

# Setting Up of Autodesk BIM 360 & Use in Education

## Presenter Names

Kevin Furlong | @kevinfurlong88

Emma Hayes | @EmmaHay68943842



# About the speaker



Kevin Furlong MA (Higher Education) MSc aBIMM

Kevin Furlong is a lecturer in BIM and Collaborative Digital Construction at the Technological University Dublin's School of Multidisciplinary Technologies. From a Building Services background, Kevin has worked in industry in a variety of construction and building services roles, before becoming an educator in a full-time capacity. Kevin holds a Masters degree in Higher Education and also a Masters Degree in BIMM. He is also a Autodesk Certified Professional

With colleagues from across the College of Engineering & Built Environment, Kevin was responsible for development of TU Dublin's ground-breaking MSc in applied Building Information Modelling & Management, and he now teaches across a range of discipline-specific and multidisciplinary modules.

Kevin leads and coordinates the Multidisciplinary BIM Collaboration module where this presentation project work was undertaken. He is an active member of the both the UK and Irish BIM Academic Fora, and has a leading role in TU Dublin's College BIM Strategy Implementation working group.



# About the speaker



**Emma Hayes** MCIAT, Dip Arch Tech, BSc Arch Tech, MSc BIM Management

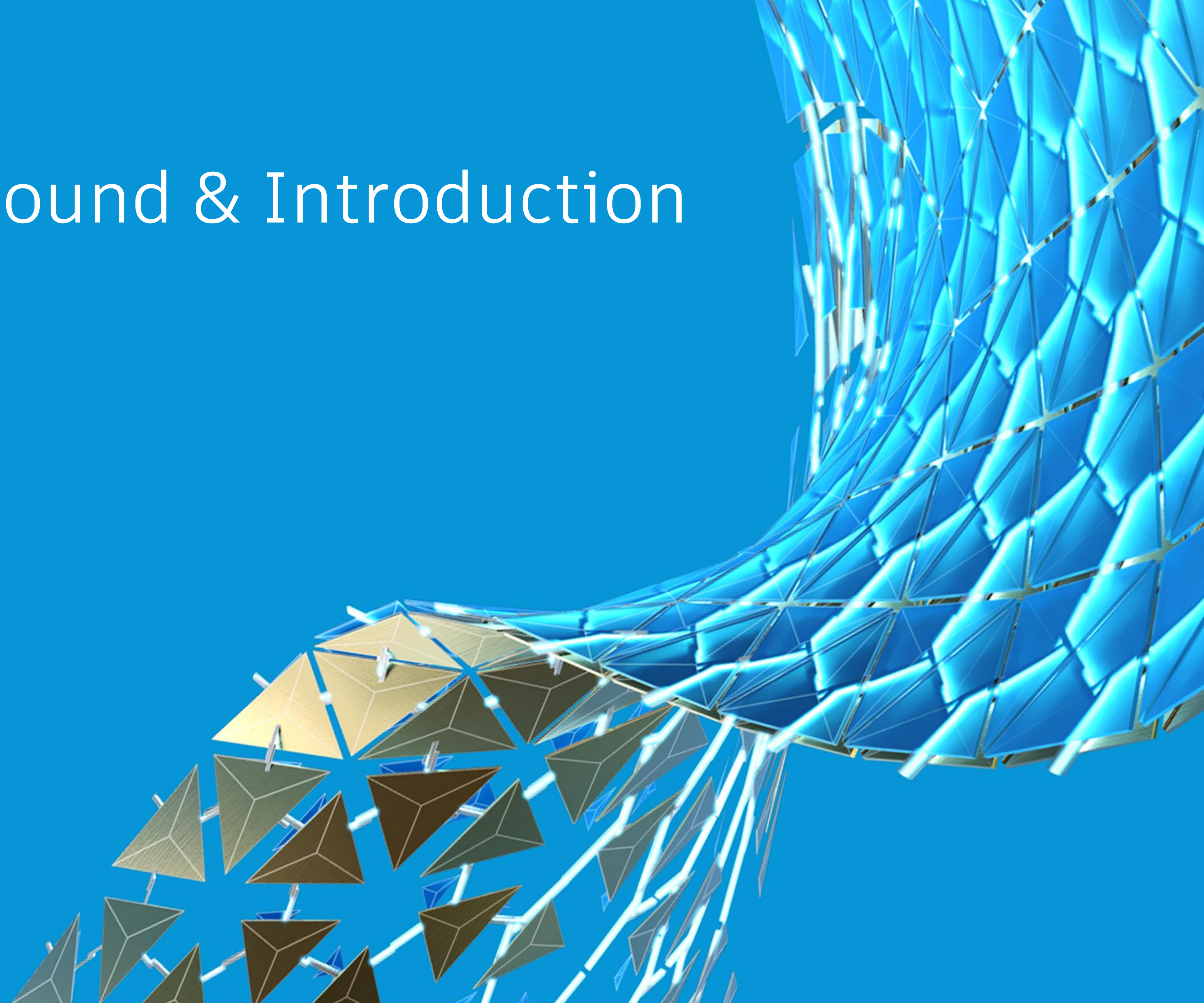
Emma Hayes, is Managing Director of Digital Built Consultants. A leading Building Information Modelling (BIM) and Digital Information Management consultancy firm who support and guide clients from the Architectural, Engineering, Construction and Owner-Operated (AECO) industry throughout their digital transition and BIM adoption journey. Emma has over 20 years' experience in the AEC industry in Ireland and internationally. She is a Chartered Architectural Technologist and holds a Bachelor's Degree in Architectural Technology from Technological University Dublin, and a Master's Degree in BIM Management from Middlesex University.

Previously, Emma was the Group BIM Manager for a large multi-disciplined AEC and Project Management organization. She was responsible for the development and implementation of the Group BIM strategy and roll-out of procedures and workflows for BIM adoption across the organization's network of offices in Europe, Asia and the US. She has executed BIM on a number of high-value complex projects in the pharma, food, energy and mission-critical sectors.

Emma is actively involved in driving progress in BIM adoption in the AEC industry. She is a non-executive director on the board of the Construction IT Alliance and is actively involved in buildingSMART (bSI) UKI Steering Committee for OpenBIM Certification. She has presented research papers at international conferences such as the CitA BIM Gathering and is on the Judging Panel for the BIM Excellence category at the Irish Construction Excellence Awards. She mentors and supports the development of women's careers in BIM through her role as the Irish Regional Leader for the Women in BIM (WiB) network. She is also a part-time lecturer on the MSc Applied BIM Management, TU Dublin and the MSc BIM Management, Middlesex University.



# Project Background & Introduction





# MSc in applied Building Information Modelling & Management

**Level 9 Programme – Part-time over 2.5 Years (3 Year Option)**

## **Overall Structure:**

**Stage 1:** Postgraduate Certificate in BIM Technologies

**Stage 2: Postgraduate Diploma in Collaborative BIM**

**Stage 3:** MSc in Applied Building Information Modelling & Management

## Stage 2: 30 ECTS: Postgraduate Diploma in Collaborative BIM

Elective (Lean, Dynamo, AR/VR, BIM for Clients & FM – 5 ECTS)

**Collaborative BIM Process – 10 ECTS**

Transition to ISO 19650 Standards - 2019

**Multidisciplinary Collaboration Project (MCP) – 15 ECTS**



## Stage 2: MCP Project 2019 – Broombridge Design & Construct Centre



### Site Visit Data Collection:

- Photographic Data
- Digital Dimensional Data
- Visual Infrastructural / Community Information
- Drone Survey – Provided by Student Participant
- Point Cloud & Photogrammetry Survey





## MCP Project Outline Brief 2020:

- Multidisciplinary Design Project up to Tender Stage of; Three New TU Dublin Proposed Student Accommodation Blocks
- To include:
  - A. Requirements under the Strategic Development Zone (SDZ) designation.**
  - B. Adherence to the Grangegorman Development Agency (GDA) Master & Strategic Plans**
  - C. Integration with Campus Site Services Infrastructure (CHP etc.)**
- The focus of this project was on Collaborative Design & Not an Architectural Design Competition.
- MCP Projects brought from Concept Design to Tender Stage
- Six Multidisciplinary Teams - each comprising Four Participants
- TU Dublin Client Requirements outlined within a detailed package including, EIR, Project Brief, Project Specification & Data-Drop Schedule

