

Project Name: House extension

UPRN Code: 0001

Originator Code: Ex-001

Role Code: Designer

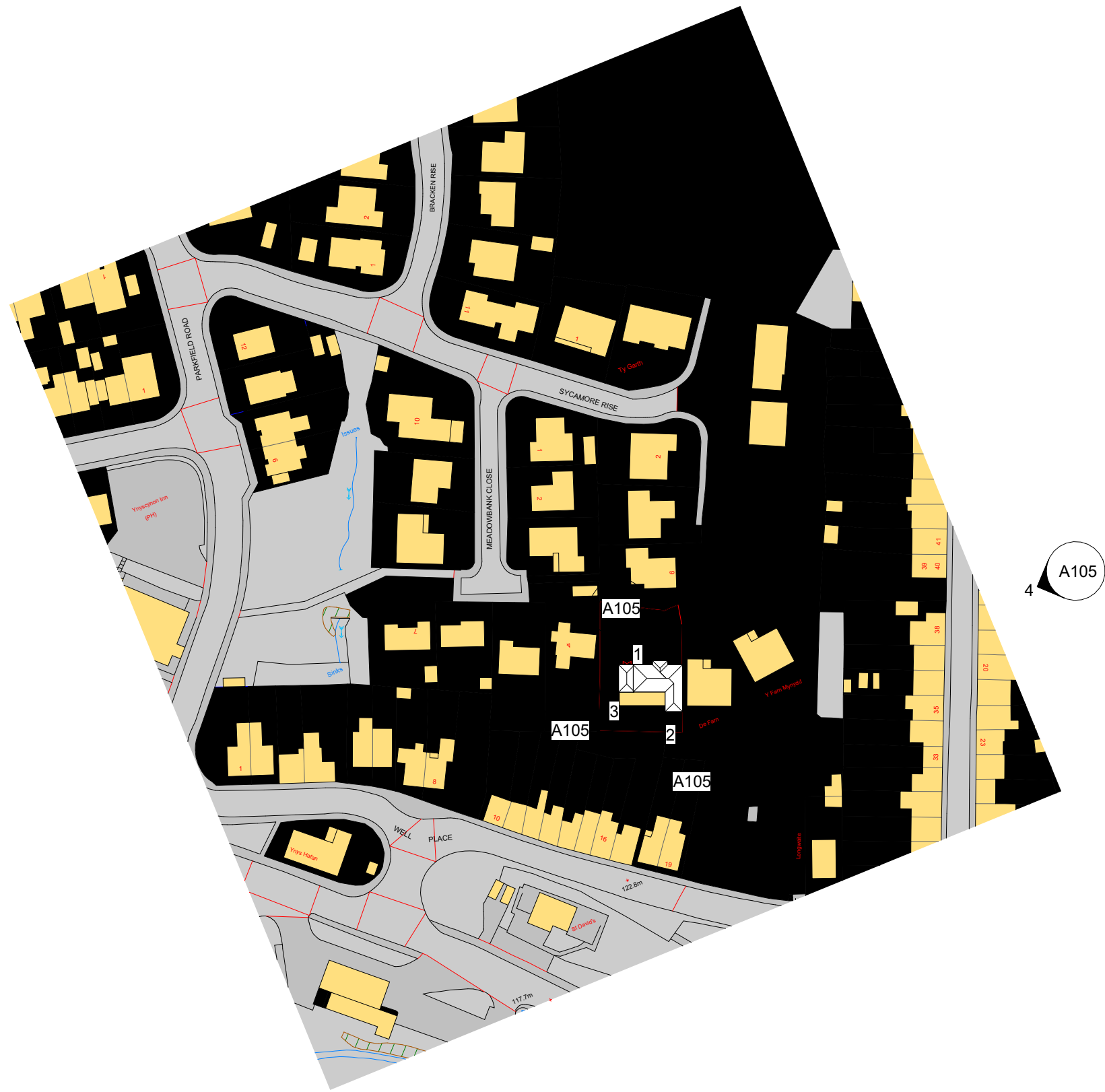
Drawn By: T. Caddell

Checked By: G. Traylor

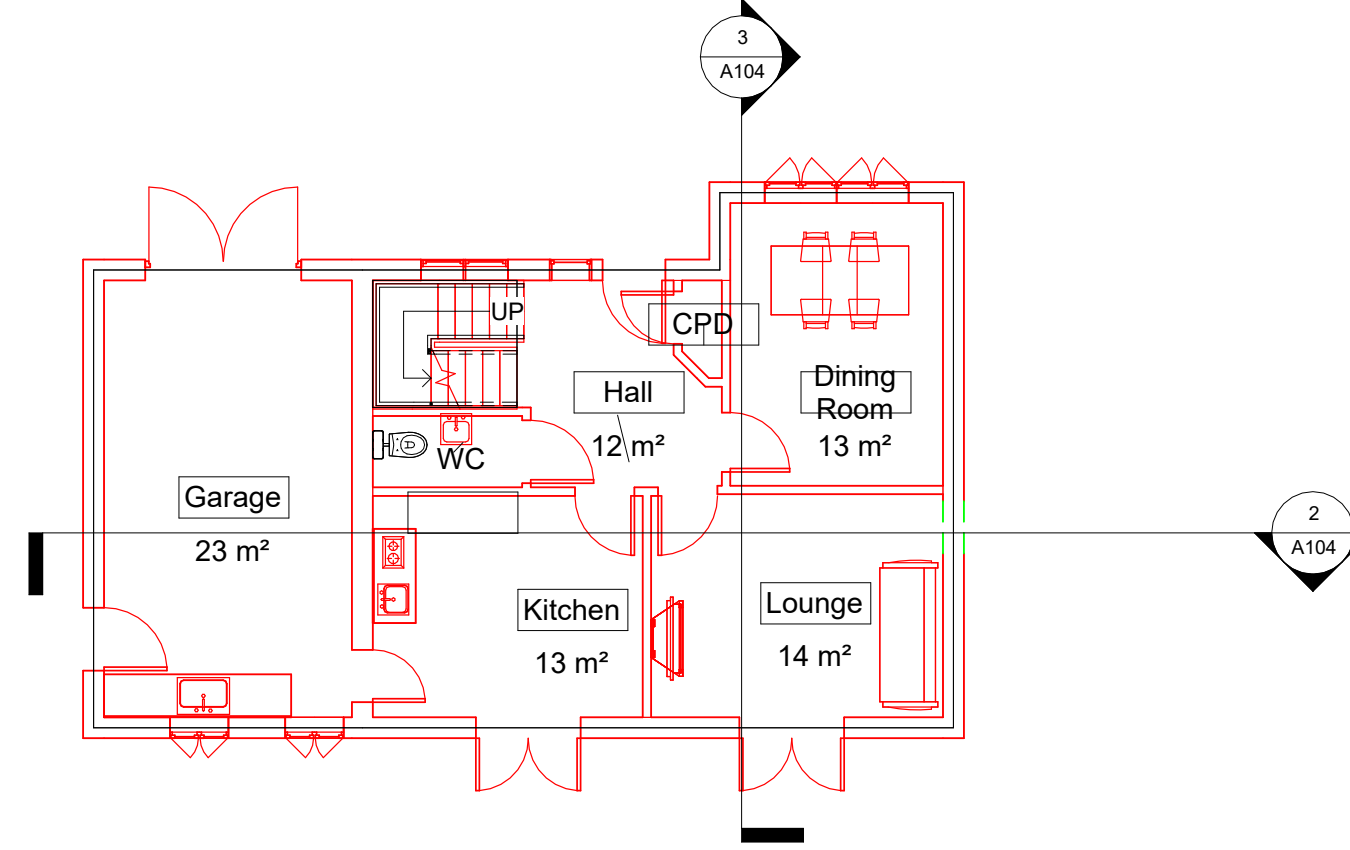
Date: 11/03/24

