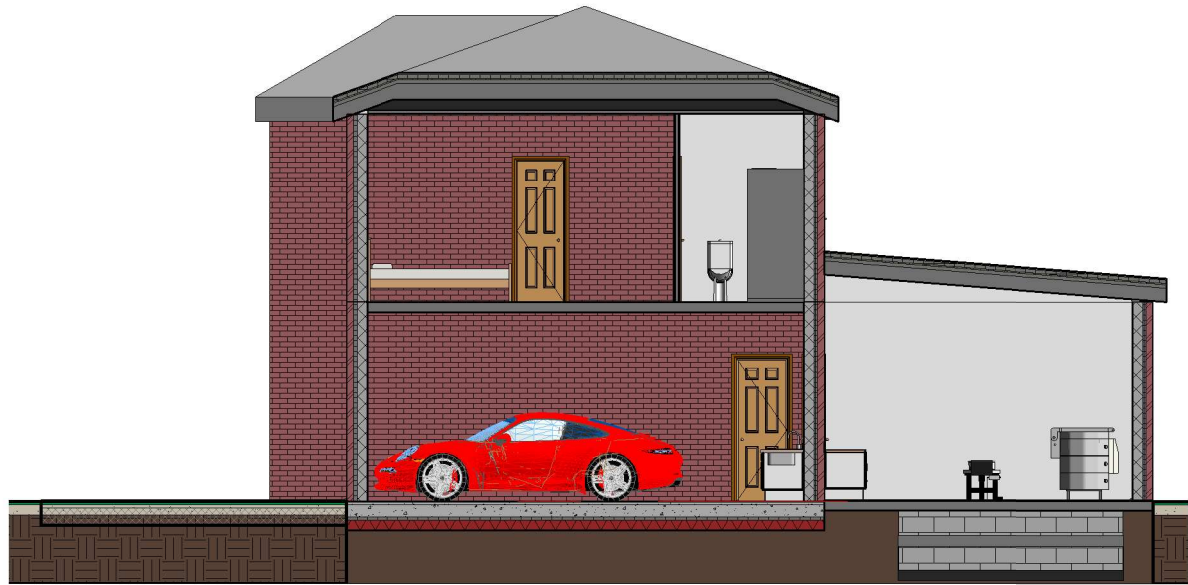
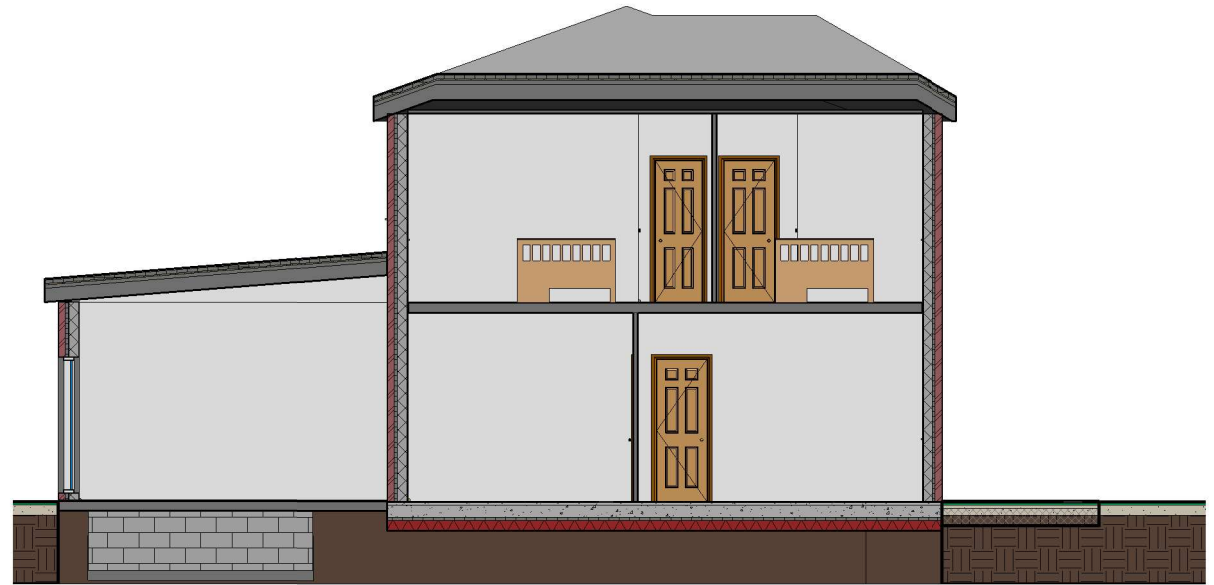