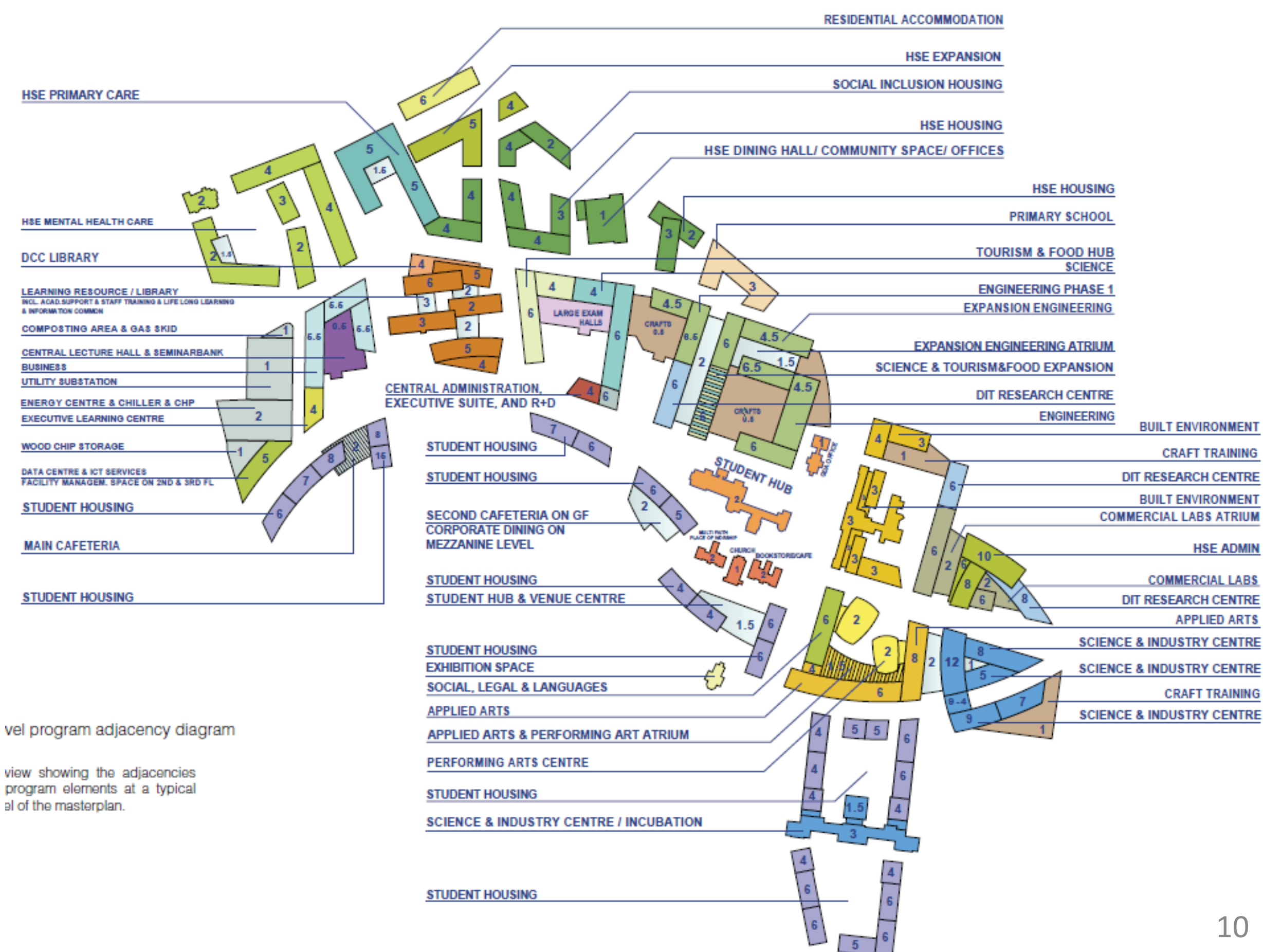


## TU Dublin: Grangegorman Development Student Accommodation Blocks





## TU Dublin: Grangeegorman Development Campus & Student Accommodation Blocks

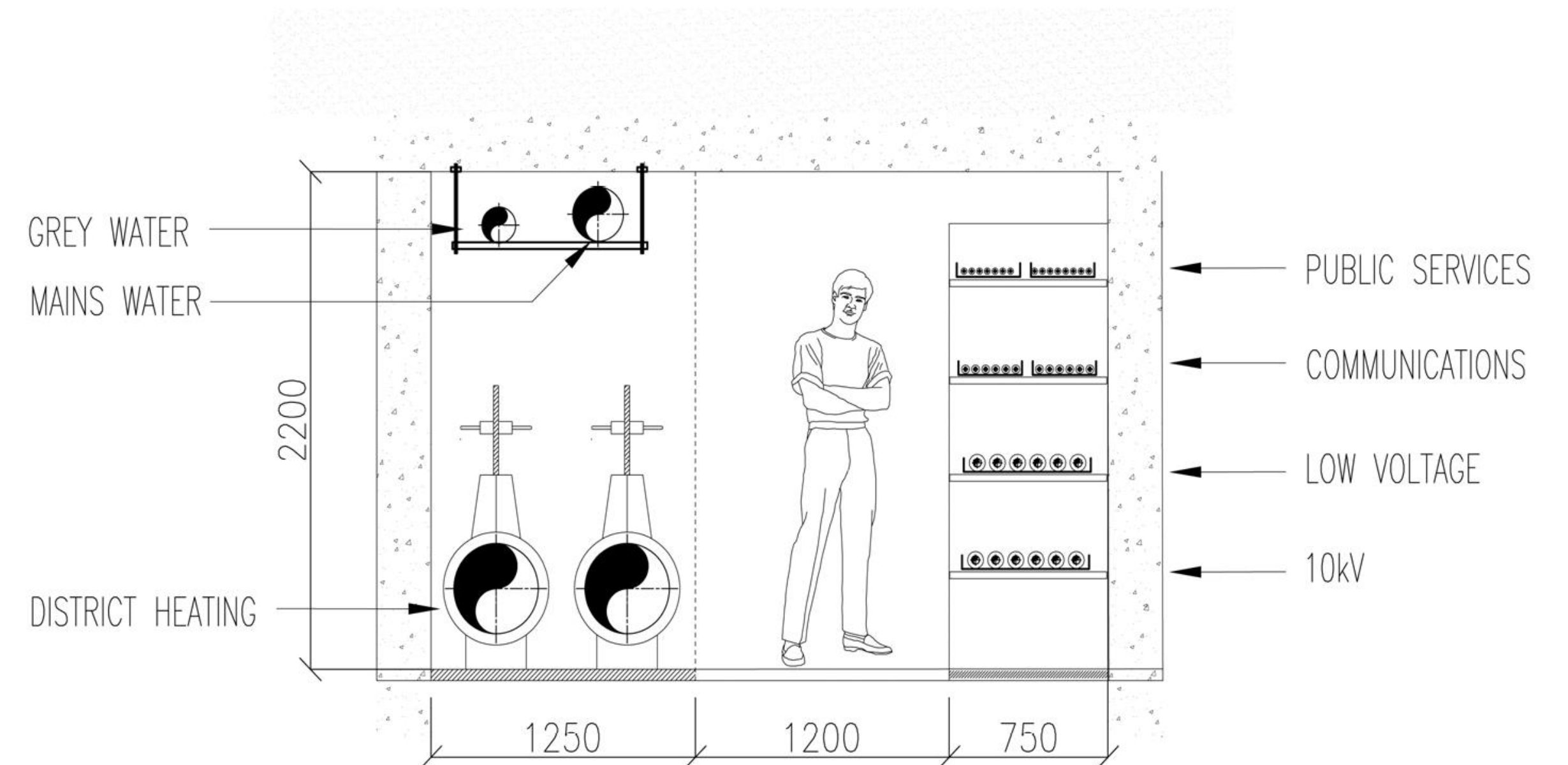
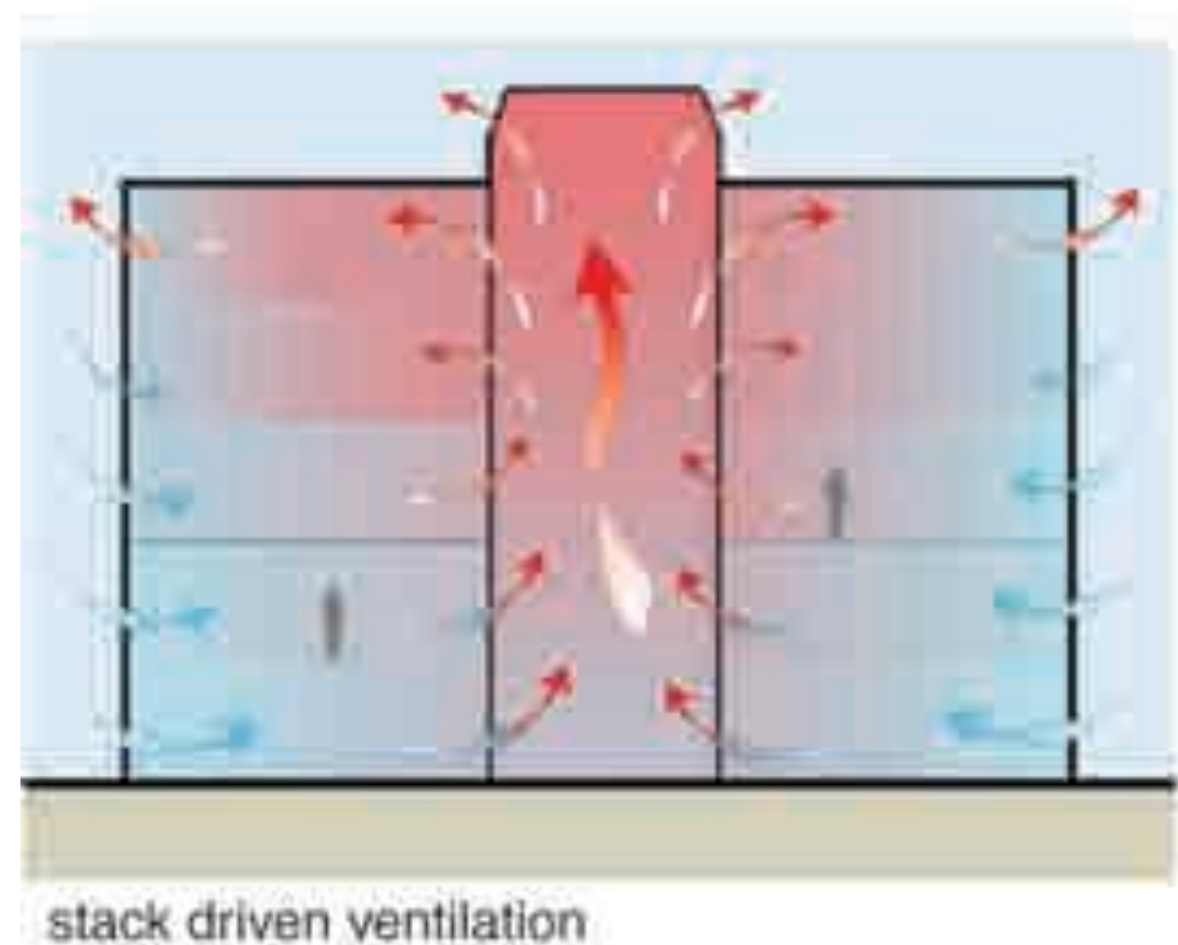
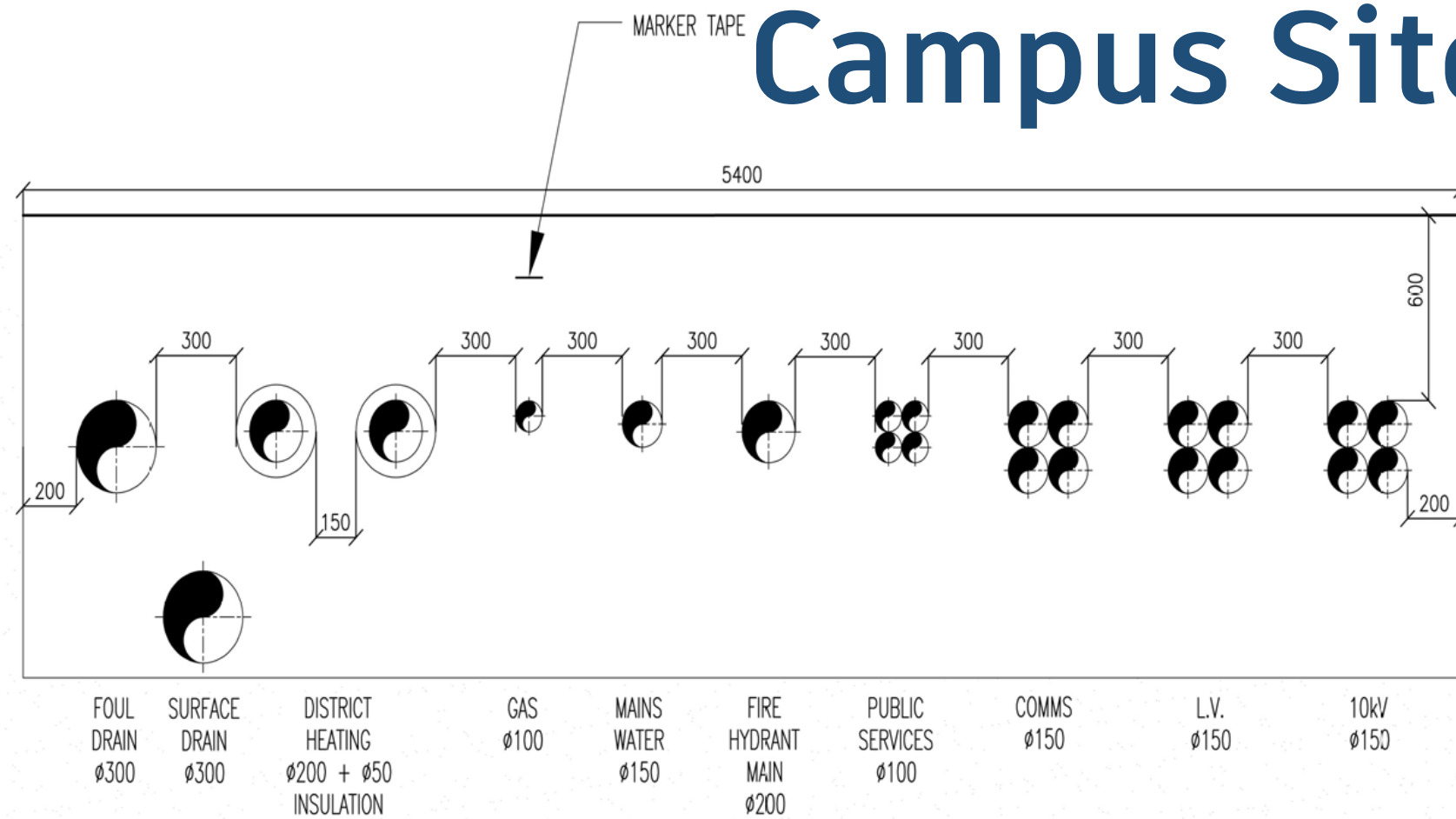


view program adjacency diagram

view showing the adjacencies  
program elements at a typical  
al of the masterplan.