Project Status: Concept

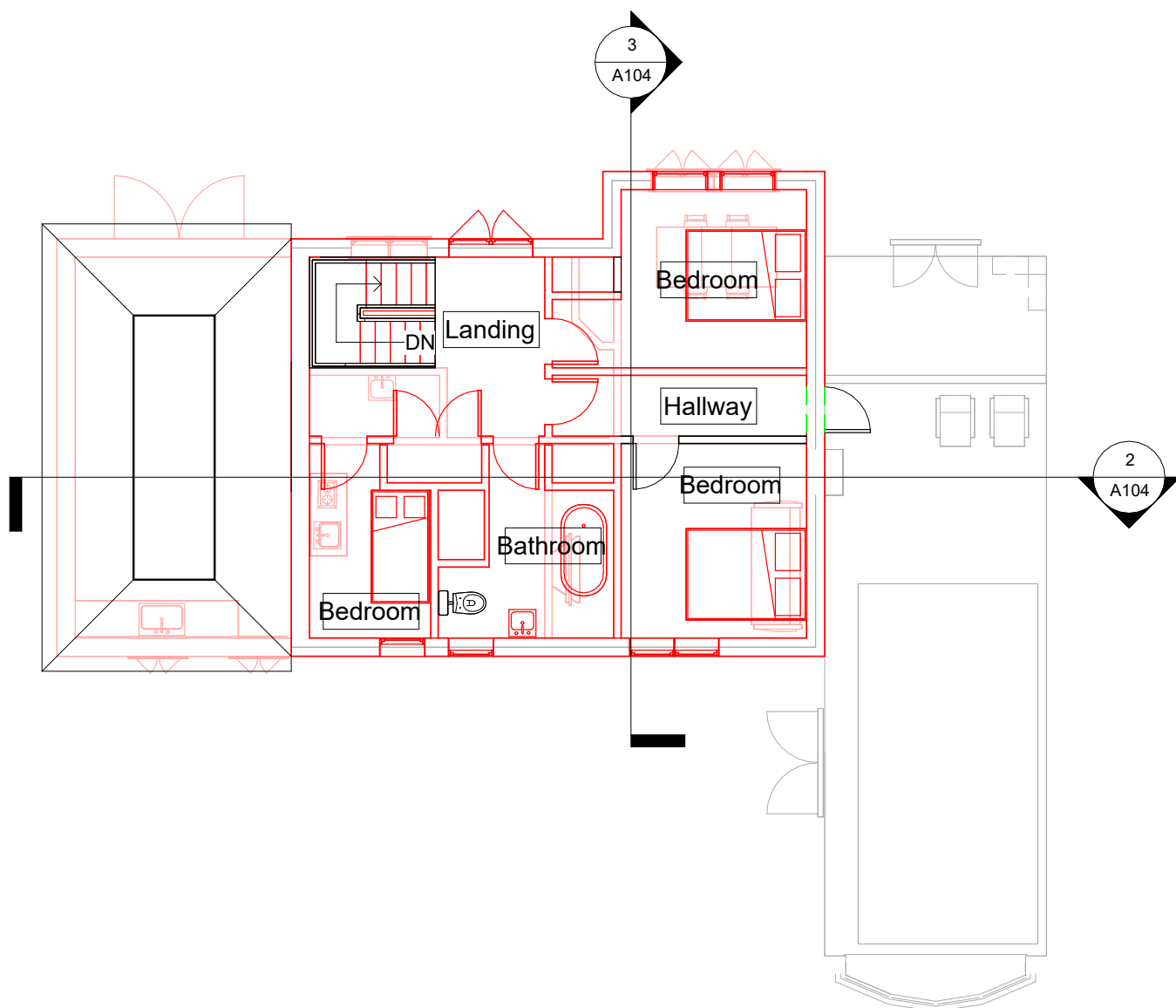
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