Property Title	Detail	Property _ Originator _ (Zone) Functional Breakdown _ (Level) Spatial Breakdown _ (Type) Form _ Role _ Number _ Description _ Suitability _ Revision	scale	drawn	 Prifysgol Cymru Yr Ymddol Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Rev/Date/By Revision		
Aberdare Property Extension	Site/Existing Plans/ Elevations	ACBA4005 UWTSO — XX — ZZ — D — C — 0001 — Site/Existing — S0 — Plans/ Elevations	As indicated	E. Evans				checked	Prifysgol Cymru Yr Ymddol Dewi Sant University of Wales Trinity Saint David
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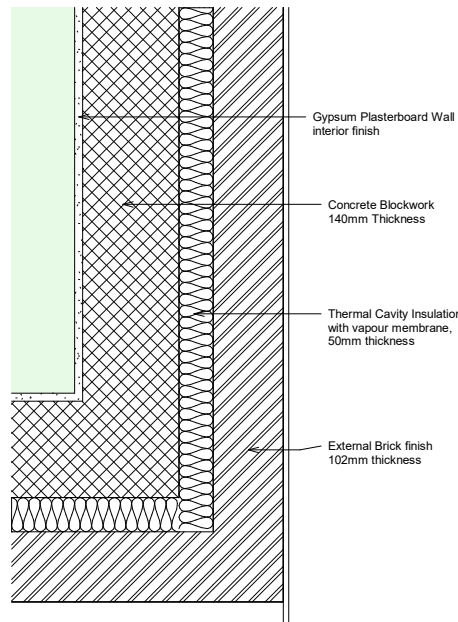
22 Long Section East
1 : 50