## TU Dublin: Grangegorman Development Campus Site Services Infrastructure



NB: GAS MAINS IN SEPARATE INDEPENDENT TRENCH



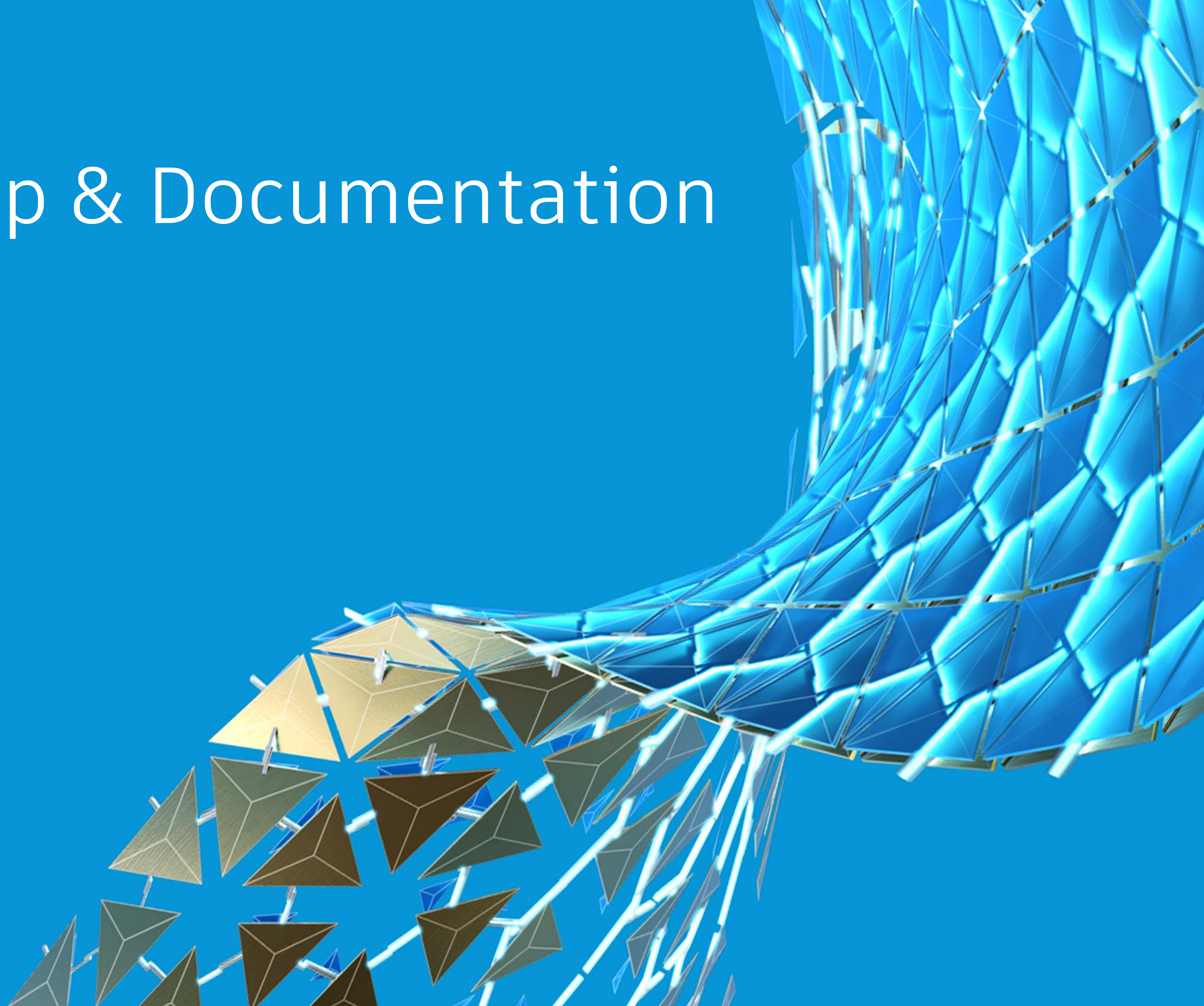
## TU Dublin: Grangegorman Development Staff Support & Discipline Specific Advisory Team

### DT 9876 MCP 2020: Client Project Team

Module & Project Lead / Client	Discipline
Kevin Furlong	BIM Process / MEP / Energy Analysis
Emma Hayes	BIM Process / Arch Tech
Client Professional Advisors	
Kirk McCormack	Architectural / Arch Tech
Mairtin Dalton	Architectural
Barry McAuley	Construction Management / QS
Ruairi Hayden	Construction Management
Avril Behan	Geomatics Surveying
Una Beagon	Structural Engineering
Dermot Kehily	Quantity Surveying
Kieran O'Neill	Lean Construction



# Project Set-Up & Documentation





# Stage 2: MCP – TU Dublin Client Package Documentation & Resources

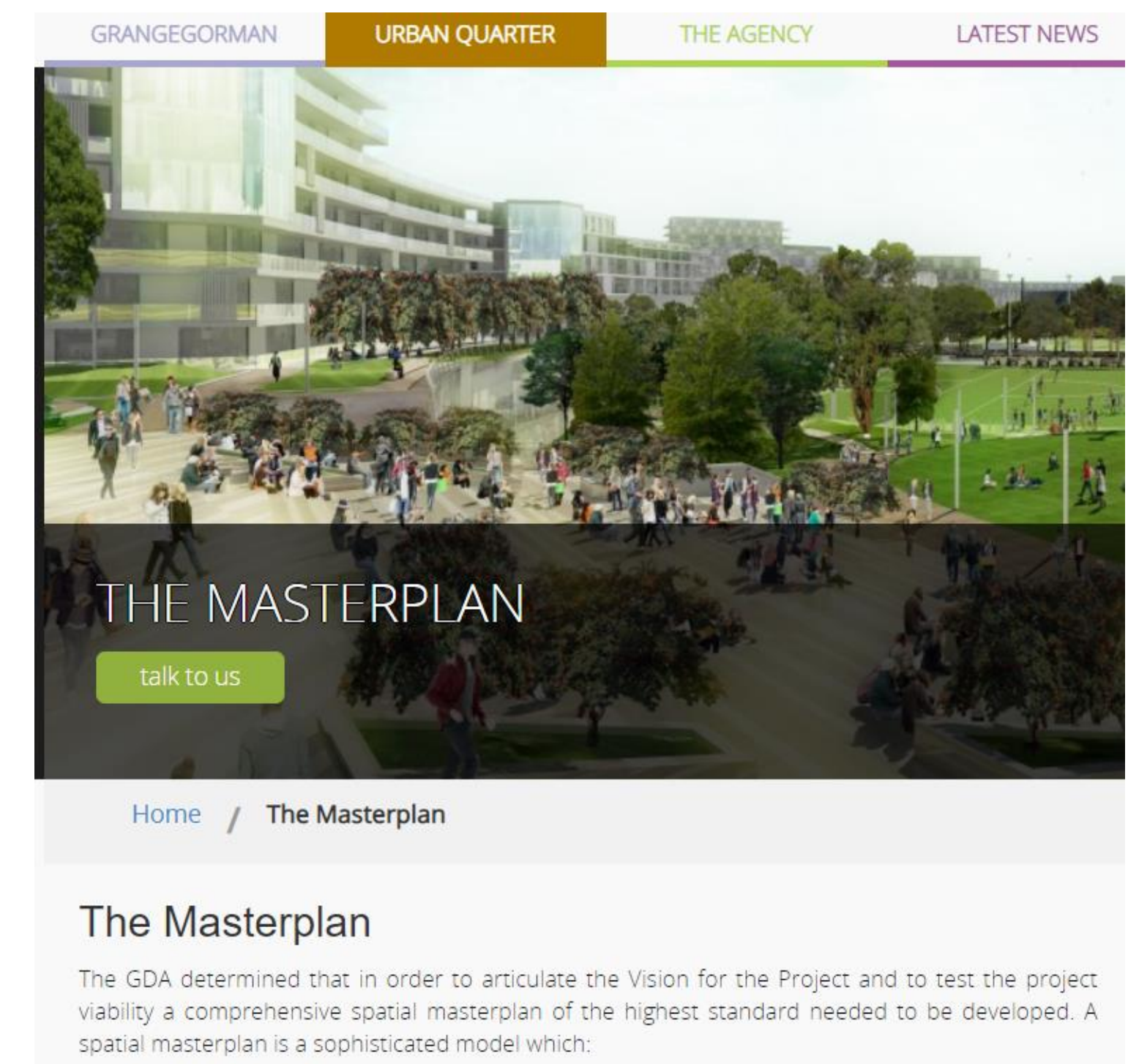
Project Specific Detailed EIR:



Project Specific Detailed Brief:



Project Specific GDA Masterplan:





