

Project Name: Extension 4005

UPRN Code: 0001

Originator Code: UWTSD

Role Code: CM

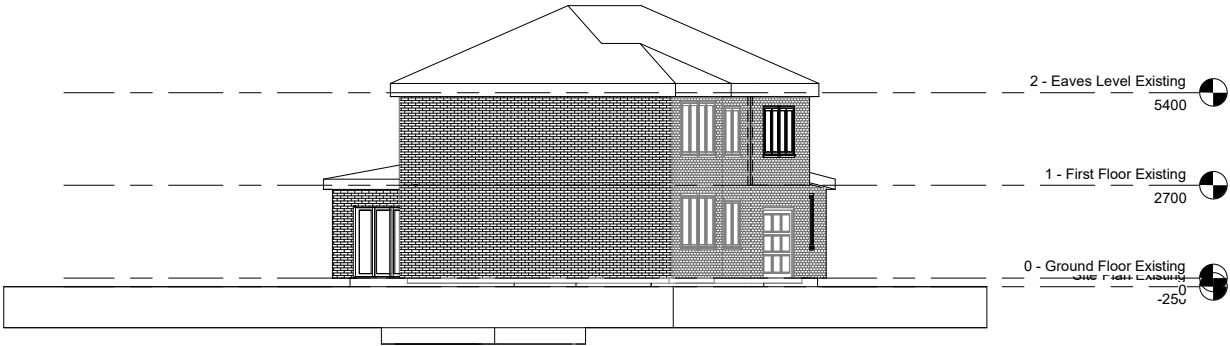
Drawn By: RL

Checked By: GT

Date: 22/04/2024

Project Status: S3

1 East
1 : 100



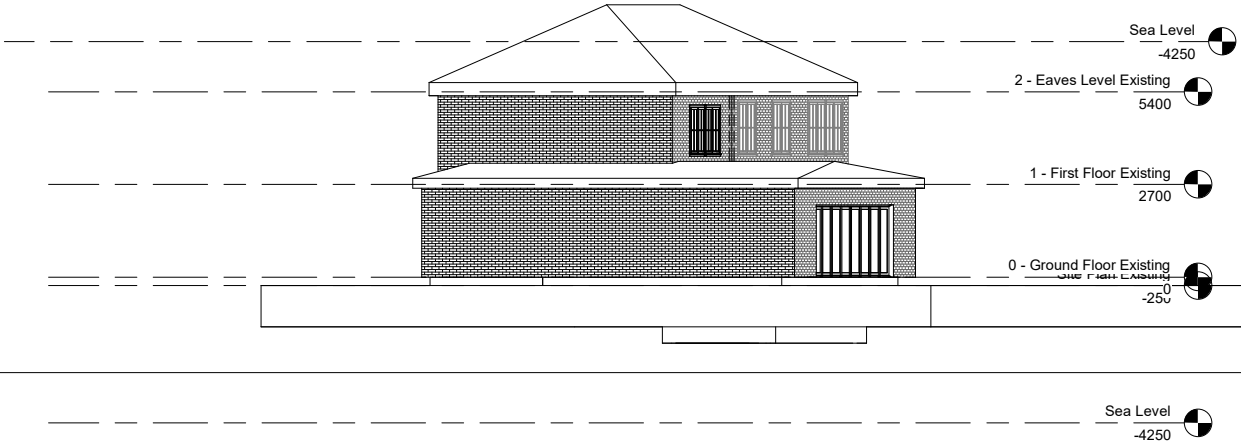
2 North
1 : 100



3 South
1 : 100



4 West
1 : 100



Property Title
Extension 4005

Detail
Elevations

Property	Originator	Zone	Level	Type	Role	Number	Description	Suitability	Revision
0001	UWTSD	XX	ZZ	DR	CM	0001	Elevations	S3	
File Path: C:\Users\robyn\OneDrive\Year 1\BIM\Revit Series\Assignment\4005-UWTSD-XX-ZZ-M-CM-0001-EXTENSION.rvt									

scale

1 : 100

date

22/04/24

drawn

RL

checked

GT

Prifysgol Cymru Y Drindod Dewi Sant
University of Wales Trinity Saint David
SA1 Campus
Kings Road
Swansea
SA1 8RD