23 Long Section West
1 : 50



24 Short Section North
1 : 50

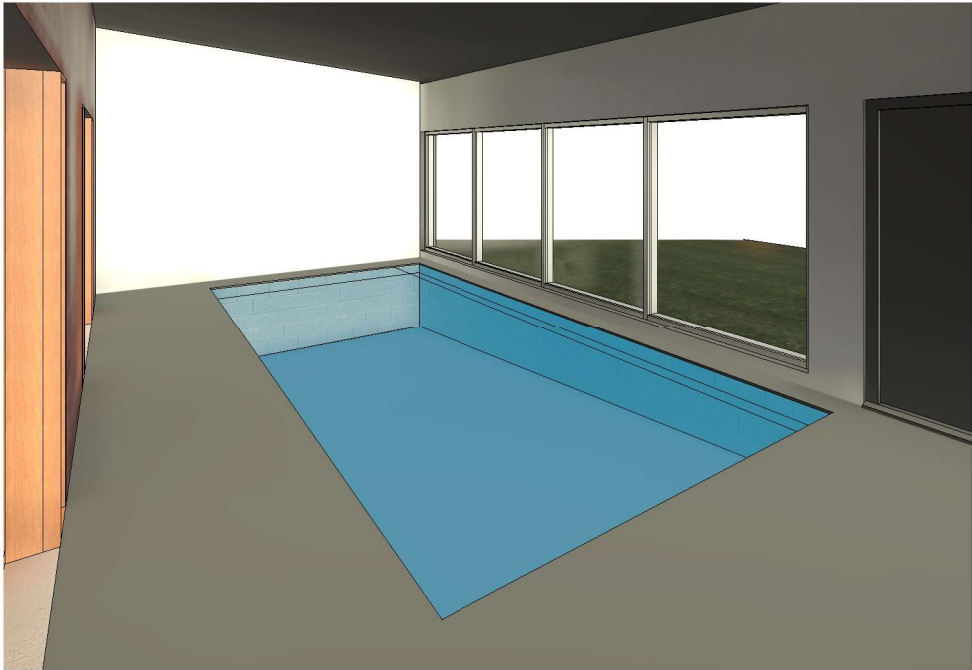


25 Ground Floor Cavity Wall
Callout
1 : 5

Property Title	Detail	Property	Originator	(Zone) Functional Breakdown	(Level) Spatial Breakdown	(Type) Form	Role	Number	Description	Suitability	Revision	scale As indicated	drawn E. Evans	 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
Aberdare Property Extension	Sections	ACBA4005	UWTS	XX	ZZ	D	C	0003	Sections	S0		date 22/04/2024	checked SA1 Campus Kings Road Swansea SA1 8RD			
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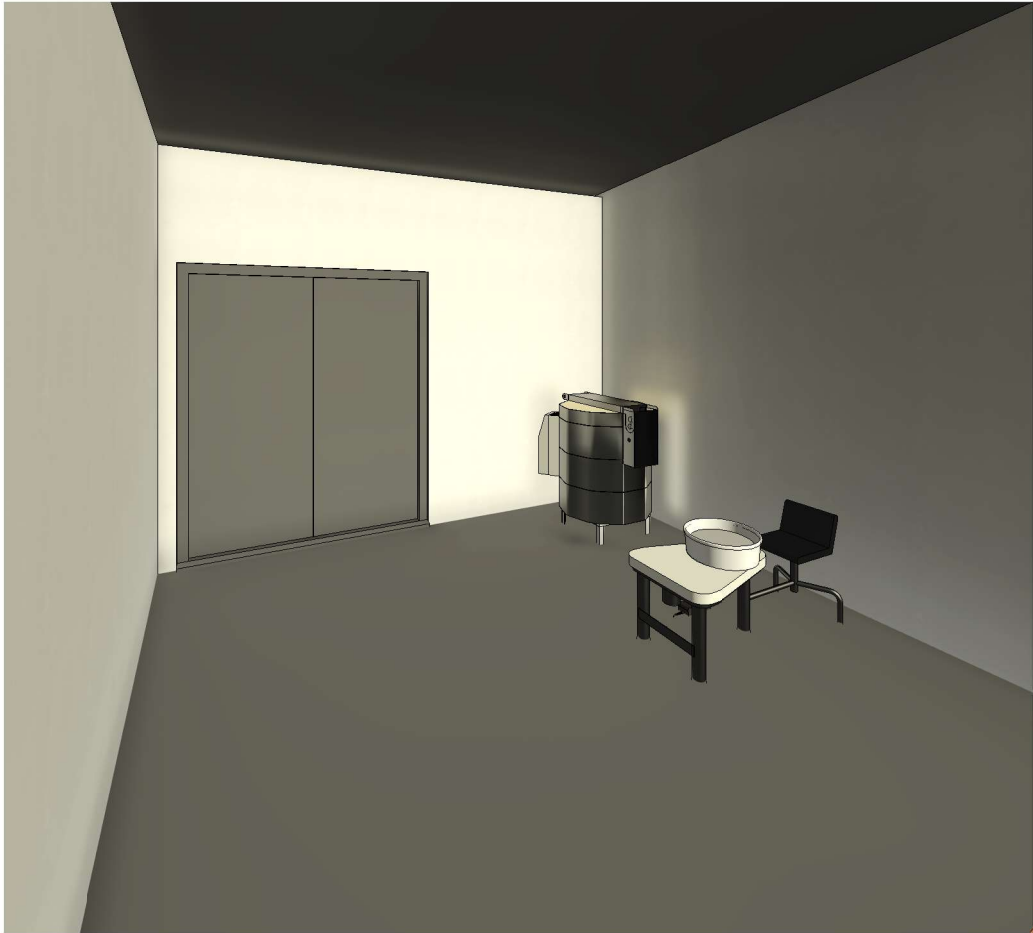
26 Garage Visual



27 Pool Room Camera



28 Master Bedroom Visual



29 Pottery Room Visual

A Common Data Environment (CDE) is a digital information platform that is commonly used within construction projects and Building Information Modelling (BIM) processes as a centralised hub for project data storage which can include documents such as project contracts, project specifications, reports and estimates as well as any other information for a projects design and its construction process. A CDE allows project stakeholders the ability to access the platform at any time and any location using a range of devices, to be able to view the documents and information withheld for their project.

Key Principles

Revision Control:
Within the Common Data Environment platform there are revision control mechanisms in place to track any changes made to a project over time, this can be very well utilised and enable users to revert to previous versions if necessary or track who made the changes if there is a problem that needs rectifying or advice needed. This ensures transparency and accountability throughout the project and produces a fail safe of the projects so that users can revert back to other versions without disbanding the whole project and therefor resulting in financial loss.

UK BIM Framework, 2020. Facilitating the Common Data Environment. [Online]
Available at: chrome-extension://efaidnbnmnibpcalpcgicfeindmkaj/https://ukbimframework.org/wp-content/uploads/2020/09/Guidance-Part-C_Facilitating-the-common-data-environment-workflow-and-technical-solutions_Edition-1.pdf
[Accessed 12 04 2024].

