

# On-Site BIM | Trinity Business School



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BSc Arch Sc, BArch, M.RIBA

**BIM Manager** at JJ Rhatigan & Company

**JJ Rhatigan**  
Building Contractors

IRISH  
**BIM INNOVATION**  
AWARDS 2016

**Winner**  
Construction Category

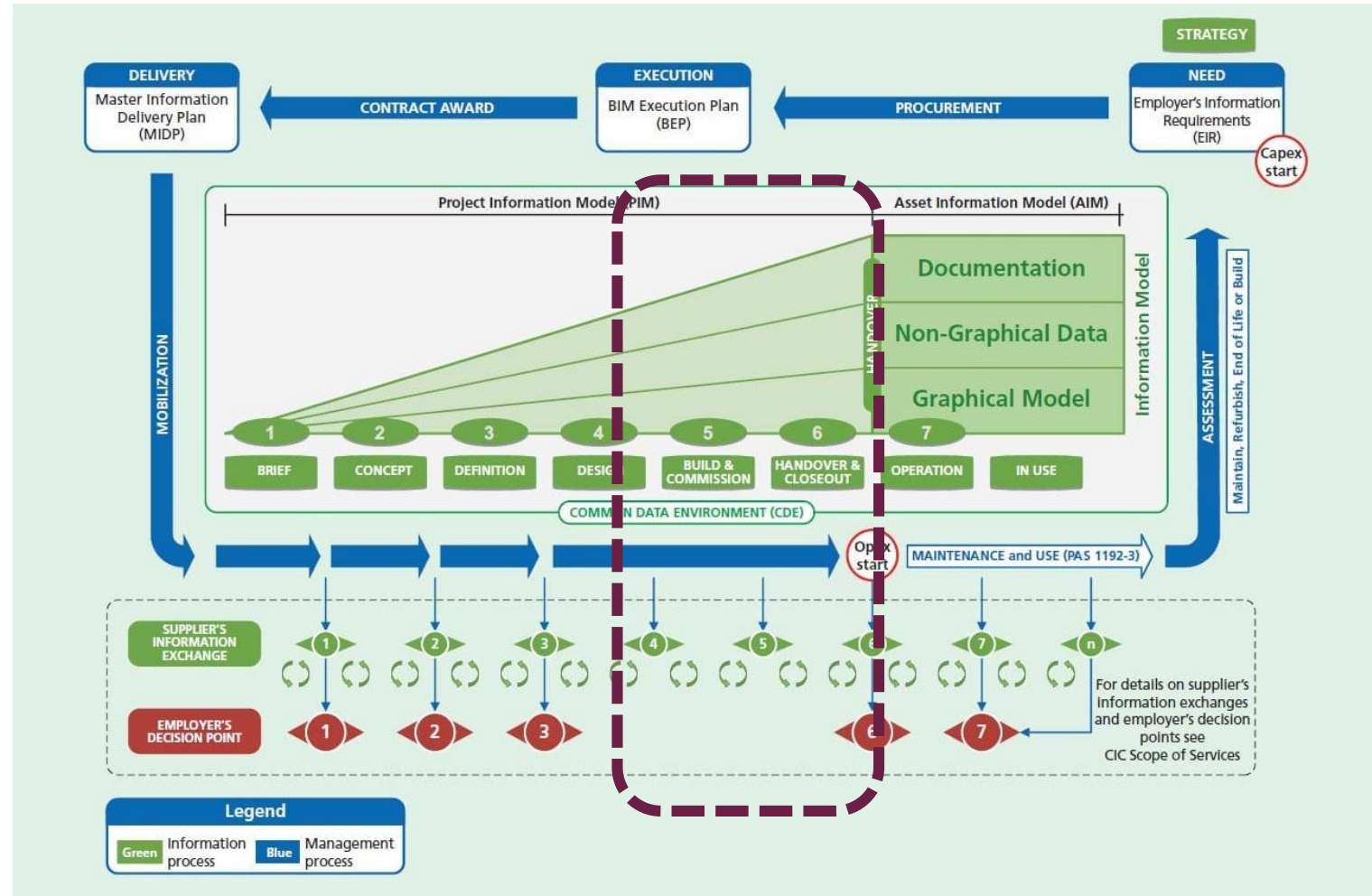


# On-Site BIM | JJ Rhatigan overview

- Irish owned company
- Over 60 years experience
- 500+ employees
- Across 5 locations
- Experienced management team across many sectors
- BSi Certified as a BIM Level 2 PAS 1192-2 compliant Tier 1 Contractor
- 25+ Live BIM projects