(S0) UNCONTROLLED
Not to be used as a
reference document
Check Status Before Quoting

Rev/Date/By

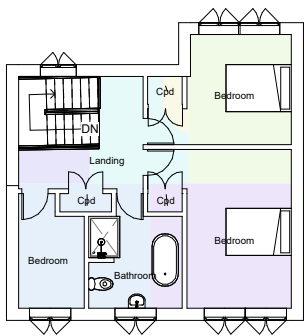
Revision



Room Legend

- Cpd
- Dining Room
- Garage
- Hallway
- Kitchen
- Lounge
- W.C

1 0 - Ground Floor Existing
1 : 100



Room Legend

- Bathroom
- Bedroom
- Cpd
- Dining Room
- Hallway
- Kitchen
- Landing
- Lounge
- W.C

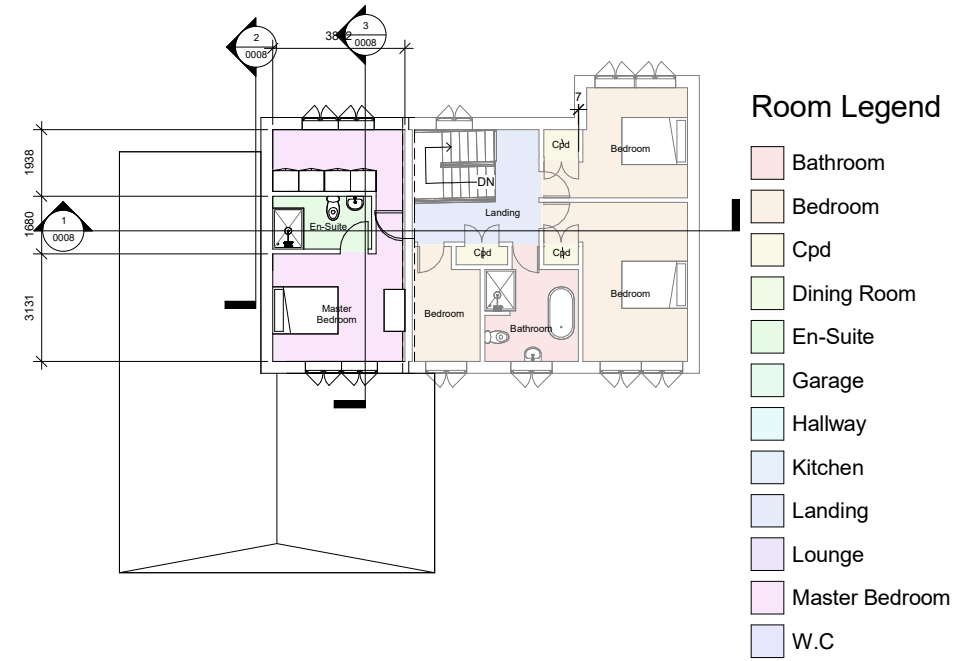
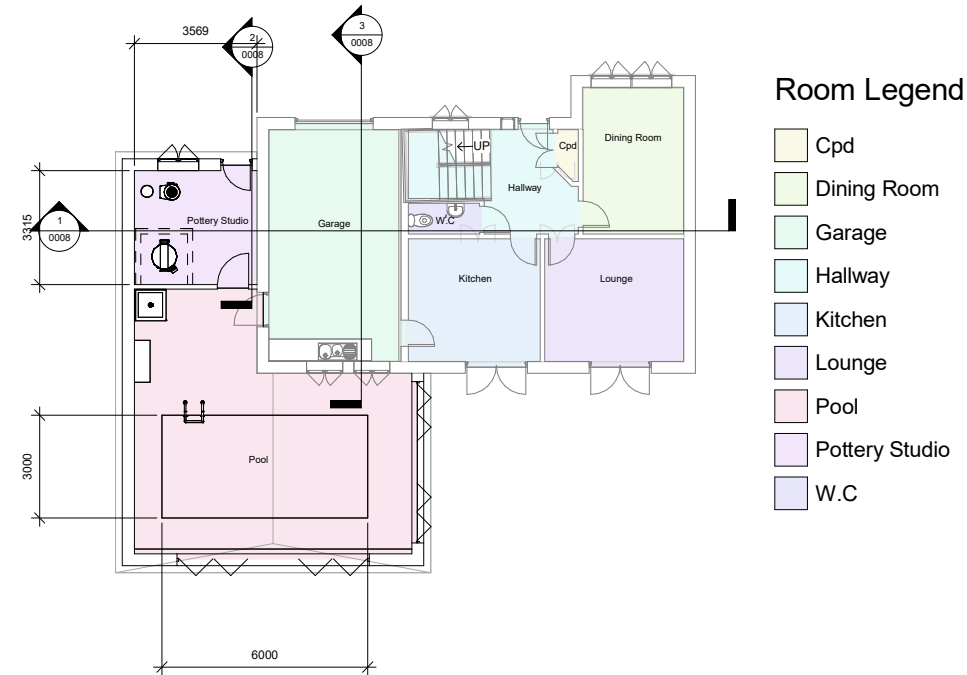
2 1 - First Floor Existing
1 : 100