# Client Documentation:

## Project Specific Data-Drop / Approval Gate Schedule (NBS & RIBA PoW Derived)

	Tuesdays	Thursdays	Semester Week	CMIS Week	Module Stages	RIBA PoW Stages - Project Specific	Data Drops	Requirements	PIR's
<b>January</b>	2020/01/21	2020/01/23	0	22	0			Research Skills	
	2020/01/28	2020/01/30	1	23	1	0 Strategic Definition	0	Development of Websites & Collaboration	1 - 2
	2020/02/04	2020/02/06	2	24	2	1 Preparation & Brief	1	Pre-Contract BEP	
<b>February</b>	2020/02/11	2020/02/13	3	25	3	1 Preparation & Brief	2	Post-Contract BEP (PIP) (CDE Set-up)	
	2020/02/18	2020/02/20	4	26	4	1 Preparation & Brief	3	MIDP, TIDP, CIC Protocol & Procurement	3 - 13
	2020/02/25	2020/02/27	5	27	5	2 Concept Design		Research Skills	
	2020/03/03	2020/03/05	6	28	6	2 Concept Design			
<b>March</b>	2020/03/10	2020/03/12	7	29	7	2 Concept Design	4	Outline Model Proposals & Energy Analysis	14 - 21
	2020/03/17	2020/03/19	8	30	8	3 Developed Design			
	2020/03/24	2020/03/26	9	31	9	3 Developed Design		Developed Model Design with Cobie Outputs	
	2020/03/31	2020/04/02	10	32	10	4 Technical Design (TD)	5 & 6	Developed Mech, Elec, Energy Analysis, Renewables	22 - 28
<b>April</b>	2020/04/07	2020/04/09	<b>Easter</b>	33	11	4A TD Pre-Construction			
	2020/04/14	2020/04/16	<b>Easter</b>	34	12	4A TD Pre-Construction	7	Final Model Design and PIM	29 - 33
	2020/04/21	2020/04/23	11	35	13	4B TD Final Tender		Final Tender Package & Federated Model	
	2020/04/28	2020/04/30	12	36	14	4B TD Final Tender	8	Final Tender Package & Federated Model	34 - 35
<b>May</b>	2020/05/05	2020/05/07	13	37	15	<b>Final Presentations</b>	9	<b>Final Presentations: Date TBC</b>	
	2020/05/12	2020/05/14	14	38		<b>Final Submissions</b>		Research Skills	
	2020/05/19	2020/05/21	15	39				Research Skills	
	2020/05/26	2020/05/28	16	40		<b>Final RW Submission</b>			<b>2020/05/28</b>



# Client Documentation:

Project Specific Data-Drop / Approval Gate Schedule (NBS & RIBA PoW Derived) & PIR's

Client Project Information Requirements						
Stage	Stage Description	Data Drop	Data Drop Purpose		PIR	Action by
0	Strategic Definition		Draft EIR	1	What is the information management Strategy for the project	Client
0	Strategic Definition		Pre Contract Survey	2	What are the characteristics of the site for the current phase of development	Geo Surveyor



# Client Documentation:

## Project Specific Data-Drop / Approval Gate Schedule (NBS & RIBA PoW Derived) & PIR's

1	Preparation & Brief	1	Pre Contract BEP	3	Have the purposes for which the model will be used been defined	Client
1	Preparation & Brief	1	Pre Contract BEP	4	How will BIM be managed and exploited in this project	Design Team
1	Preparation & Brief	1	Pre Contract BEP	5	What is the available site	Geo Surveyor
1	Preparation & Brief	1	Pre Contract BEP	6	What physical constraints are there on and around the site	Design Team
1	Preparation & Brief	1	Pre Contract BEP	7	What services constraints (water, drainage, electricity, etc.) exist	Design Team
1	Preparation & Brief	1	Pre Contract BEP	8	What other data about the site or asset is available from client records	Client
1	Preparation & Brief	1	Pre Contract BEP	9	What will be the generic services philosophy	Client
1	Preparation & Brief	2	Post Contract BEP, PIP	10	What information do facilities managers need	Design Team
1	Preparation & Brief	3	MIDP, TIDP, CIC Protocol & Procurement	11	What is the proposed procurement route and recommendations	Design Team
1	Preparation & Brief	3	MIDP, TIDP, CIC Protocol & Procurement	12	Is there a means of controlling distribution of documents	Design Team
1	Preparation & Brief	3	MIDP, TIDP, CIC Protocol & Procurement	13	How will the client be consulted with respect to detailed changes to designs & brief	Design Team

2	Concept Design	4	Outline Model Proposals & Energy Analysis.	14	How would the outline development look [early stage visualisation]	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	15	What is the outline proposal for space design	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	16	What are the zoning designs for services systems	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	17	Can Building Regulations Part L and EPC requirements be met	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	18	Has the concept been designed for Lean manufacture, construction and assembly	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	19	Has the concept been designed for Green manufacture, construction and assembly	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	20	Have any client specific space requirements been met	Design Team
2	Concept Design	4	Outline Model Proposals & Energy Analysis.	21	Are there any deviations from the brief or proposals to improve it	Design Team



## Stage 2: MCP Twice Weekly Face to Face Collaboration – Pre Covid 19



**Big BIM Room**





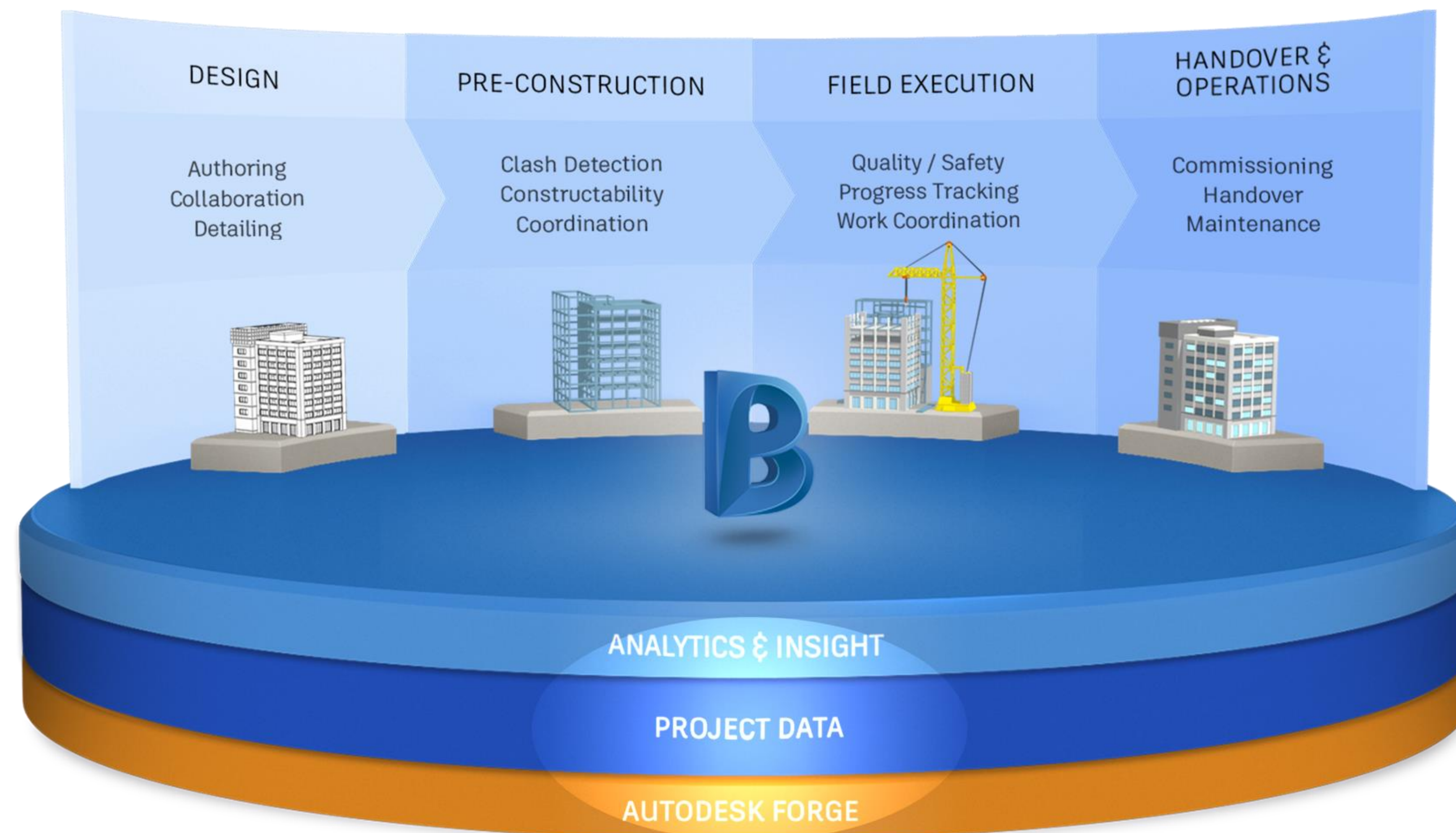
## Stage 2: MCP Twice Weekly Meetings Move to Online Collaboration

- **University closed Thursday March 12<sup>th</sup> @ 16.00pm – class fully up and running online for 18.00pm.**
- Structured Module with pre-defined deliverables, dates, requirements & resources allowed for this easy transition.
- Cloud Collaboration achieved using BIM 360 & College Virtual Learning Environment (VLE) Brightspace ‘Virtual Classroom’.




## Client Resources – Autodesk BIM 360 Design

Main Set Up before Start of Module – Final Set-up after First Team Meetings






AUTODESK® BIM 360™
|
TU Dublin - SoMT

Account Admin

PROJECTS


MEMBERS

COMPANIES


## Project Directory

The Project Directory lists all projects in your account.

Add

 Search projects

6 Current Projects   <a href="#">View Archived</a>		
Name ▲	Members	Companies
 TU Dublin - MCP Team 1 - 2020	6	5
 TU Dublin - MCP Team 2 - 2020	6	6
 TU Dublin - MCP Team 3 - 2020	6	6
 TU Dublin - MCP Team 4 - 2020	6	6
 TU Dublin - MCP Team 5 - 2020	6	6
 TU Dublin - MCP Team 6 - 2020	5	4


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TU Dublin - SoMT

Account Admin

PROJECTS


MEMBERS

COMPANIES













## Company Directory

The Company Directory lists your partner companies. This list includes both companies currently in use to make available in projects.

Add

 Search

44 Companies

Name ▲	Trade
 MCP - Arch - T5 - 2020	Architecture
 MCP - Arch - T6 - 2020	Architecture
 MCP - ArchTech - T1 - 2020	Arch Tech
 MCP - ArchTech - T2 - 2020	Arch Tech
 MCP - ArchTech - T3 - 2020	Arch Tech
 MCP - ArchTech - T4 - 2020	Arch Tech
 MCP - ArchTech - T5 - 2020	Arch Tech
 MCP - ArchTech - T6 - 2020	Arch Tech
 MCP - ConstMgt - T1 - 2020	Construction Management
 MCP - ConstMgt - T2 - 2020	Construction Management
 MCP - ConstMgt - T3 - 2020	Construction Management
 MCP - ConstMgt - T4 - 2020	Construction Management



## Project Admin

MEMBERS

COMPANIES

SERVICES

PROFILE

### Project Members

Project Members lists all members of your project. This list includes pending members who have been invited to services but not yet activated their accounts as well as inactive members who were disabled by an account admin.