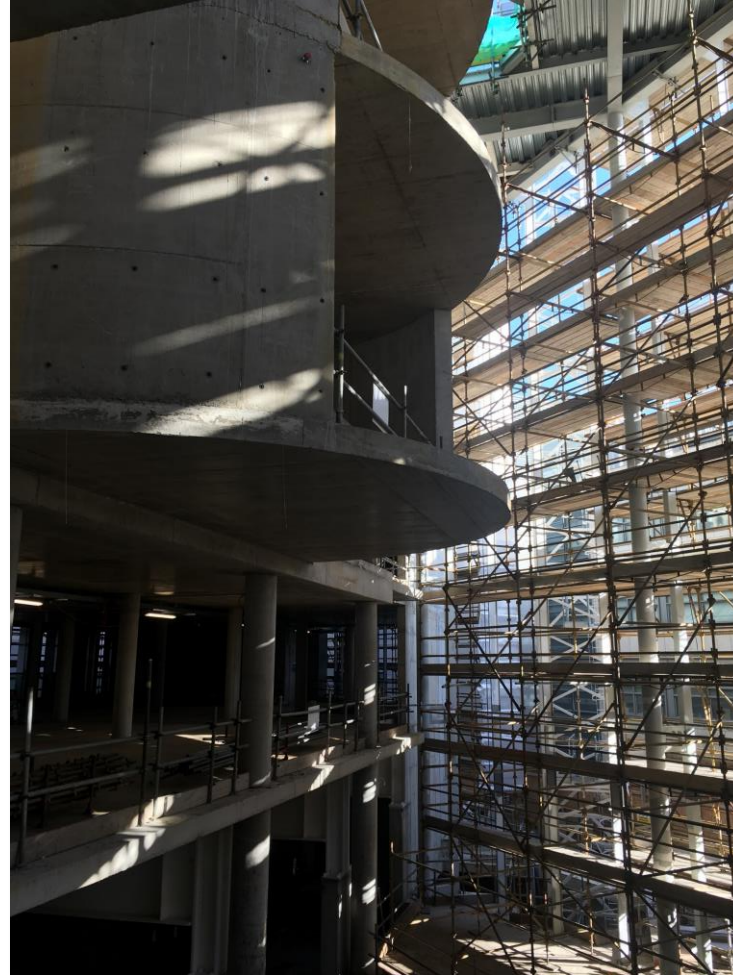


# On-Site BIM | Construction Stage



# On-Site BIM | Construction Programme

- July 2016 - Contract Award
- Aug 2016 - Start on site
- Apr 2018 (Current Status)
  - Structure complete
  - 40% façade complete
  - Internal first fix for all levels in progress
- Dec 2018 - Completion



# On-Site BIM | Overview

## **(+) BIM “Successes”**

- Models for Coordination
- Models as Source of Information
- Construction Documentation

## **(-) BIM “Challenges”**

- Model Handover at Tender Stage
- Model Ownership
- Model Status