0001
2

0001
2

0001
1

0001
1



1 0 - Ground Floor Proposed
1 : 100

2 1 - First Floor Proposed
1 : 100



1 Site Plan Existing
1 : 500



2 Site Location Plan
1 : 1250

Property Title Extension 4005	Detail Exisitng Site Plans	Property _ Originator _ Zone _ Level _ Type _ Role _ Number _ Description _ Suitability _ Revision										scale As indicated	drawn RL	 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Rev/Date/By Revision
		0001 _ UWTSD _ XX _ ZZ _ DR _ CM _ 0004 _ Exisitng Site Plans— S3 _										date	checked GT			
		File Path: C:\Users\robyn\OneDrive\Year 1\BIM\Revit Series\Assignment\4005-UWTSD-XX-ZZ-M-CM-0001-EXTENSION.rvt										22/04/2024				



1 Site Plan Proposed
1 : 500

Property Title Extension 4005	Detail Proposed Location Plan	Property — Originator — Zone — Level — Type — Role — Number — Description — Suitability — Revision	scale 1 : 500	drawn RL	 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Rev/Date/By Revision
		0001 — UWTS — XX — ZZ — DR — CM — 0005 — Proposed Location Plan — S3 —	date 22/04/2024	checked GT			
		File Path: C:\Users\robyn\OneDrive\Year 1\BIM\Revit Series\Assignment\4005-UWTS-XX-ZZ-M-CM-0001-EXTENSION.rvt					

Common Data Environment: an essential factor of BIM.

Common Data Environment (CDE) is an integrated BIM-based process, where digital information and documents are stored, shared, and managed collaboratively between all parties involved in the construction project, providing access to only the most up-to-date information, which results in an efficiently coordinated project.

The concept of a CDE originated from the need to improve the issues associated with managing construction projects. CDE's roots can be traced back to the introduction of Building Information Modelling (BIM). BIM is an information management process underpinned by collaborative working and digital technologies. (Institute, 2023) and plays a vital role in every stage of a construction project. As an extension to BIM, CDE provides access to information beyond digital drawings, such as planning documentation, reports, surveys etc. (Egnyte.com, 2023)

In 2011 the Government Construction Strategy introduced the Bew Richards Wedge, a useful diagram for the supply chain to identify what is to be delivered and the competences required at specific levels. (Mordue, 2019) These four BIM maturity levels can be seen in Figure 1.

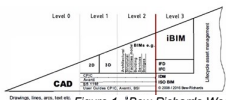


Figure 1 --Bew Richards Wedge (Traylor, 2024)

This strategy aimed at reducing the cost of the public sectors assets by 20% by 2016 and to achieve this, the government mandated that the supply chain tendering for government projects to be working at BIM Level 2. (Traylor, 2024) It was suggested to treat construction projects as assets, where the focus of the project would shift to include the handover sage, maintenance, as well as its end of life.