Add

Manage Classic Apps



<input type="checkbox"/>	Name	Status	Email	Company	Role	Project Admin											
<input type="checkbox"/>	AM Ameen Mui...	Active	t14445868@myt...	MCP - ArchTec...	Architectural ...												
<input type="checkbox"/>	Emma Hayes	Active	emma.hayes@tu...	TU Dublin - So...	Owner												
<input type="checkbox"/>	Kevin Furlong	Active	kevin.furlong@t...	TU Dublin - So...	Owner												
<input type="checkbox"/>	KO kevin.oneill	Active	t13439668@myt...	MCP - Geo - T1 ...	Geo Surveyor												
<input type="checkbox"/>	RB Richard Bol...	Active	d18127017@mytu...	MCP - ConstMg...	Construction ...												
<input type="checkbox"/>	RK Roqaya Abo...	Active	d18125523@myt...	MCP - Arch - T1...	Architect												


Filters

SERVICE

	Design Collaborati...	6
	Cost Management	6
	Document Manage...	6
	Field Management	6
	Model Coordination	6
	Insight	6
	BIM 360 Plan	1
	Project Manageme...	6




## Stage 2: MCP CDE – BIM 360 Design – Set-Up - *Procurement*

 AUTODESK® BIM 360™ | [TU Dublin - SoMT](#) > [TU Dublin - MCP Team 1 - 2020](#) ▼

Project Admin

MEMBERSCOMPANIESSERVICESPROFILE



TU Dublin -  
MCP Team 1 -  
2020

● Active

Project Type

Student Accommodation

Construction Type

New Construction

Project Value

30,000,000 EUR

Contract Type

IPD

Project Date

Jan 28, 2020 to May 31, 2020

Project Job Number

MCP T1 2020



# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *Teams*

AUTODESK® BIM 360®
TU Dublin - SoMT > TU Dublin - MCP Team 1 - 2020

**Project Admin**

MEMBERSCOMPANIES**SERVICES**PROFILE

OverviewIssuesLocations

Document ManagementProject ManagementCost ManagementDesign CollaborationModel CoordinationField Management

BIM 360 Plan

TeamsManage Models

Add TeamManage team membersSchedule publishDeactivate team

The default location for newly added teams is /Project Files

	Team ^	Path
<input type="checkbox"/>	T1 - Arch Design WIP	/Project Files/T1 - Arch Design WIP
<input checked="" type="checkbox"/>	T1 - Arch Tech Design WIP	/Project Files/T1 - Arch Tech Design WIP
<input type="checkbox"/>	T1 - Const Mgt - WIP	/Project Files/T1 - Const Mgt - WIP
<input type="checkbox"/>	T1 - Geo Survey - WIP	/Project Files/T1 - Geo Survey - WIP
<input type="checkbox"/>	T1 - MEP Design - WIP	/Project Files/T1 - MEP Design - WIP
<input type="checkbox"/>	T1 - Struct Design - WIP	/Project Files/T1 - Struct Design - WIP



Manage members of T1 - Arch Tech Design WIP



Add existing team members or invite new team members into this team.

Enter roles, companies, or individual names

Add

**i** Permission level

View + edit

Name ^

Permission level

Type

Ameen Mubideen

View + edit + share

User

Remove

Emma Hayes

View + edit + share + control

User

Inherited

Kevin Furlong

View + edit + share + control

User

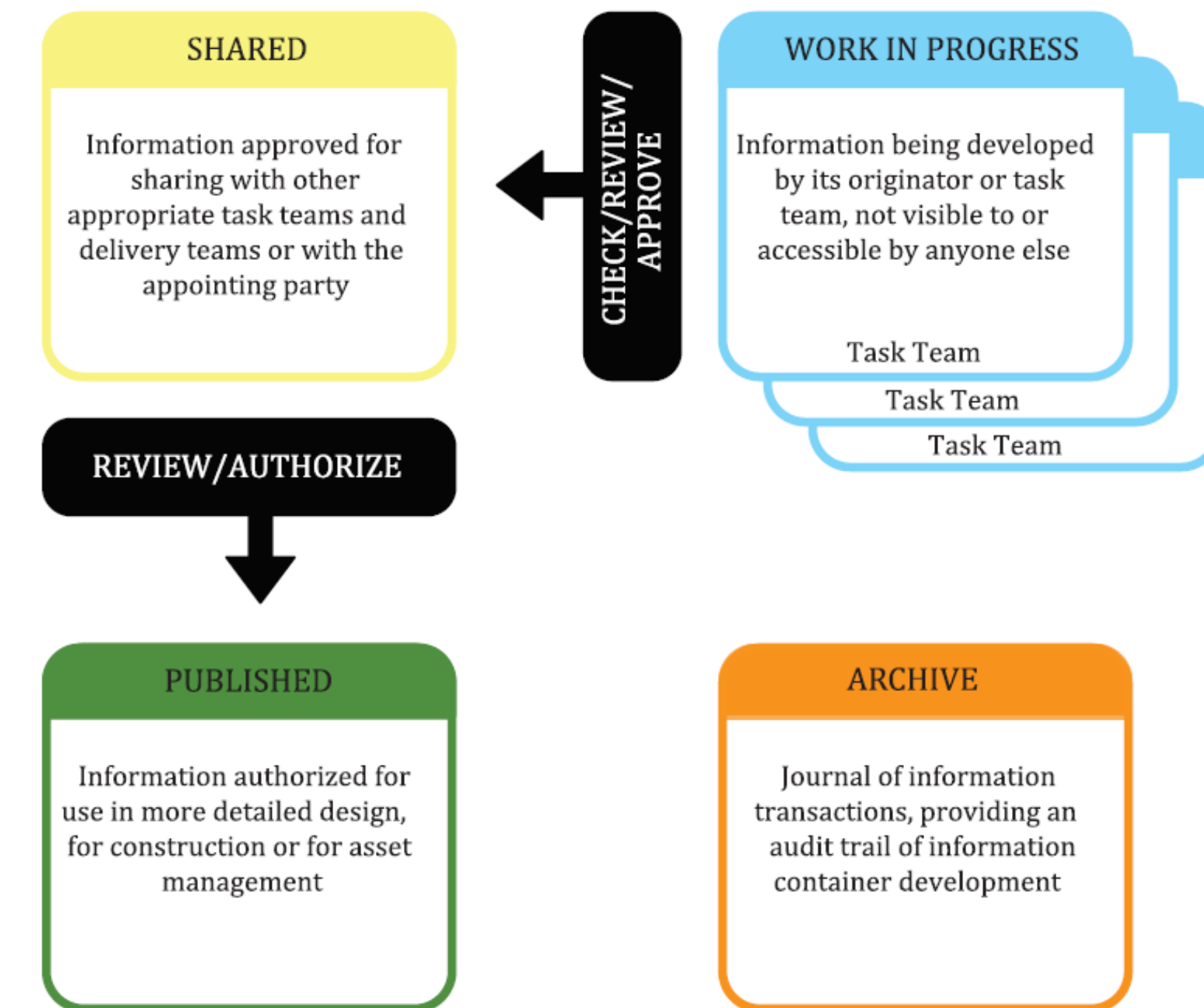
Inherited

Close



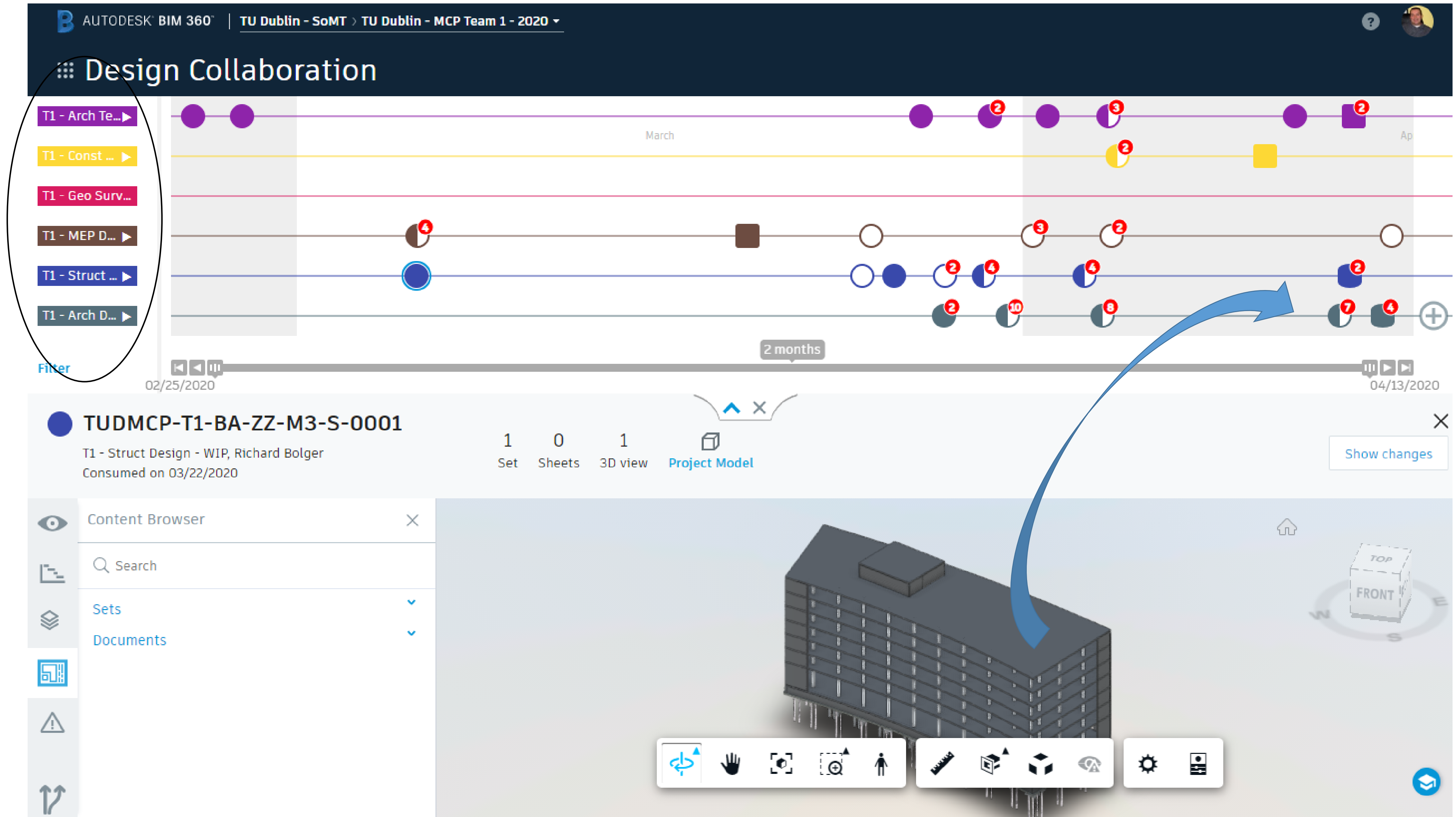
# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *Workflow*

The screenshot displays the Autodesk BIM 360 Document Management interface. The top navigation bar shows the project path: TU Dublin - SoMT > TU Dublin - MCP Team 1 - 2020. The main area is divided into 'Document Management' and 'Document' sections. A context menu is open over a folder, listing actions: Add subfolder, Rename, Upload, Share, Add attributes, Move folder, Sort by, Delete, Permissions (highlighted with a red circle), PDF Viewer, Subscribe, Submit for review, and Create transmittal. The folder structure on the left includes 'Plans', 'Project Files', 'Client Documentation', 'Published', 'Shared' (highlighted with a red circle), and 'Consumed'. The 'Shared' folder contains several subfolders, including 'T1 - Arch Design WIP' (highlighted with a red circle).








# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *Collaboration*





# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *RFIs*

<div>  AUTODESK® BIM 360® </div> <div> <a href="#">TU Dublin - SoMT</a> &gt; <a href="#">TU Dublin - MCP Team 1 - 2020</a> </div>							
<div>  Project Management </div> <div> <div>RFIs</div> <div>SUBMITTALS</div> <div>MEETINGS</div> </div>							
<div>  <div> <input type="text" value="Search RFI"/> </div> <div>Export</div> </div>							
Status	ID ▼	Title	Assigned to	Company	Due date	Location	
CLOSED	-	Coordination model request	kevin oneill	MCP - Geo - T1 - 2020	Feb 25, 2020		
OPEN	12	No Door to apartment on Level 02 and above	kevin oneill	MCP - Geo - T1 - 2020	Apr 13, 2020		
OPEN	11	Architectural Layout Level 02 & Level 03	kevin oneill	MCP - Geo - T1 - 2020	-		
CLOSED	10	Electrical Room Level 8	Richard Bolger	MCP - ConstMgt - T1 - 2020	Mar 29, 2020	Level 8	
CLOSED	9	Surface elevation correction	kevin oneill	MCP - Geo - T1 - 2020	Mar 29, 2020		
CLOSED	8	Ground Floor Layout	Richard Bolger	MCP - ConstMgt - T1 - 2020	Mar 29, 2020		
CLOSED	7	Incomplete room layout around atrium	Richard Bolger	MCP - ConstMgt - T1 - 2020	Mar 29, 2020	Second atrium	
CLOSED	6	Room Layout Incomplete on L2 & L3	Richard Bolger	MCP - ConstMgt - T1 - 2020	Mar 29, 2020	L2 & L3	



# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *RFIs*

RFI

#Unspecified

SUBMITTED

Your action is required

Submit to Reviewer

DETAILS

ATTACHMENTS

ACTIVITY

Floor Slab to Bathroom Pots

Assigned to

chao chen

Due date

Apr 13, 2020

Cost impact

Unspecified

Schedule impact

Unspecified

Question

Hi Kieran

the floor slab is 250mm Plus the finish layer, may I ask that can we make a cranked beam under the Bathroom pots units just lower down 100mm to make the floor in the same level.

Suggested answer

Add suggested answer



# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *Meetings*

AUTODESK® BIM 360® | TU Dublin - SoMT > TU Dublin - MCP Team 1 - 2020 ▾

**Project Management** RFI's SUBMITTALS **MEETINGS**

Showing all your meetings, select a date or range to filter

< April 2020 >

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

☐ Select range

Today Week Month

Clear

Title	Date	Time
01 BIM Coordination Meeting	Tue Mar 31	7:00 PM to 9:00 PM
01 BIM Production Project Tracking Meeting	Thu Mar 26	6:00 PM to 9:00 PM
01 BIM Coordination Meeting	Tue Mar 24	6:00 PM to 9:00 PM
01 BIM Production Project Tracking Meeting	Wed Mar 18	6:00 PM to 9:00 PM
01 BIM Coordination Meeting	Thu Mar 05	6:00 PM to 9:00 PM
01 BIM Production Project Tracking Meeting	Tue Mar 03	6:00 PM to 9:00 PM
01 BIM Coordination Meeting	Thu Feb 27	6:00 PM to 9:00 PM
01 BIM Production Project Tracking Meeting	Tue Feb 25	6:00 PM to 9:00 PM
01 BIM CO-Ordination Meeting	Thu Feb 20	6:00 PM to 9:00 PM
01 BIM Production Programme Tracking Mee...	Tue Feb 18	6:00 PM to 9:00 PM
01 BIM Co-Ordination Meetings	Thu Feb 13	6:00 PM to 9:00 PM

AUTODESK® BIM 360® | TU Dublin - SoMT > TU Dublin - MCP Team 1 - 2020 ▾

**Project Management** RFI's SUBMITTALS **MEETINGS**

< 01 BIM Coordination Meeting Mar 31, 2020

Filters ▾

**01 BIM Coordination Meeting** **MINUTES**

Date Mar 31, 2020 Time 07:00 PM - 09:00 PM Location GoToMeetings

**Description**  
Clash avoidance coordination and model progression update

**Meeting Discussion**

▼ **Clash avoidance**

- Federartion report presented and discussed. **CLOSED**
- Clash resolution requests discussed. **CLOSED**
- Furhter issues highlighted in relation to space constraints within the ceiling to slab opening. **CLOSED**
- Resolution proposed and agreed. **CLOSED**

▼ **Design coordination**



# Stage 2: MCP CDE – BIM 360 Design – Set-Up - *Issues*

Issues Templates

Search

ID	Type	Sub-type	Title
35	Design	Work to Complete	Stage 4A : Developed Information
34	Design	Work to Complete	Stage 4A : Updated Federated Clash Detection Report
33	Design	Work to Complete	Stage 4A : Updated Federated Model
32	Design	Work to Complete	Stage 4A : Updated Models
31	Design	Work to Complete	Stage 4A : PIR Response
30	Design	Work to Complete	Stage 4A : Energy Analysis Report
29	Design	Work to Complete	Stage 4A: Updatd MIDP & TIDP's
28	Design	Work to Complete	Stage 4A : Updated MDI
27	Design	Work to Complete	Stage 3 : Architectural GA Information
26	Desian	Work to Complete	Stage 3 : Area Schedule

Issue  
#35

OPEN

DETAILS ATTACHMENTS ACTIVITY

Stage 4A : Developed Information

Created by (MCP - Arch - T2 - 2020) on Apr 6, 2020

Assigned to  
Unspecified

Due Date  
Apr 16, 2020

Location  
Unspecified

Location Details  
Unspecified

Linked document  
Unspecified

Type  
Design > Work to Complete

Owner  
John Mc Enroy

Root Cause  
Documentation Incomplete

Description  
Add description

## Stage 2: MCP CDE – BIM 360 Design – Set-Up – *Review & Feedback*

**AUTODESK® BIM 360®** | [TU Dublin - SoMT](#) > [TU Dublin - MCP Team 6 - 2020](#)

**Document Management** FOLDERS **REVIEWS** TRANSMITTALS ISSUES

Filter ▼

Status	ID ▼	Review name	Workflow	Initiated by	Next action by	Next action due	Documents	Approved	Rejected
CLOSED	10	Team 6 - COBie Spreadsheet - Data-Dr...	Data Drop Single Stage Workflow	Kevin Furlong	--	--	1	1	0
CLOSED	9	Team 6 - Data Drop 5 & 6 Federated R...	Data Drop Single Stage Workflow	Kevin Furlong	--	--	4	4	0
CLOSED	8	Team 6 - Data Drop 5 & 6 Architectural...	Data Drop Single Stage Workflow	Kevin Furlong	--	--	1	1	0
CLOSED	7	Team 6 - Data Drop 5 & 6 Structural R...	Data Drop Single Stage Workflow	Kevin Furlong	--	--	4	4	0
CLOSED	6	Team 6 - Data Drop 5 & 6 MEP Review	Data Drop Single Stage Workflow	Kevin Furlong	--	--	20	20	0
CLOSED	5	Team 6 - Data Drop 5 & 6 Architectural...	Data Drop Single Stage Workflow	Kevin Furlong	--	--	13	13	0
CLOSED	4	Data Drop Single Stage Workflow	Data Drop Single Stage Workflow	Emma Hayes	--	--	4	4	0
CLOSED	3	Data Drop Single Stage Workflow	Data Drop Single Stage Workflow	Emma Hayes	--	--	5	4	1
CLOSED	2	Data Drop Single Stage Workflow	Data Drop Single Stage Workflow	Emma Hayes	--	--	11	11	0
CLOSED	1	Data Drop Single Stage Workflow	Data Drop Single Stage Workflow	Emma Hayes	--	--	6	6	0

Full Review Workflow Set Up for Every Document within Every Data-Drop – With Approval Status & Full Feedback (approx 50 Files, Models & Sheets per data-Drop per Team) (Approximately 300 Files per Data-drop for Approval / Feedback. Total circa 2,700 Files)



# Stage 2: MCP CDE – BIM 360 Design – Set-Up – *Review & Feedback*

AUTODESK® BIM 360™ | TU Dublin - SoMT > TU Dublin - MCP Team 6 - 2020 ▾

**Document Management** FOLDERS REVIEWS TRANSMITTALS ISSUES

Reviews > Review detail

**CLOSED #6**

Team 6 - Data Drop 5 & 6 MEP Review

Export Report ▾

This review is closed.

Name ^	Description	Version	Markup	Comments	Approval status	Action upon completion	
00120-MEC-01-00-DR-M-1100....	Level 00 - HVAC Zo...	V1	1	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-00-DR-M-1105....	Level 00 - Plumbin...	V1	0	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-00-DR-M-1110....	Level 00 - Lighting ...	V1	0	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-01-DR-M-1101....	Level 01 - HVAC Zon...	V1	0	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-01-DR-M-1106....	Level 01 - Plumbing...	V1	0	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-01-DR-M-1111.p...	Level 01 - Lighting ...	V1	0	No comments yet.	Approved w...	Updated documen...	
00120-MEC-01-02-DR-M-1102....	Level 02 - HVAC Zon...	V1	0	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-02-DR-M-1107....	Level 02 - Plumbing...	V1	0	<a href="#">1 Comment</a>	Approved w...	Updated documen...	
00120-MEC-01-03-DR-M-1112....	Level 03 - Lighting ...	V1	0	No comments yet.	Approved w...	Updated documen...	

## PROGRESS

Initiator Initial Review ^



**Kevin Furlong**

Apr 10, 12:22 PM

<kevin.furlong@tudublin.ie>

Submitted to Approver

Approver Final Review ^



**Kevin Furlong**

Apr 11, 12:36 PM

<kevin.furlong@tudublin.ie>

Review ended  
Really excellent submission outside of your main discipline - well done.  
Please see all comments on each file.