Centralised Data Management
The CDE platforms can collate all project information in a centralised hub which can incorporate the project models, documents, schedules and specifications as well as estimates and reports that are needed. This reduces the need for individual emails back and for from different parties and therefore any changes that need to be made can get out of sync very quickly, with this centralised management documents and the like can be shared quickly and synced with different versions, therefore reducing errors and parties working on outdated versions.

Trimble Construction, 2022. What is a Common Data Environment and How is It Used In Construction?. [Online]
Available at: <https://constructible.trimble.com/construction-industry/what-is-a-common-data-environment-and-how-is-it-used-in-construction>
[Accessed 12 04 2024].

Accessibility and Security
As the CDE allows multiple parties of a project access to the centralised hub of its documents it is important to maintain strict security measures to protect sensitive information, the CDE implements access controls and permissions to help regulate who can view, edit or share data within its environment. As a project moves forward not every member of the project needs access to all of the data, within CDE a relevant authorization can be controlled via means of each party to limit the access to sensitive data or restrict the ability to edit it with the use of permissions that can be assigned. This can be implemented by different level of responsibility and duties that the parties hold with different levels of access. This feature reinforces the security of the project and protects confidential data and prevents unauthorised changes to data. Coupled with the revision controls, this can be utilised to safeguard intellectual property and compliance requirements.

Through the integration and development of CDE there are advancements made to the security of the platform by means of encryption, authentication procedures and secure access restrictions which all comply to data protection and privacy laws.

pbtoday, 2023. What are the benefits of using a Common Data Environment in construction?. [Online]
Available at: <https://www.pbtoday.co.uk/news/digital-construction-news/benefits-using-common-data-environment-in-construction/122119/>
[Accessed 12 04 2024].

Data Standards and Interoperability
A key principle of the CDE is to facilitate interoperability by supporting various file formats and protocols which allows the exchange of data between different software applications in the construction industry. This is very advantageous for stakeholders to be able to access the data that may not work to the same software or may operate in a different manner to others but can still send and receive information without losing accuracy and also enhances collaboration across disciplines. As a result of the utilisation of different formats this has further decreased costs within a project, mainly from not necessarily needing many software subscriptions and trained users for different applications as well as minimising errors and delays. This impacts the stakeholder's satisfaction in the process and quality of the project.

Farhadi, F., 2023. Common Data Environment in Construction; Guide to 2024. Construction Magazine, 25 11.
pbtoday, 2023. What are the benefits of using a Common Data Environment in construction?. [Online]

Essential factor in BIM process

A CDE is a component of Building Information Modelling and its integration into construction projects relies on its adoption and implementation stragies proposed by the different stakeholders involved in the project. A successful CDE deployment in a project is key for its success and streamlining project goals, deadlines and milestones. To fully take advantage of a CDE, a clear roadmap of the project with all accountable parties should be implemented and documented on the CDE platform so that all parties can be accountable and have clear instruction where the project is going and who is responsible, this can be achieved by ensuring that all parties have necessary training and education on the different software uses and data entry procedures to fully promote and utilise the CDE adoption.

Farhadi, F., 2023. Common Data Environment in Construction; Guide to 2024. Construction Magazine, 25 11.
pbtoday, 2023. What are the benefits of using a Common Data Environment in construction?. [Online]

Significance in BIM process
The cloud based platform CDE integrates within the BIM process to offer seamless exchange of data such as BIM workflows by sharing accessing BIM models, documents and project data which enhances the collaborative aspect of a project among architects, engineers, contractors and stakeholders. Within the BIM models hosted in the CDE platform undergo clash detection analysis to identify and resolve conflicts between information and building elements to minimise design errors and cost implications.

Key standards of the CDE platform and BIM processes are the use of BS1192:2007 & PAS 11192:2013, although as of 2019 new guidance came in place which can be found below.