As the construction industry transitioned to digital based workflows, there was a growing need for a centralised repository to share the 'one truth' digital project information, where everyone involved in the construction project can see, store and work. This digital workspace with all the project information could be considered as a smart and safe filing cabinet. Every participant, from Architects to Engineers can use this system to make sure they are all looking at and working with the true plans and data, avoiding mistakes, and keeping everyone on the same page. (Traylor, 2024)

The CDE protects sensitive information by allowing only authorized users to access certain data, making sure the right people have the right information at the right time, but also has the ability to allow you to set different viewing rights, restricting access to certain documents from certain users. (Traylor, 2024) CDE provides version control by ensuring only the latest versions of data are available, reducing the risk of errors due to outdated information and maintains accountability. Additionally, CDE works seamlessly with other project management tools, streamlining workflows and boosting efficiency, making construction project more organised. (Will Doyle, 2024)

When first introduced, CDE was defined in BS 1192:2007, then PAS 1192:2013; these standards set out the guidelines for a Common Data Environment, which also set out four specific states that users would need to work a document through, to achieve a successful project. (AEC Hub , n.a) These four states are: -

- Work in Progress (WIP)** – at this stage, the work will only be available to the task team producing this work. (AEC Hub , n.a)
- Shared** – In this state, the information has been approved to be shared with authorised parties involved in the project but cannot be edited. (AEC Hub , n.a)
- Published** – This state is used for information that has been authorised for use, such as plans and drawings for the construction of an asset. (AEC Hub , n.a)
- Archived** – This state is used to store all records of any information that has been shared or published during the process. (AEC Hub , n.a)

BS PAS 1192 was the framework standard for BIM Level 2 in the UK, and the information management process was outlined in the 'Information Delivery Cycle'. (Figure 2)

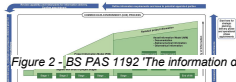


Figure 2 - BS PAS 1192 'The information delivery cycle'. (Traylor, 2024)

However, the use of BIM and CDE is not exclusive to the United Kingdom, therefore, in 2019, standards were revised to incorporate international standard and ISO 19650 was published, with the of unifying the processes of the project and the built asset's lifecycle, from pre-planning, design and construction, handover and end of life stages, resulting in a simplified diagram of the information delivery cycle (Figure 3).

ISO 19650-1:2018, Figure 1



Figure 3 - ISO 19650 'Information Delivery Cycle'. (BIM Academy , 2020)

ISO 19650 is composed of 6 series of standards, each focusing on different aspects of the information management:

- ISO 19650-1** – This part outlines the concepts and principles for information management using BIM and provides an overview of the entire ISO 19650 series. (12dsynergy.com, 2022)
- ISO 19650-2** – Delivery phase of the asset. This part focuses on the design, construction, and handover stage of the project, emphasising the importance of collaboration. (12dsynergy.com, 2022)
- ISO 19650-3** – This operational phase of the asset, this part covers the operation maintenance and decommissioning phase of the project, to optimise the asset performance and life cycle. (12dsynergy.com, 2022)
- ISO 19650-4** -Information exchange; this stage recommends the concepts and principles of information exchange between receivers and providers. (12dsynergy.com, 2022)
- ISO 19650-5** – This part guides users to adopt a security minded approach when sharing the information. (12dsynergy.com, 2022)
- ISO 19650-6** – This part is still under development with BSI and focuses on health and safety within building projects. (12dsynergy.com, 2022)

These standards are vital to provide consistency with project teams worldwide, quality assurance in delivering high-quality outcomes, to deliver projects on time and within budget and provided users with a competitive advantage, improving opportunities.