# On-Site BIM | Models for Coordination (+)

- Key driver for BIM for a contractor
- BIM 360 Glue used for model hosting and clash detection

AUTODESK® BIM 360® GLUE™ Jj\_rhatigan > P16-014 Trinity Business School

P16-014 Trinity Business Schoo... TRIN COLL DUBI

Merged Models + New merged model

- TBS-JJR-00-ZZ-FM-W-0001
- TBS-JJR-00-ZZ-FM-W-0002
- Merged Structural Steel

Models + Upload models

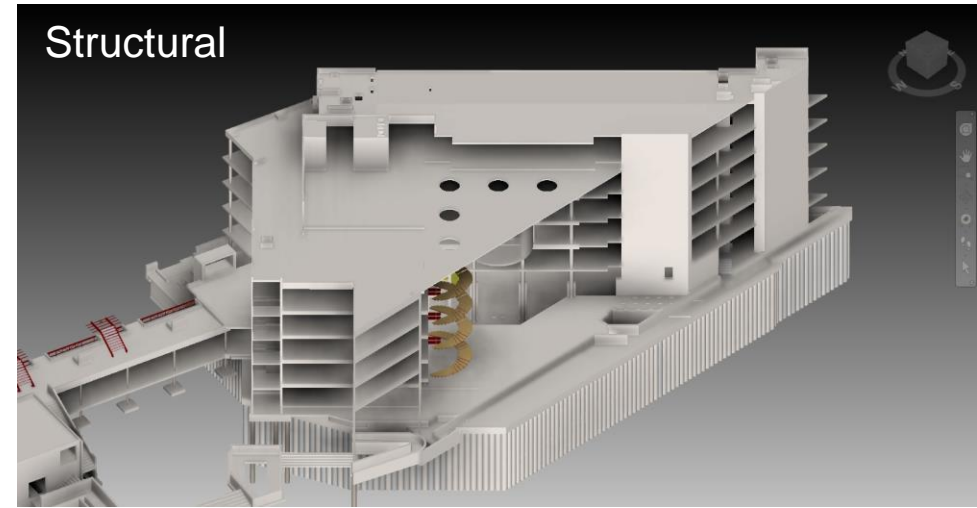
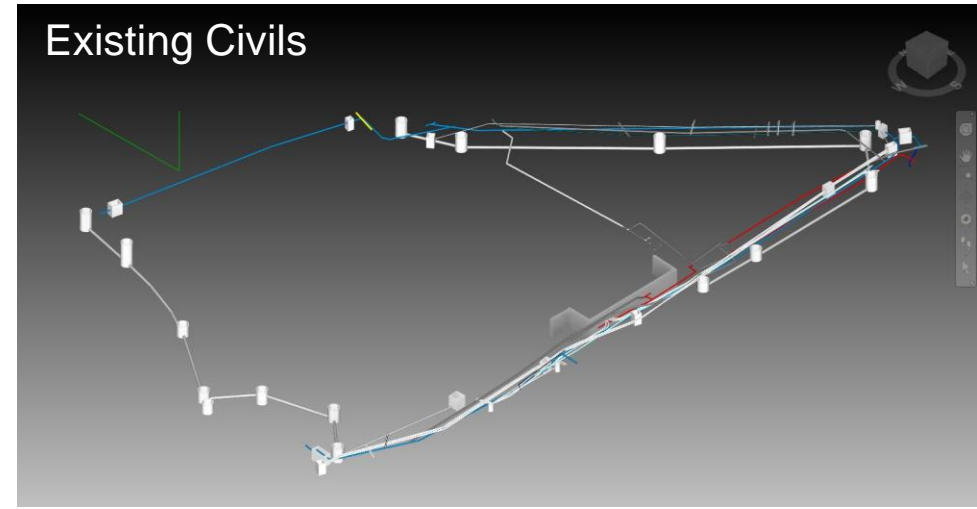
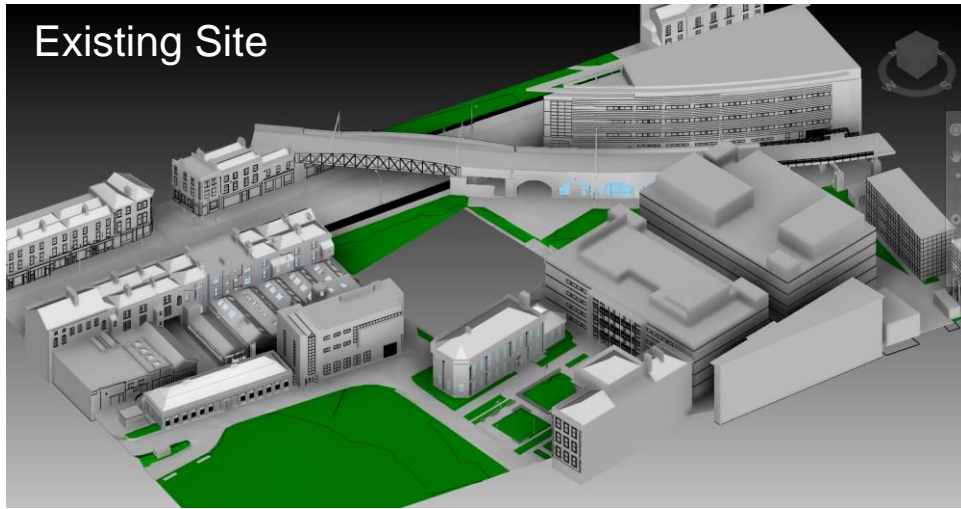
- TBS-DG-00-ZZ-M3-XE-0001.nwd