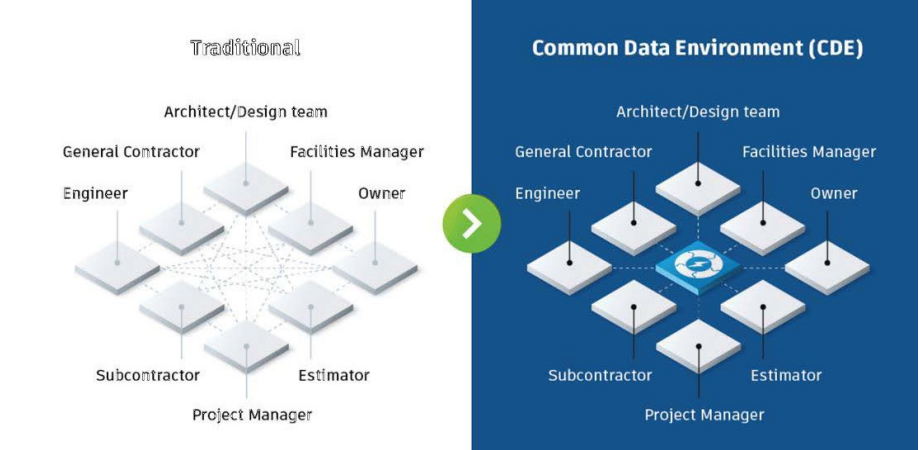
The CDE aligns with Information Exchange Requirements specified in BIM execution plans and contractual agreements so that the project information is structured, standardised and accessible according to the predefined protocols. To facilitate the task of collaboration of projects the CDE aligns with BS EN ISO-19650 which establishes requirements for construction information management throughout the life cycle of the project. ISO-19650 also requires the audit and review requirements within a project and sets out compliance and standard processes to ensure all parties comply with these measures. The key requirements of ISO-19650 are Unique standard identification for every "information container" which includes drawings, models and files as well as for these documents should contain standardised naming conventions which all parties will need to adopt so that anyone looking at the drawing or information will know exactly what they are viewing. The requirements also feature the revision control system and workflows set out to prevent unauthorised changes to be made to data as well as a suitability status being implemented so that users can be confident in the reliability, accuracy and intended use of the data presented.

Tenedini, M., 2023. Construction Information Management: The Importance of CDE, BIM, LGPD, and ISO 19650. [Online]
Available at: <https://www.linkedin.com/pulse/construction-information-management-importance-cde-bim-tenedini>
[Accessed 18 04 2024].

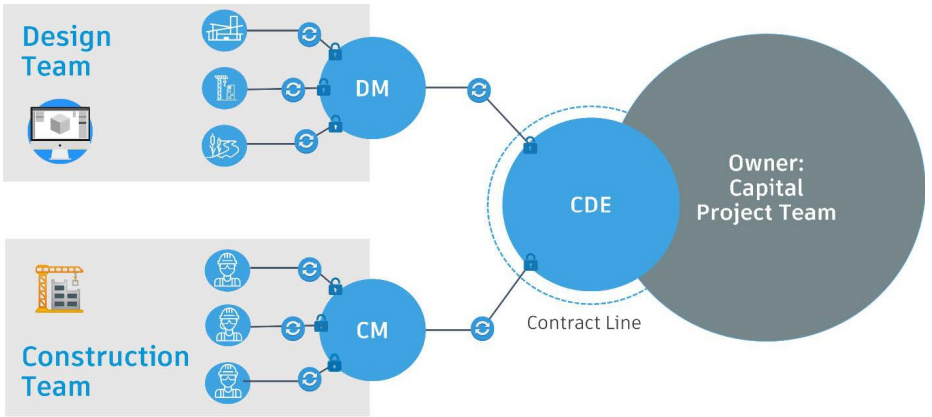
ISO, 2018. ISO 19650-1:2018. [Online]
Available at: <https://www.iso.org/standard/68078.html> [Accessed 18 04 2024].

AutoDesk, n.d. ISO 19650, the Common Data Environment, and Autodesk Construction Cloud. pp. <https://www.autodesk.com/autodesk-university/article/ISO-19650-Common-Data-Environment-and-Autodesk-Construction-Cloud>. [Accessed 18 04 2024].