References

- 12dsynergy.com, 2022. *The Ultimate Guide to ISO 19650 in 2024*. [Online] Available at: https://www.12dsynergy.com/iso-19650-guide/?utm_campaign=iso-19650&gad_source=1&gclid=Cj0KCQjwZixBhCoARisAIC745DICTXHIYEEMQYq3hzBoxZrjsq0cwYdu3J3B8vxoofKQB1xDa-K0WEaAh-wEALw_wcB [Accessed 22 04 2024].
- AEC Hub , n.a . *Common Data Environment (CDE)*. [Online] Available at: <https://aechub.io/common-data-environment-cde/> [Accessed 31st March 2024].
- BIM Academy , 2020. *Project Management / Packing more profit into your projects*. [Online] Available at: <https://www.bimacademy.global/insights/project-management/packing-more-profit-into-your-projects-by-implementing-a-common-data-environment/> [Accessed 31st March 2024].
- Egnyte.com, 2023. *Understanding CDE and BIM*. [Online] Available at: <https://www.egnyte.com/guides/aec/common-data-environment> [Accessed 31st March 2024].
- Institute, B. S., 2023. *Little book of BIM*. 2023 ed. s.l.:s.n.
- Mordue, S., 2019. *Explaining the levels of BIM*. [Online] Available at: <https://www.bimplus.co.uk/explaining-levels-bim/> [Accessed 31 March 2024].
- Traylor, G., 2024. *University Lecture*. s.l.:s.n.
- Will Doyle, 2024. *Common Data Environment in Construction: Simplifying Collaboration*. [Online] Available at: <https://www.gatherinsights.com/en/resources/blog/common-data-environment-in-construction-simplifying-collaboration> [Accessed 31 March 2024].

Property Title
Extension 4005

Detail
Essay

Property __ Originator __ Zone __ Level __ Type __ Role __ Number __ Description __ Suitability __ Revision

0001 __ UWTSd __ XX __ ZZ __ DR __ CM __ 0006 __ Essay __ S3 __

File Path: C:\Users\robyn\OneDrive\Year 1\BIM\Revit Series\Assignment\4005-UWTSd-XX-ZZ-M-CM-0001-EXTENSION.rvt

scale

date

22/04/2024

drawn

RL

checked

GT

Prifysgol Cymru Y Drindod Dewi Sant
University of Wales Trinity Saint David
SAT Campus
Kings Road
Swansea
SA1 8RD

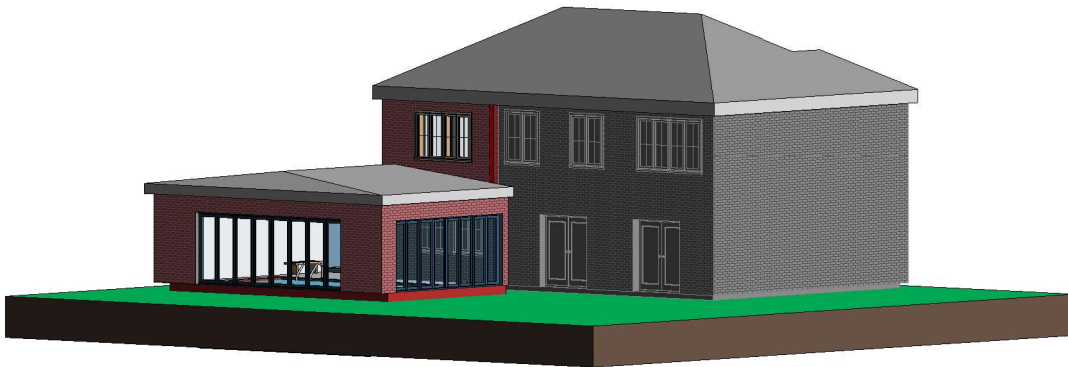


(S0) UNCONTROLLED
Not to be used as a
reference document
Check Status Before Quoting