Activities

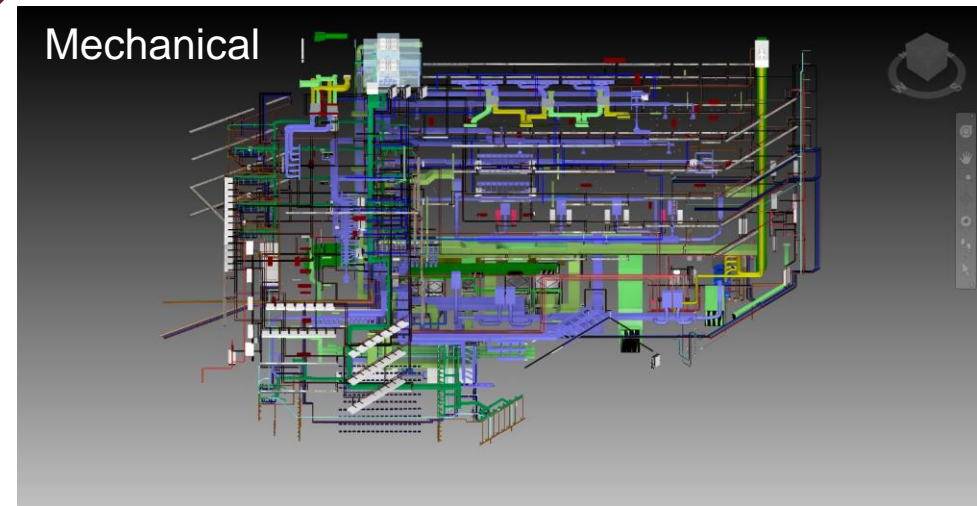
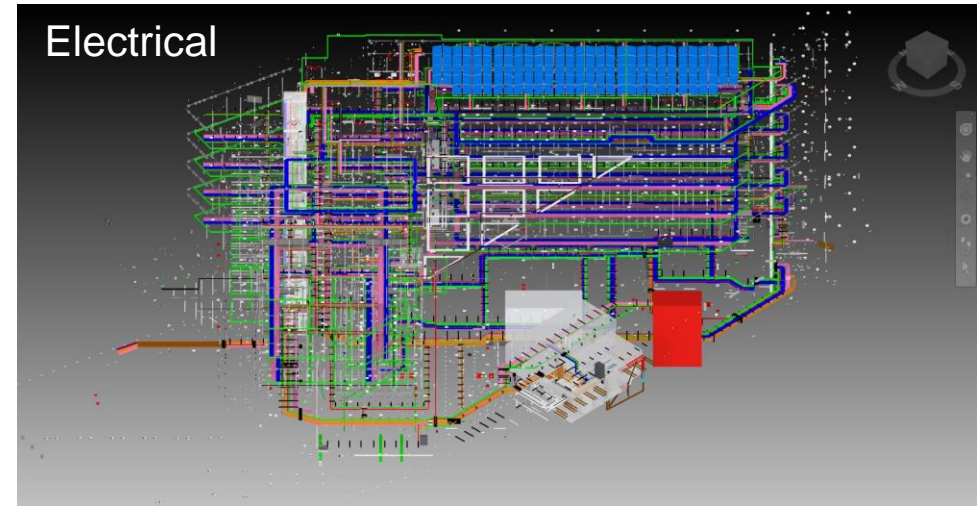
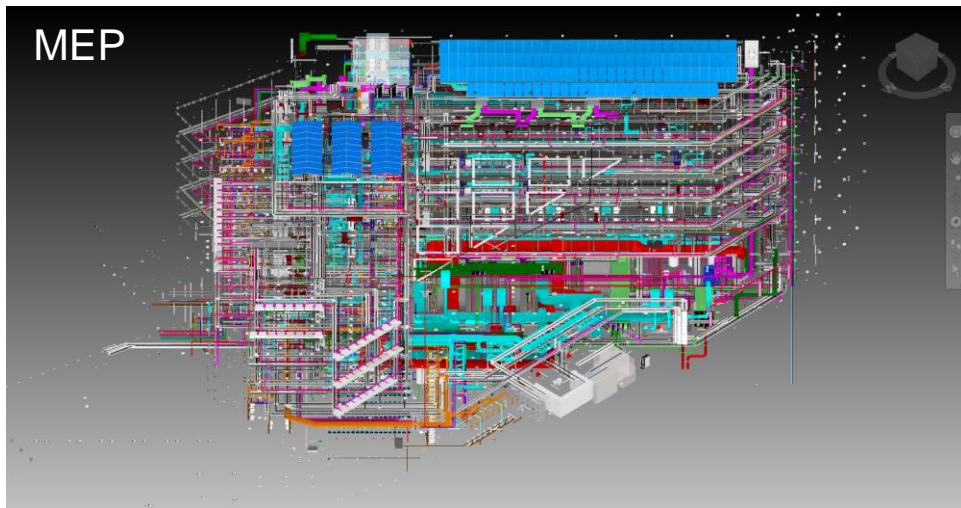
- Graham Sheppard updated merged model 'TBS-JJR-00-ZZ-FM-W-0001' to version 301 21/02/2018 12:18
- Graham Sheppard updated model 'TBS-DG-00-ZZ-M3-XE-0001.nwd' to version 24 21/02/2018 12:18
- Chris Innes updated merged model 'TBS-JJR-00-ZZ-FM-W-0001' to version 300 20/02/2018 12:56
- Chris Innes updated model 'TBS-WWE-00-ZZ-M3-C-0001.nwc' to version 15 20/02/2018 12:56
- Chris Innes updated merged model 'TBS-JJR-00-ZZ-FM-W-0001' to version 299 20/02/2018 10:21
- Graham Sheppard updated merged model 'TBS-JJR-00-ZZ-FM-W-0001' to version 298 14/02/2018 14:36
- Graham Sheppard updated model 'TBS-DG-00-ZZ-M3-XE-0001.nwd' to version 23 14/02/2018 14:36
- Laurence McKenna updated merged model 'TBS-JJR-00-ZZ-FM-W-0001' to version 297 13/02/2018 14:26
- James Kiernan updated merged model 'TBS-...