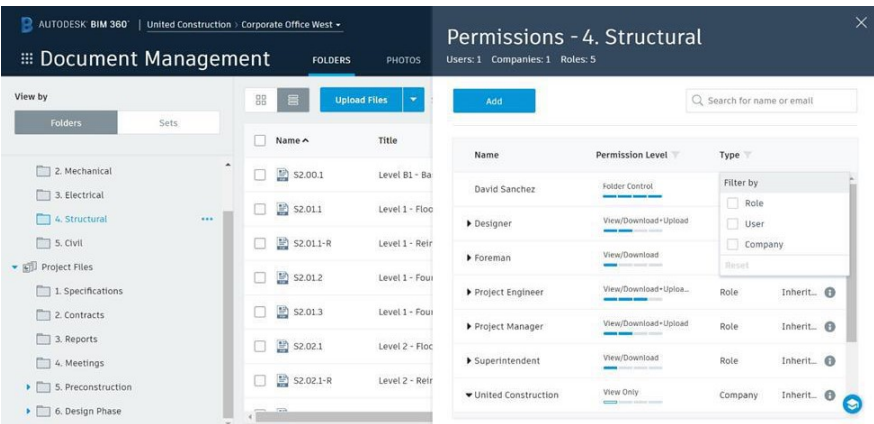
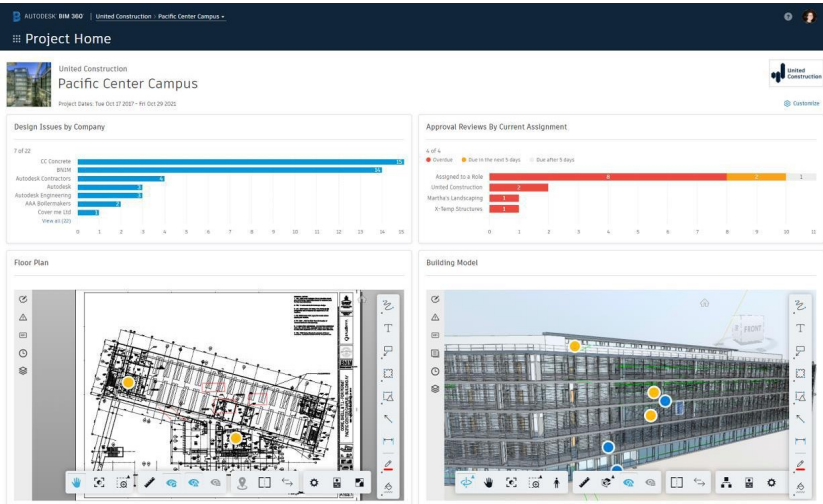
Taylor, G., 2024. Digital Technology & BIM Lectures. [Online]
[Accessed 2024].



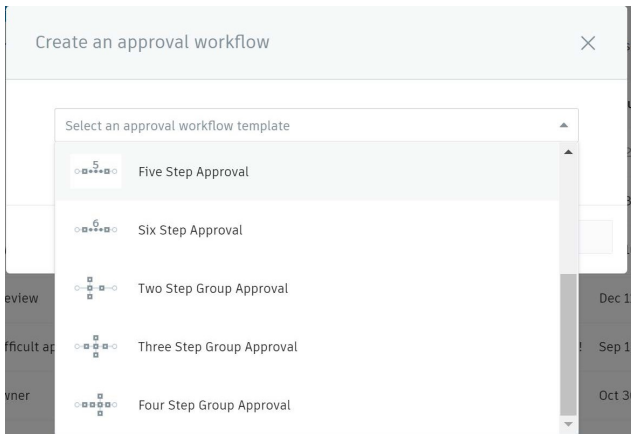
AutoDesk, n.d. ISO 19650, the Common Data Environment, and Autodesk Construction Cloud. pp. <https://www.autodesk.com/autodesk-university/article/ISO-19650-Common-Data-Environment-and-Autodesk-Construction-Cloud>. [Accessed 18 04 2024].



AutoDesk, n.d. ISO 19650, the Common Data Environment, and Autodesk Construction Cloud. pp. <https://www.autodesk.com/autodesk-university/article/ISO-19650-Common-Data-Environment-and-Autodesk-Construction-Cloud>. [Accessed 18 04 2024].



AutoDesk, n.d. ISO 19650, the Common Data Environment, and Autodesk Construction Cloud. pp. <https://www.autodesk.com/autodesk-university/article/ISO-19650-Common-Data-Environment-and-Autodesk-Construction-Cloud>. [Accessed 18 04 2024].



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AutoDesk, n.d. ISO 19650, the Common Data Environment, and Autodesk Construction Cloud. pp. <https://www.autodesk.com/autodesk-university/article/ISO-19650-Common-Data-Environment-and-Autodesk-Construction-Cloud>. [Accessed 18 04 2024].

Property Title	Detail	Property — Originator — (Zone) Functional Breakdown — (Level) Spatial Breakdown — (Type) Form — Role — Number — Description — Suitability — Revision	scale	drawn			
Aberdare Property Extension	CDE Essay	ACBA4005 UWTS — XX — ZZ — D — C — 0005 — CDE Essay — S0 —	date	checked	E. Evans	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
		File Path: C:\Users\112865\Desktop\UNI\YEAR 2\Digital Tech\CW2\ACBA4005-UWTS-XX-ZZ-M-C-0001-Aberdare Property Extension.rvt	22/04/2024	Checker			Rev/Date/By Revision