Review closed

# Stage 2: MCP CDE – BIM 360 Design – Set-Up – Review & Feedback - Reports

File Home Share View

Navigation pane Details pane

Extra large icons Large icons Medium icons Small icons List Details Tiles Content

Group by Add columns Size all columns to fit

Item check boxes File name extensions Hidden items

Stage 2 - Multidisciplinary Collaboration Project > Final Assessment Results > Data Drop Review Reports

Name	Date modified
TU Dublin - MCP Team 5 - 2020_Data Drop Single Stage Workflow_2020-04-11 (1).xlsx	11/04/2020 13:51
TU Dublin - MCP Team 5 - 2020_Data Drop Single Stage Workflow_2020-04-11 (2).xlsx	11/04/2020 13:51
TU Dublin - MCP Team 5 - 2020_Data Drop Single Stage Workflow_2020-04-11.xlsx	11/04/2020 13:50
TU Dublin - MCP Team 4 - 2020_Data Drop Single Stage Workflow_2020-04-11.xlsx	11/04/2020 13:24
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-04-11.xlsx	11/04/2020 13:08
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-04-11 (4).xlsx	11/04/2020 13:07
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-04-11 (3).xlsx	11/04/2020 13:06
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-04-11 (2).xlsx	11/04/2020 13:06
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-04-11 (1).xlsx	11/04/2020 13:05
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-04-10.xlsx	11/04/2020 13:04
TU Dublin - MCP Team 3 - 2020_Data Drop Single Stage Workflow_2020-04-10 (2).xlsx	10/04/2020 10:35
TU Dublin - MCP Team 3 - 2020_Data Drop Single Stage Workflow_2020-04-10 (1).xlsx	10/04/2020 10:35
TU Dublin - MCP Team 1 - 2020_Data Drop Single Stage Workflow_2020-04-07 (2).xlsx	10/04/2020 10:04
TU Dublin - MCP Team 1 - 2020_Data Drop Single Stage Workflow_2020-04-07 (1).xlsx	10/04/2020 10:04
TU Dublin - MCP Team 2 - 2020_Data Drop Single Stage Workflow_2020-04-09 (2).xlsx	10/04/2020 10:03
TU Dublin - MCP Team 2 - 2020_Data Drop Single Stage Workflow_2020-04-09 (1).xlsx	10/04/2020 10:03
TU Dublin - MCP Team 5 - 2020_Data Drop Single Stage Workflow_2020-03-15.xlsx	18/03/2020 20:50
TU Dublin - MCP Team 4 - 2020_Data Drop Single Stage Workflow_2020-03-15 (2).xlsx	18/03/2020 20:16
TU Dublin - MCP Team 1 - 2020_Data Drop Single Stage Workflow_2020-03-16.xlsx	18/03/2020 19:16
General Feedback.docx	16/03/2020 20:47
TU Dublin - MCP Team 3 - 2020_Data Drop Single Stage Workflow_2020-03-16.xlsx	16/03/2020 17:03
TU Dublin - MCP Team 2 - 2020_Data Drop Single Stage Workflow_2020-03-16.xlsx	16/03/2020 12:39
TU Dublin - MCP Team 4 - 2020_Data Drop Single Stage Workflow_2020-03-05 (2).xlsx	16/03/2020 10:31
TU Dublin - MCP Team 4 - 2020_Data Drop Single Stage Workflow_2020-03-05 (3).xlsx	16/03/2020 10:31
TU Dublin - MCP Team 3 - 2020_Data Drop Single Stage Workflow_2020-03-05.xlsx	16/03/2020 10:31
TU Dublin - MCP Team 3 - 2020_Data Drop Single Stage Workflow_2020-03-05 (1).xlsx	16/03/2020 10:31
TU Dublin - MCP Team 2 - 2020_Data Drop Single Stage Workflow_2020-03-05.xlsx	16/03/2020 10:30
TU Dublin - MCP Team 5 - 2020_Data Drop Single Stage Workflow_2020-03-06.xlsx	16/03/2020 10:30
TU Dublin - MCP Team 5 - 2020_Data Drop Single Stage Workflow_2020-03-06 (1).xlsx	16/03/2020 10:30
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-03-06.xlsx	16/03/2020 10:30
TU Dublin - MCP Team 6 - 2020_Data Drop Single Stage Workflow_2020-03-06 (1).xlsx	16/03/2020 10:30







A1

PROJECT NAME	
TU Dublin - MCP Team 4 - 2020	
Report generated	Apr 11, 2020 12:14 PM
By	Kevin Furlong
Total documents	23
Approved documents	20
Rejected documents	3
Status	closed

REVIEWED DOCUMENTS							Reviewer and Comments	
							Initiator	Final Review
							Kevin Furlong	Kevin Furlong
4	Name	Description	Version	Markup	Approval status	Action upon completion		
5	TM4-DM-ZZ-XX-M3-MEP-0001	Mechanical and electrical model V2		6	Rejected	Updated document approval status		
6	TM4-DM-ZZ-XX-M3-S-0001	Structural Design model	V2	2	Approved w/ comments	Updated document approval status		
7	TM4-DMS-ZZ-00-DR-ME-1000	coordinated plan	V1	2	Approved w/ comments	Updated document approval status		



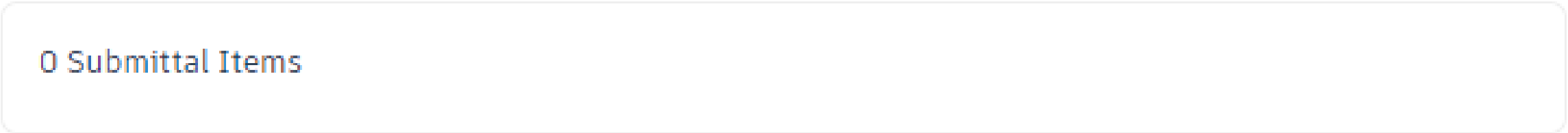
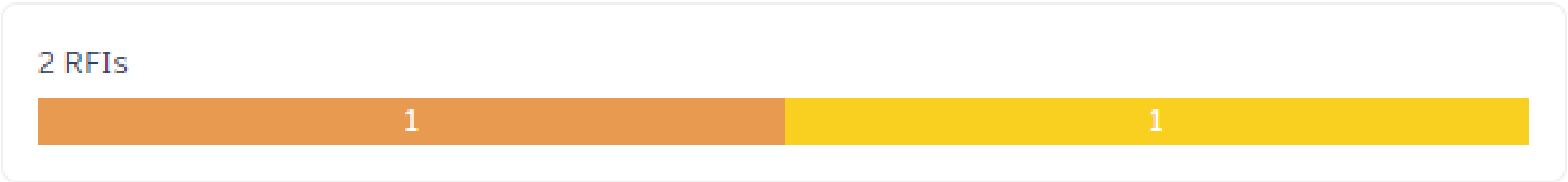
## Design Packages

Package Title	Created By	Date
 TUDMCP-T1-BA-ZZ-M3-E-0001	Richard Bolger	Yesterday
 TUDMCP-T1-BA-ZZ-M3-A-0001	Rogaya Abou Klaitb	Yesterday
 TUDMCP-T1-XX-XX-M3-L-0001	Rogaya Abou Klaitb	Yesterday
 TUDMCP-T1-BA-ZZ-M3-S-0001	Rogaya Abou Klaitb	Apr 12, 2020
 TUDMCP-T1-BA-ZZ-M3-A-0002	Rogaya Abou Klaitb	Apr 12, 2020
 TUDMCP-T1-BA-ZZ-M3-A-0001	Rogaya Abou Klaitb	Apr 11, 2020



6 of 66 Packages | [View all \(66\)](#)

## Open RFIs and Submittals

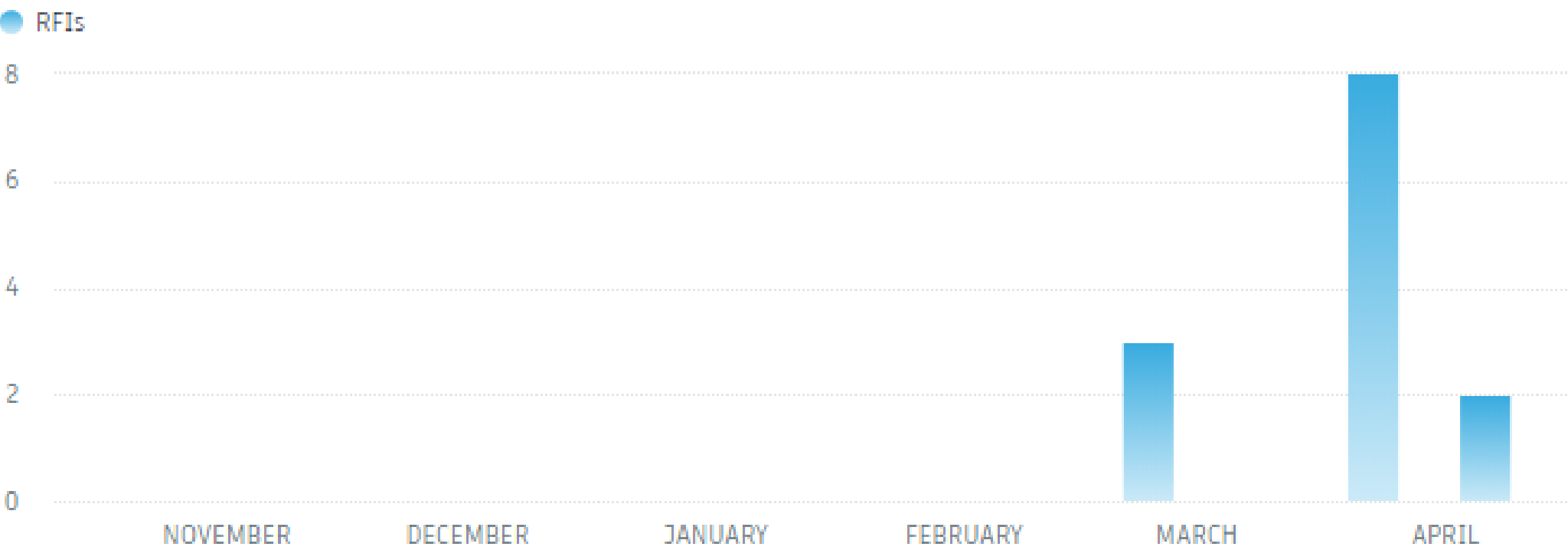
 Overdue
  Due in the next 5 days
  Due after 5 days



## Project RFIs

ID	Title	Due Date
 12	No Door to apartment on Level 02 and above	Yesterday
 11	Architectural Layout Level 02 & Level 03	

## RFI Activity



AUTODESK BIM 360

TU Dublin - SoMT > TU Dublin - MCP Team 1 - 2020

**Project Admin**

MEMBERSCOMPANIESSERVICESPROFILE

OverviewIssuesLocations

Document ManagementProject ManagementCost ManagementDesign CollaborationModel CoordinationField Management

BIM 360 Plan

ActivityAdvanced SettingsReviewsRevit Cloud Model Upgrade

Export

3:56 PM

Richard Bolger changed the Description for [TUDMCP-T1-BA-ZZ-DR-E-0004...](#) from "" to "Level 02 - Electrical - Grid 1-8" in the [Electrical](#) folder.

3:56 PM

Richard Bolger changed the Description for [TUDMCP-T1-BA-ZZ-DR-E-0003...](#) from "" to "Level 02 - Keyplan" in the [Electrical](#) folder.

3:56 PM

Richard Bolger changed the Description for [TUDMCP-T1-BA-ZZ-DR-E-0002...](#) from "" to "Level 01 - Reflected Ceiling" in the [Electrical](#) folder.

3:56 PM

Richard Bolger changed the Description for [TUDMCP-T1-BA-ZZ-DR-E-0001....](#) from "" to "Perspective of Electrical Syste... " in the [Electrical](#) folder.

3:48 PM

Richard Bolger changed the attribute Revision value to P02 for the document [TUDMCP-T1-BA-ZZ-DR-S-0024...](#) in the [Structural](#) folder.

3:48 PM

Richard Bolger changed the attribute Revision value to P02 for the document [TUDMCP-T1-BA-ZZ-DR-S-0023...](#) in the [Structural](#) folder.