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# On-Site BIM | Models for Coordination (+)

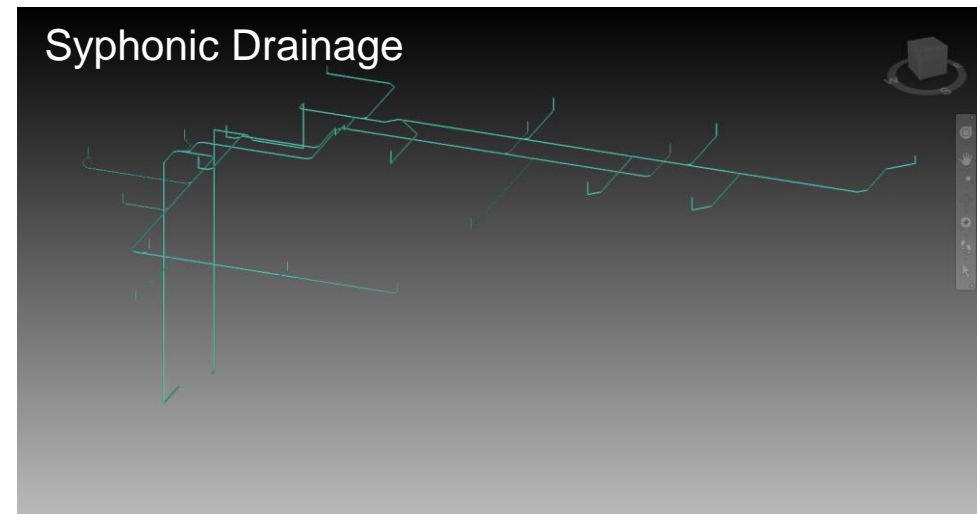
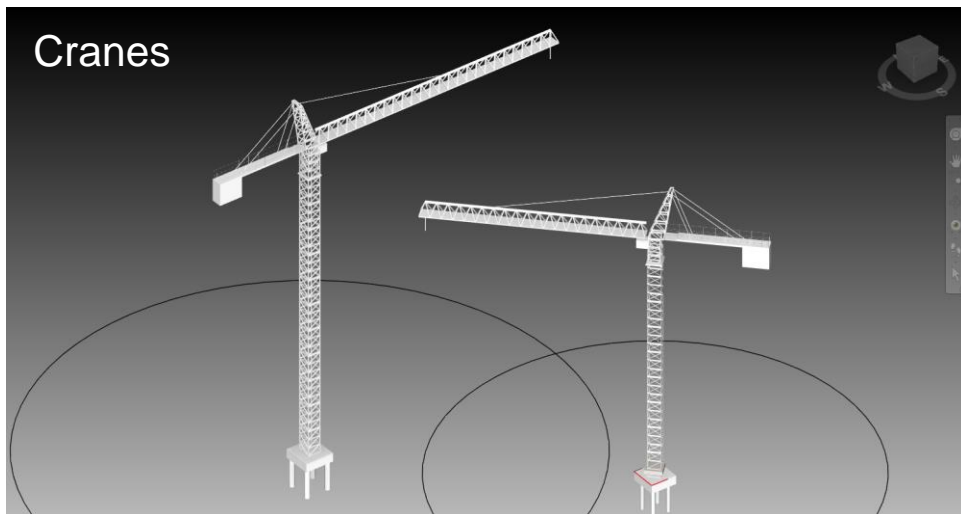
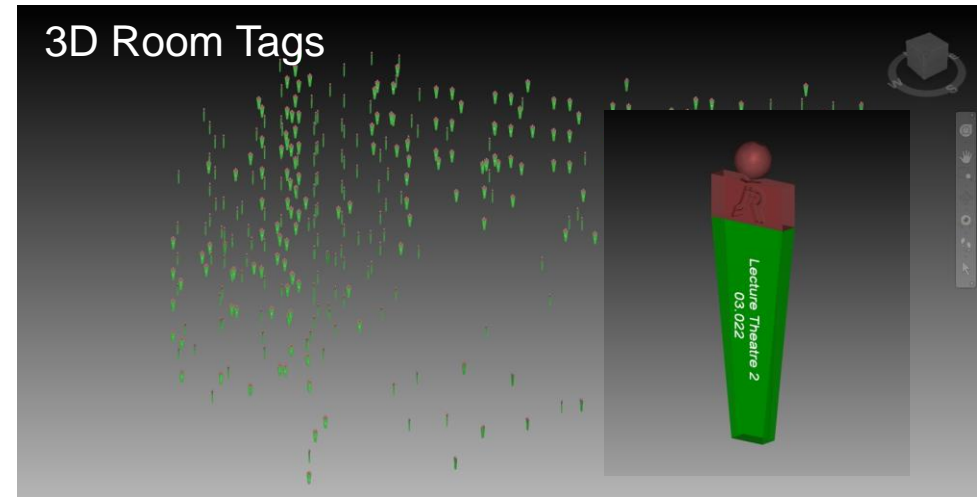
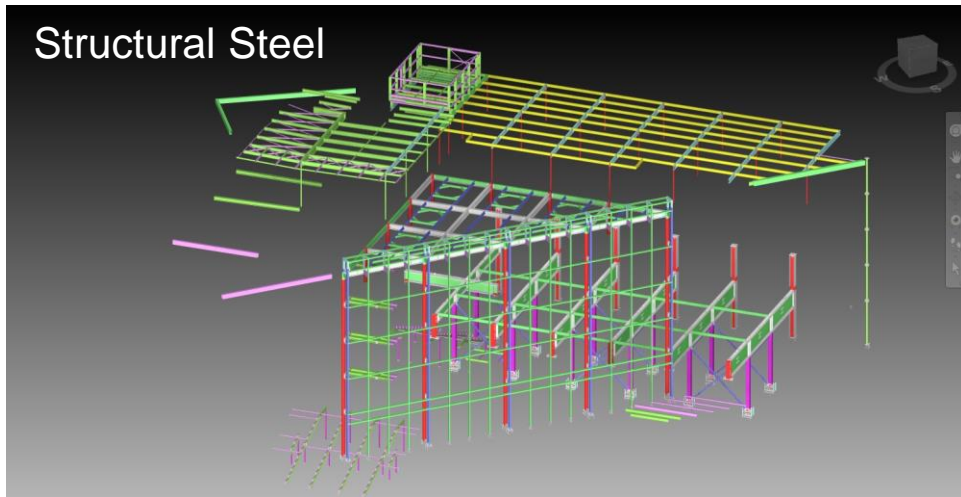