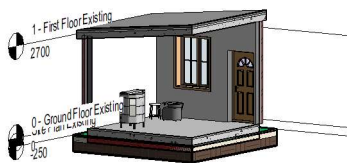
Revision



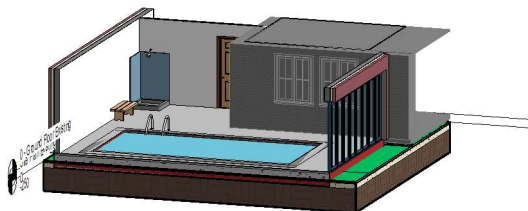
1 Full 3D View



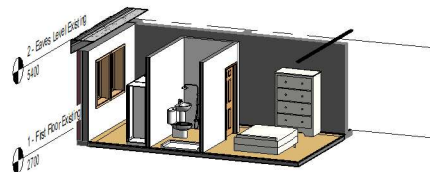
2 Rear 3D View



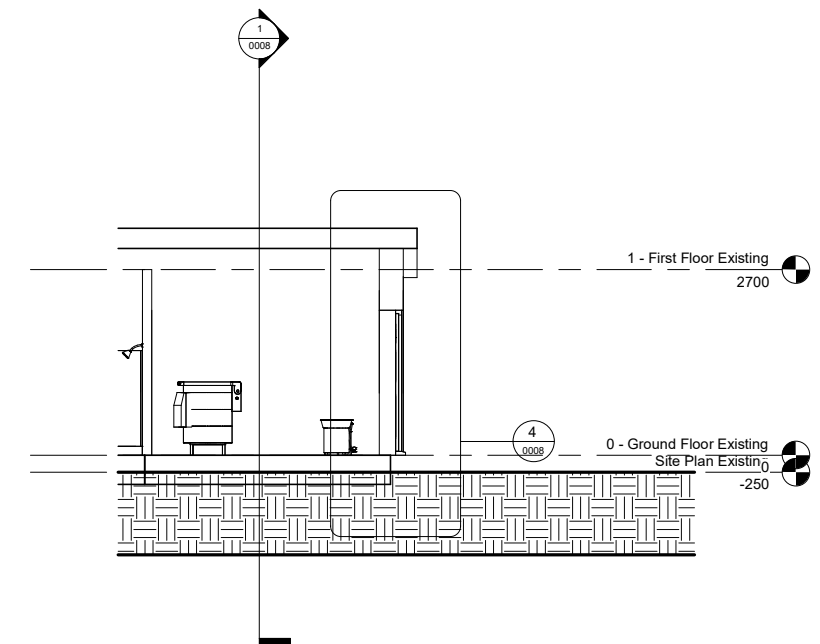
3 Pottery Studio



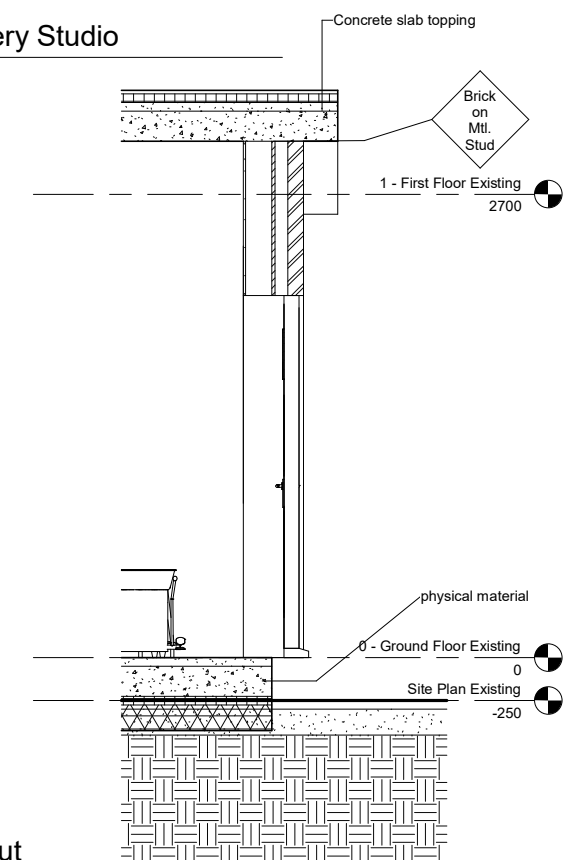
4 Pool



5 Master Suite



2 Proposed Pottery Studio
1 : 50



4 Pottery Studio - Callout

Property Title Extension 4005	Detail Section Views	Property — Originator — Zone — Level — Type — Role — Number — Description — Suitability — Revision	scale As indicated	drawn RL	 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Revision By Revision	
		0001 — UWTS — XX — ZZ — DR — CM — 0008 — Section Views — S3 —	date 22/04/2024	checked GT				Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David SA1 Campus North Road Swansea SA1 1AA
		File Path: C:\Users\rhym\OneDrive\Year 1\BIM\Revit Series\Assignment\4005\UWTS\XX-ZZ-MCM-0001-EXTENSION.rvt						