3:48 PM

Richard Bolger changed the attribute Revision value to P02 for the document [TUDMCP-T1-BA-ZZ-DR-S-0022....](#) in the [Structural](#) folder.

[Load more for Yesterday](#)

Previous 7 days

Previous 30 days

Last 3 months



# Project Findings & Lessons Learned





# Projects brought from Design to Tender Stage

## Module Team Deliverables:

- Development of Project Team CDE to Record Collaboration & Design
- Project Decision Stages & Data Drop Requirements
- Project Information Requirements Response's
- Development & Use of CDE using Autodesk BIM 360
- Final Design, Tender Package & Presentations
- Final CDE Development to Appropriate Standards
- Individual Reflective Writing Paper (30% of Module Grade)



# Autodesk BIM 360 Design – Findings & Lessons

- BIM 360 - has proved to be a complete game changer on the module – (Pre & Post Covid 19) – with the entire module data fully captured and recorded within a single source.
- With a structured and deliberate approach, a proper low-trust WIP environment can be set up that affords compliance with the new standards – (ISO 19650)
- As shown earlier it can be set-up to match any procurement methodology with clever permissions and team formations assigned
- Allowed for excellent cloud collaboration and work-sharing throughout the module – with seamless Revit Integration and it now also accepts MS Office files
- As shown previously there is excellent Document and Collaboration tracking with full activity analytics that could inform further research
- Educationally we adapted the software to provide immediate reviews and feedback with appointed status and reports on all published files & models.
- Very positive feedback from participants (especially since covid 19 allowing the module to continue uninterrupted)
- We are still carrying out further research on the analytics of the entire module as many other benefits appeared to emerge through the design stages



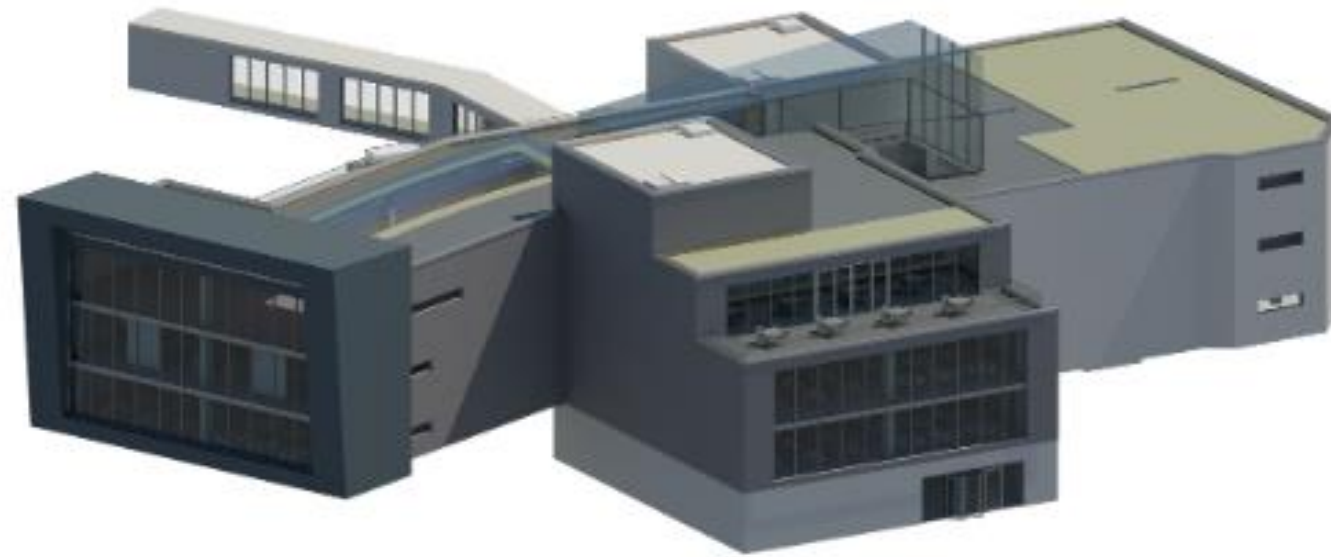
## Concept Stage Examples:





# Detailed Design & Tender Stage Examples:

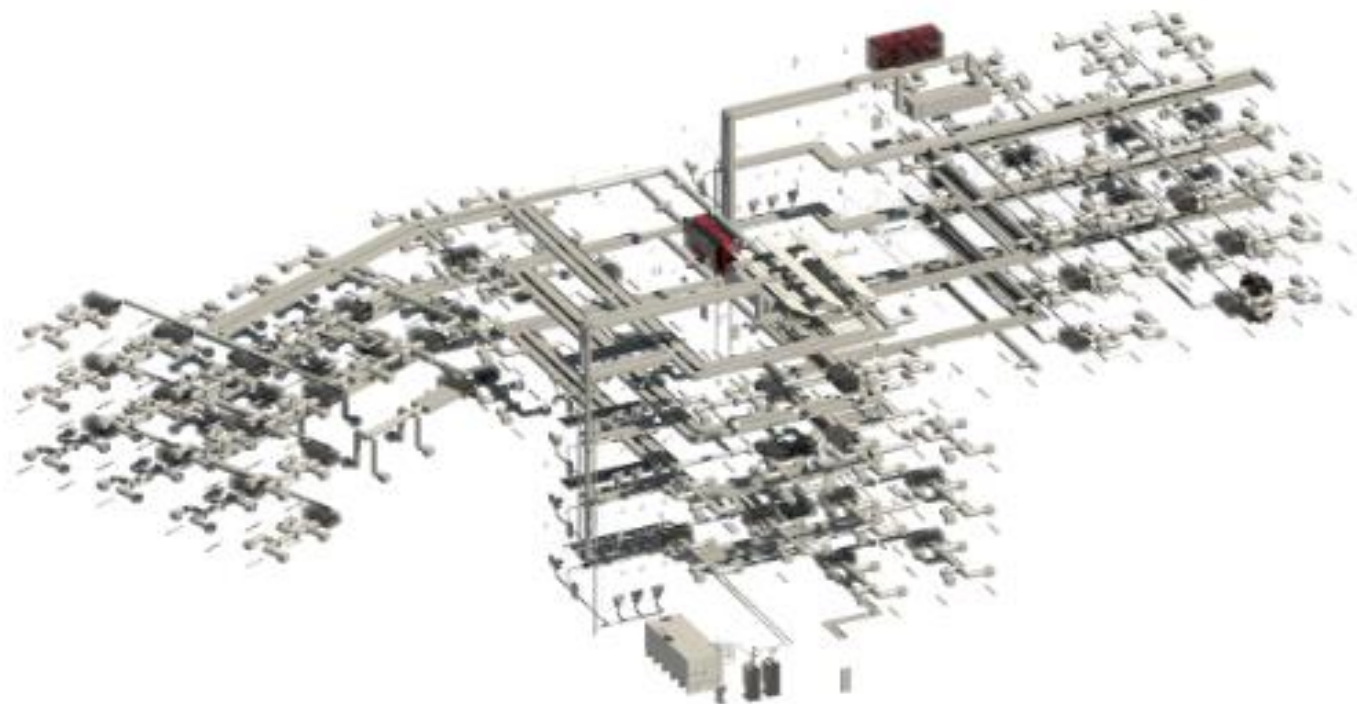
Architectural Information Model



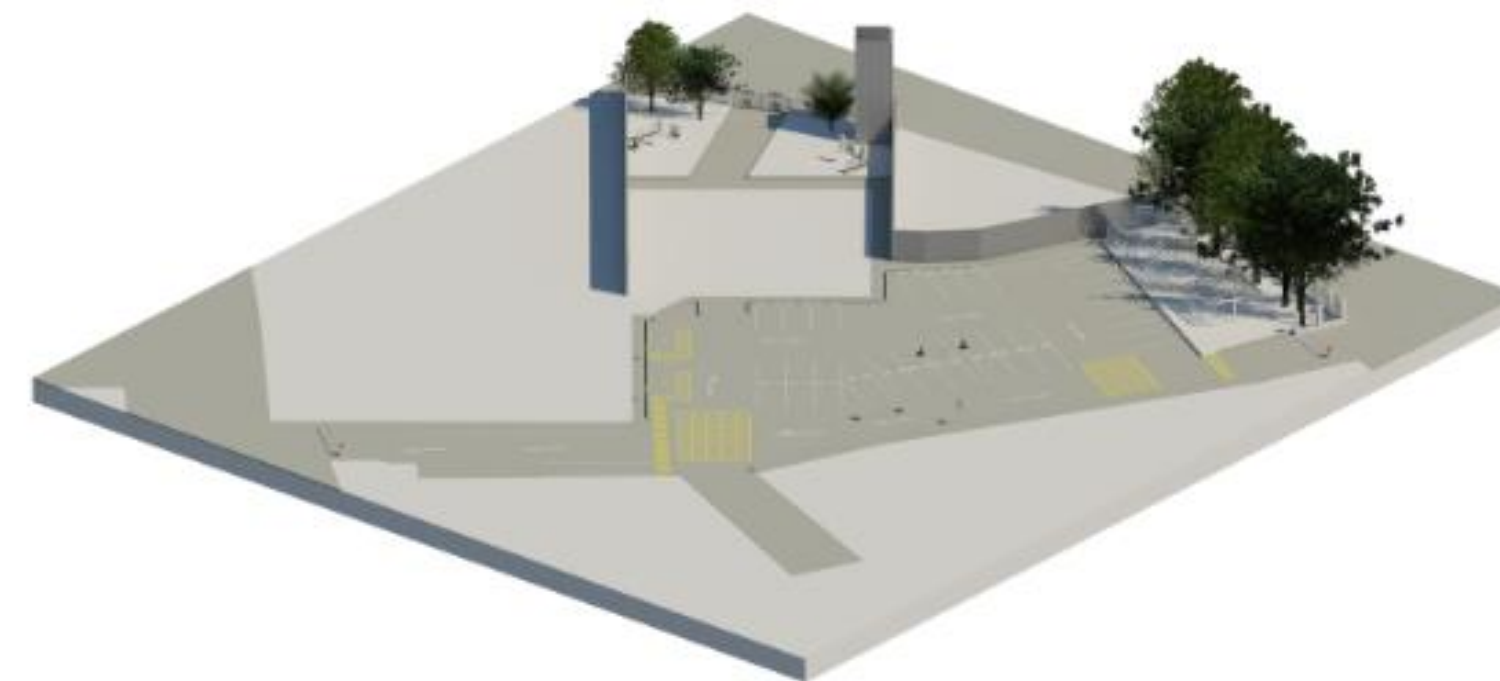
Structural Information Model



MEP Information Model



Civil Information Model





# Detailed Design & Tender Stage Examples:



Ireland's Top 10  
Construction &  
Engineering  
companies  
employ our  
graduates

8,000m<sup>2</sup> of flexible  
space for a unique  
education, research,  
and recreation  
facility

Up to 8,000  
students  
taking part in  
collaborative  
educational  
activities each year

Supported by  
leading  
international and  
national AEC  
leaders as well as  
Enterprise Ireland

€22 Million  
investment for one-  
of-a-kind centre in  
Ireland





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