# On-Site BIM | Models for Coordination (+)



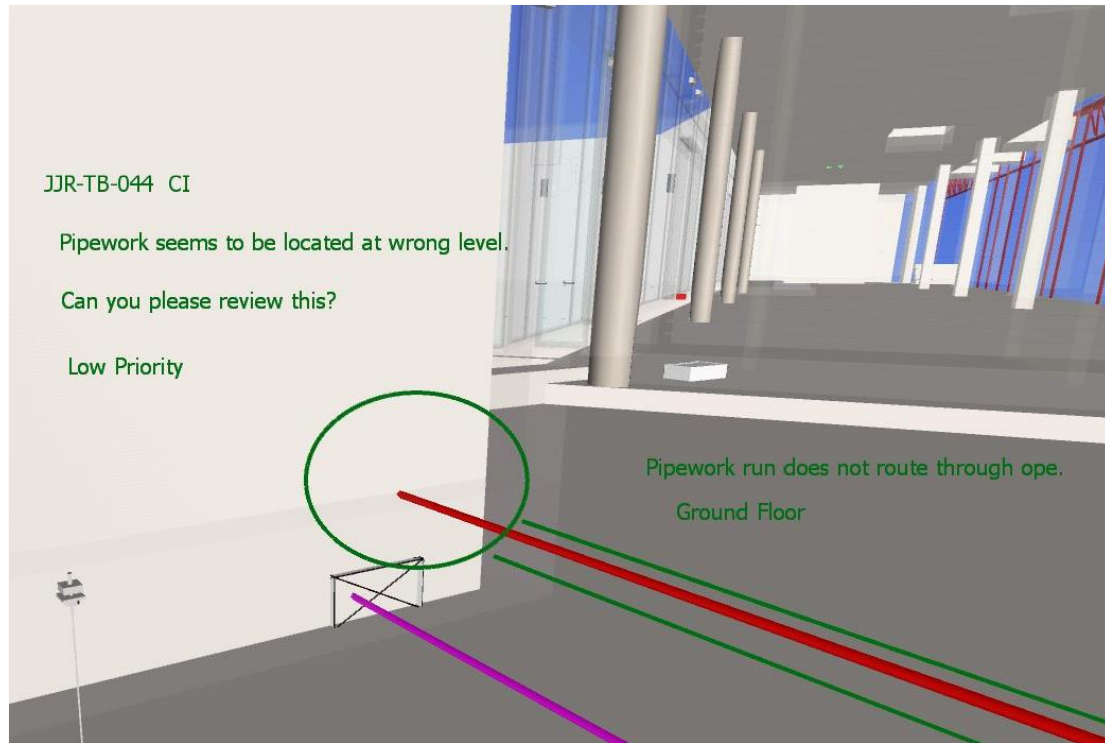


# On-Site BIM | Models for Coordination (+)

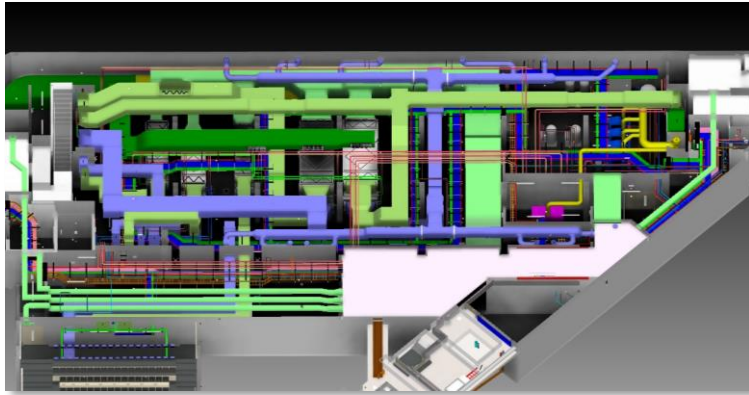


# On-Site BIM | Models for Coordination (+)

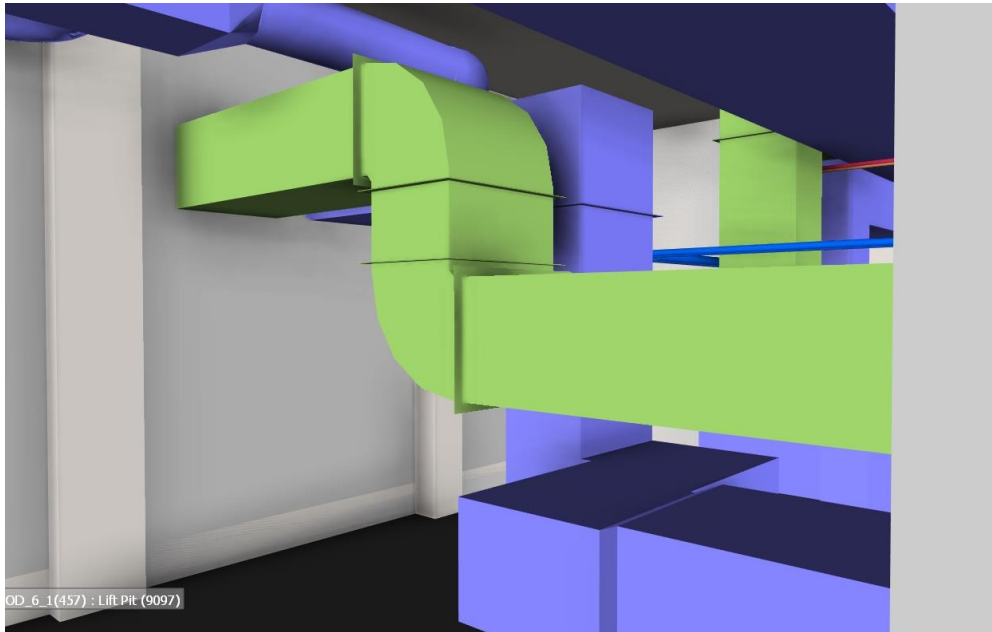
## Coordination through Mark-Ups in BIM 360 Glue



# On-Site BIM | Models for Coordination (+)



Good basement plant room models resulted in no coordination issues on site for this area.



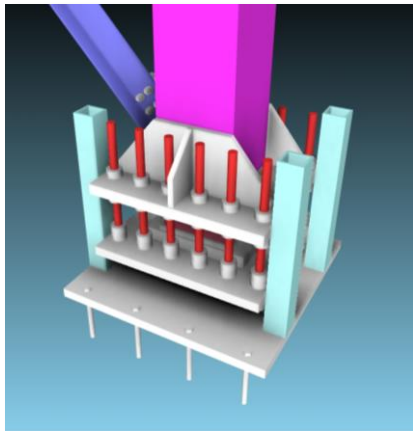
# On-Site BIM | Models as a Source of Information (+)

- Site team refer models to for clarification of information
- Models used at meetings to explain issues
- Reduced amount of RFIs



# On-Site BIM | Construction Documentation (+)

- More consistency in construction documentation derived from models
- PAS 1192-2 file naming convention very useful when navigating through documentation



Temp Prop Base top view

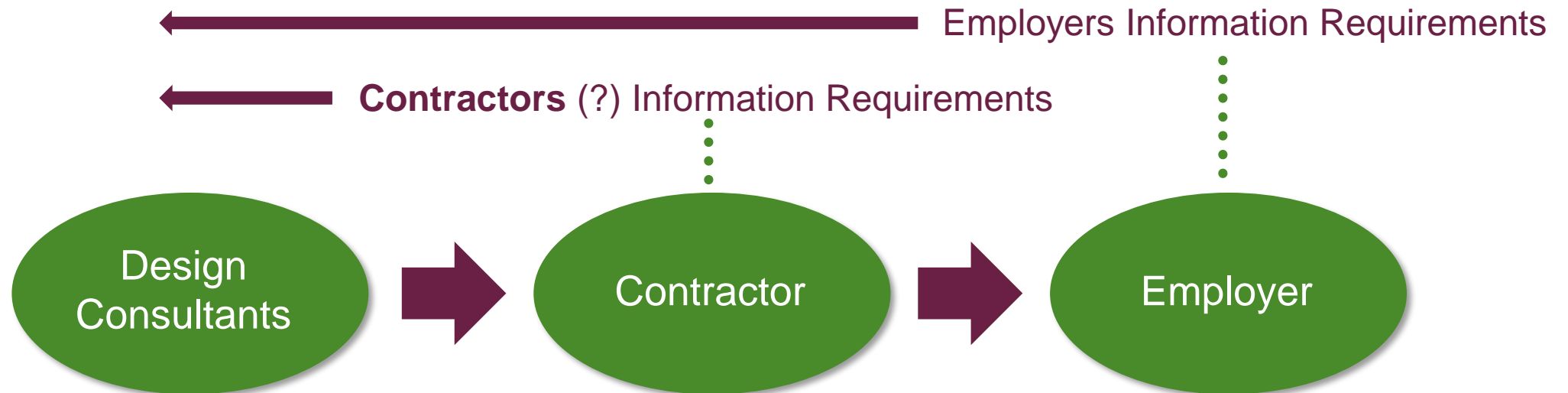
Temp Prop Base front view

Temp Prop Base end view

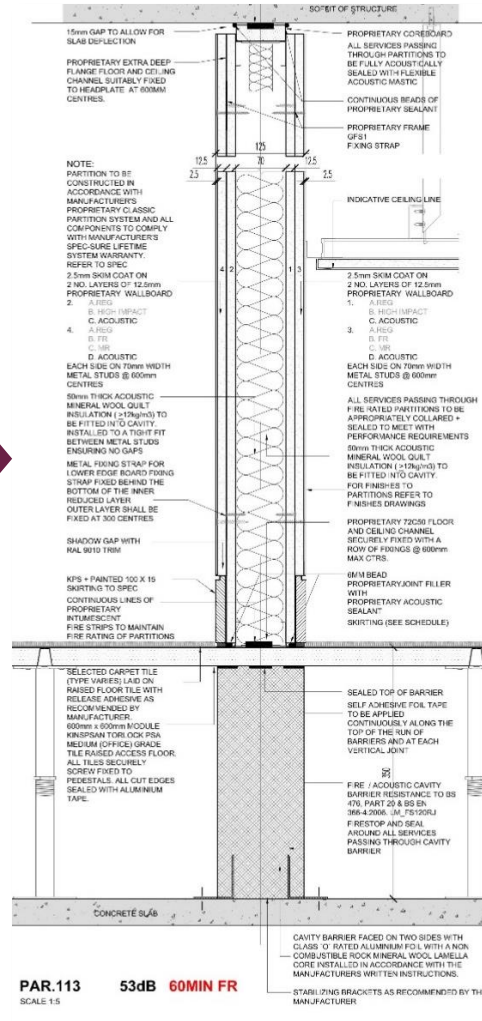
Temp Prop Base 3D view

CO1	FOR CONSTRUCTION	26.01.2018
REV MARK	REVISION DESCRIPTION	REVISION DATE
JJ Rhatigan & Company		 <small>WALL STEEL RAHEEN NEW RIDGES CO. WEXFORD IRELAND info@wallsteel.ie www.wallsteel.ie FAX: +353 (0) 51 420516</small>
TRINITY COLLEGE DUBLIN		
<b>DRAWING TITLE</b>	FABSEC TEMP PROP BASE PLATE ASSEMBLY	
<b>CONTRACT</b>	TRINITY BUSINESS SCHOOL	
<b>MODELLED BY</b>	BDB	<b>ISSUE DATE</b> 26.01.2018
<b>CONTRACT NO</b>	T2841	<b>SCALE</b> 1:25
<b>DRAWING No</b>	TBS-WST-01-B2-DR-XS-0053	<b>REVISION No.</b> CO1

# On-Site BIM | Model Handover at Tender Stage (-)



# On-Site BIM | Model Handover at Tender Stage (-)



# On-Site BIM | Model Ownership (-)

## 3.1 APPENDIX 1 – PRODUCTION AND DELIVERY TABLE FOR BIM PROTOCOL USER GUIDE

Data and Information Drop: PW-CF1 Workstage		1		1		2		3		3		4		5		5	
		Model Originator	LoMD	Model Originator	LoMD	Model Originator	LoMD	Model Originator	LoMD	Model Originator	LoMD	Model Originator	LoMD	Model Originator	LoMD	Model Originator	LoMD
1	Brief																
	Requirements																
	Surveys																
2	Strategies																
	Fire Strategy					ARCH / FCON	3	ARCH / FCON	4								
	Security Strategy					ARCH		ARCH									
	Acoustic Strategy					ARCH		ARCH									
	Sustainability Strategy					SERV	3	SERV	4								
	Disabled Access Strategy					ARCH	3	ARCH	4								
	Maintenance Access Strategy					ARCH	3	ARCH	4								
	Waste Management Strategy					ARCH		ARCH									
3	Solutions																
	Site Planning and Sections					ARCH	3	ARCH	4			MCON	5	MCON	6	FMSP	7
	Space Planning					ARCH	3	ARCH	4			MCON	5	MCON	6	FMSP	7
	Architectural Facility Layouts, Sections and Elevations					ARCH	3	ARCH	4			MCON	5	MCON	6	FMSP	7
	Structural Facility Layouts, Sections and Elevations					STRU	3	STRU	4			MCON	5	MCON	6	FMSP	7
	Services Facility Layouts, Sections and Elevations					SERV	3	SERV	4			MCON	5	MCON	6	FMSP	7
	Architectural Specifications					ARCH	3	ARCH	4								
	Structural Specifications					STRU	3	STRU	4								
	Services Specifications					SERV	3	SERV	4								
4	Analysis																
	Thermal Analysis			SERV	2												
	Sustainability Analysis			SERV	2												
	Energy Analysis			SERV	2												
	Acoustic Analysis																
	4D Programme Analysis																
	5D Cost Analysis																
5	Impacts																
	Safety																
	Security																
	Sustainability																
	Commercial																
6	Implementation																
	Phasing											MCON	5				
	Sequence											MCON	5				
	Site Access											MCON	5				
	Site Set-Up											MCON	5				
	End																






# On-Site BIM | Models Status (-)

Models issued “for Construction” rather than “for Information”



Client: Trinity College Dublin  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin



Project Number: 13094  
Project Name: TRINITY BUSINESS SCHOOL

Project Stage: STAGE 4  
Data and Information Drop: -

Project Architect: WAYNE ROTHWELL  
Project Information Manager: LIAM FARRELLY

Model Description: Architectural Model

Model Reference: TBS-STW-00-ZZ-M3-A-0003  
Status Code: S2

Revision Date: 07/03/2017  
Revision Code: C4

**Scott Tallon Walker Architects**  
19 Merion Square, Dublin 2, Ireland  
Tel: +353 1 6693000  
Fax: +353 1 6613300  
Email: 13094@stwarchitects.com  
Web: www.stwarchitects.com

**Building Information Model**  
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**Model Status**  
Work In Progress: S0 - Work in Progress  
Shared: S1 - Fit for Coordination, S2 Fit for Information, S3 Fit for Internal Review and Comment, S4 Fit for Construction Approval, S5 Fit for Manufacture, S6 Fit for PM Authorisation, S7 Fit for AIM Authorisation, D1 Fit for Costing, D2 Fit for Tender, D3 Fit for Contractor Design, D4 Fit for Manufacture/Procurement, AM As Maintained  
Publish: A Fit for Construction, B Partially Signed-off, AB As Built handover Documentation

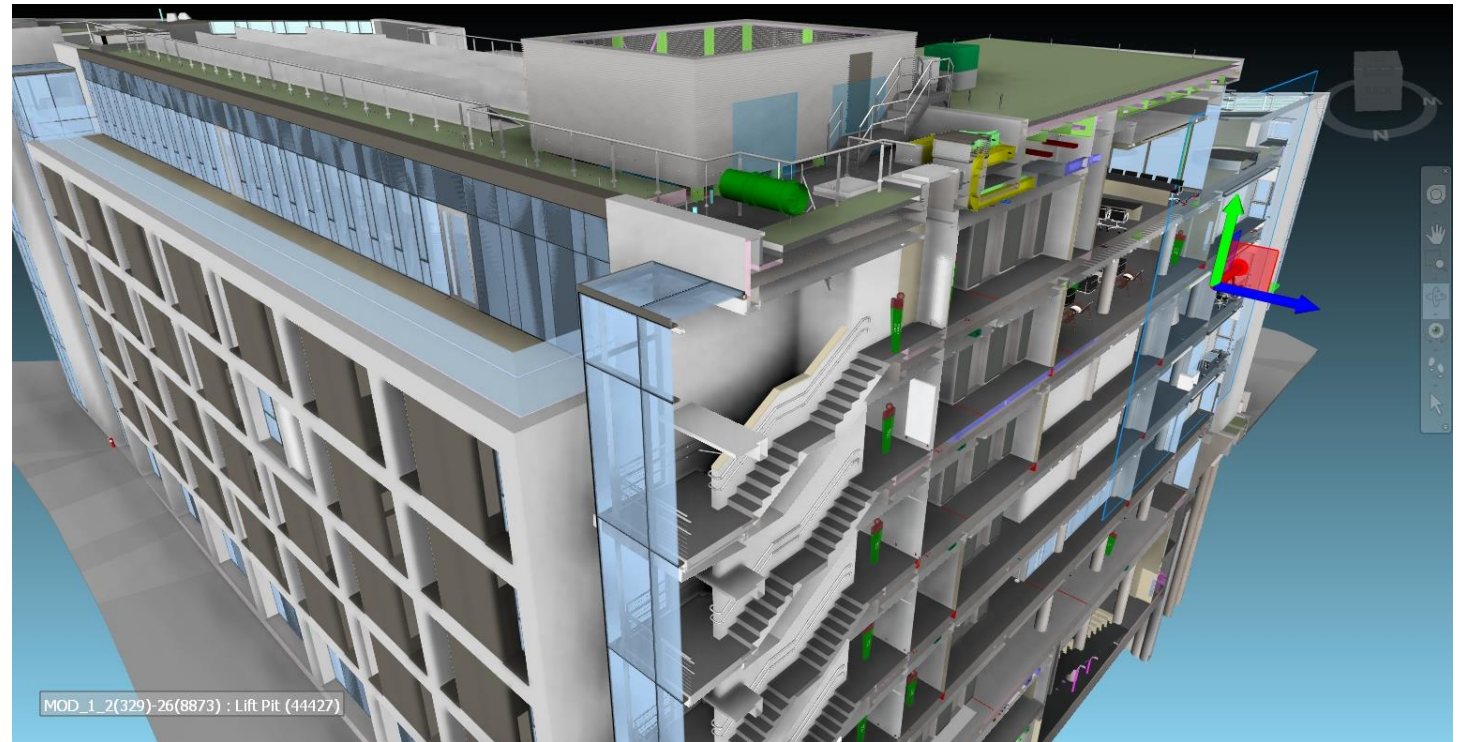
**THIS MODEL IS FOR INFORMATION PURPOSES ONLY. INFORMATION ON DRAWINGS AND IN SCHEDULES TAKES PRECEDENCE OVER ANY INFORMATION IN THIS FILE.**

**Model Update Summary**  
CEI: Nominal thickness of 100mm assigned to all ceilings to account for secondary support tracks and build-up. Ceiling hangars not included. Model to be read in conjunction with detail drawings and any discrepancies between model and contract documents to be reported to STW for clarification.  
PAR: Nominal thickness of acoustic and fire insulation has been added beneath all partitions to coincide with existing RAF drawings and details. Model to be read in conjunction with RAF series of drawings and any discrepancies between model and contract documents to be reported to STW for clarification.  
PAR/DOR: Fire rating requirements added to the properties of all doors and partitions. Drawings to be read in conjunction with fire cert and any discrepancies between the model and the contract documents to be reported to STW for clarification.

Status Code  
A !!!

# Summary

- BIM Successes outweigh the Challenges
- A learning curve for all involved
- Models to be handed over to Trinity in Dec 2018 for use by their operations team



**Thank You!**

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