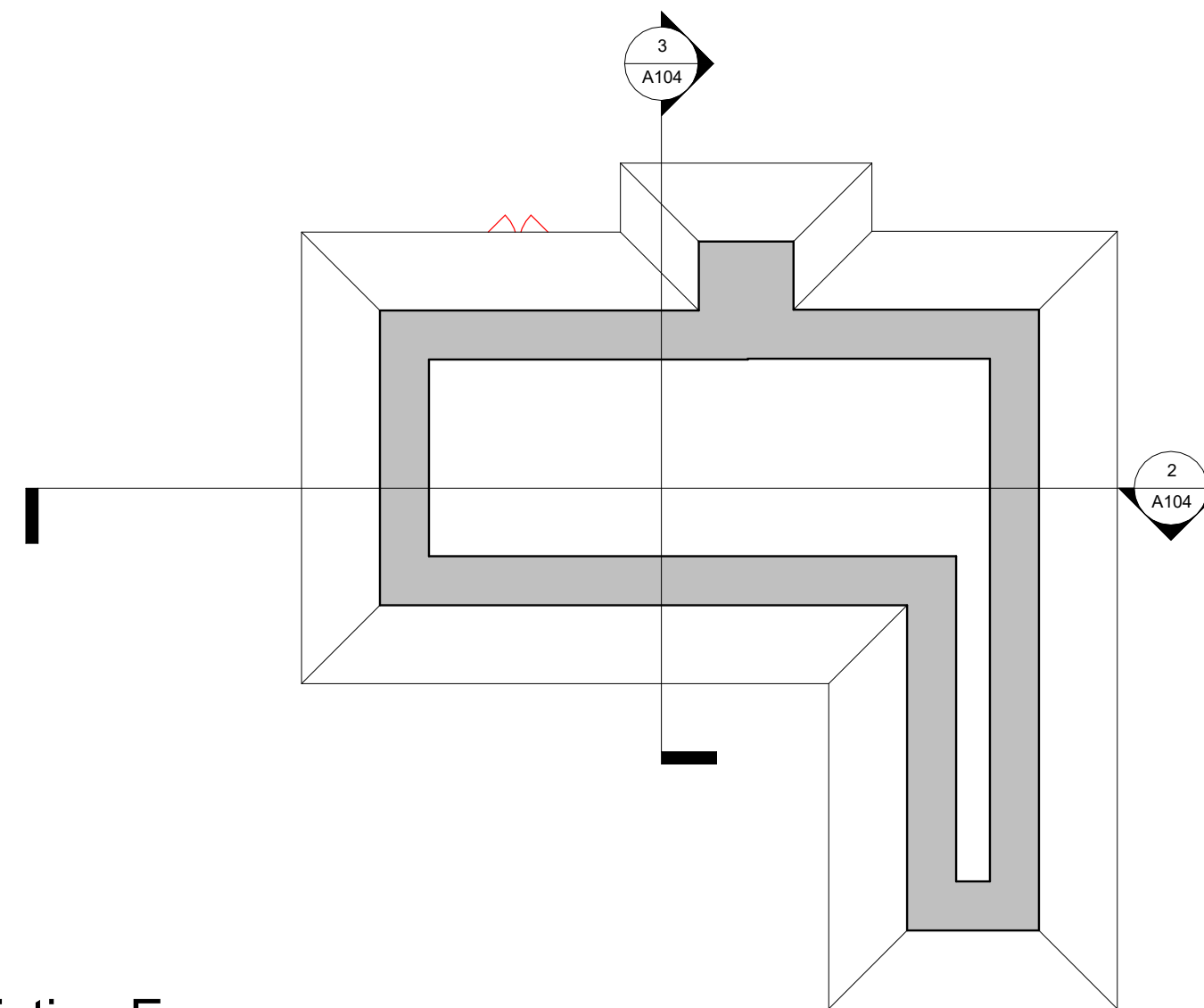
1 Existing Site Plan
1 : 1250



2 Existing Ground Floor
1 : 100

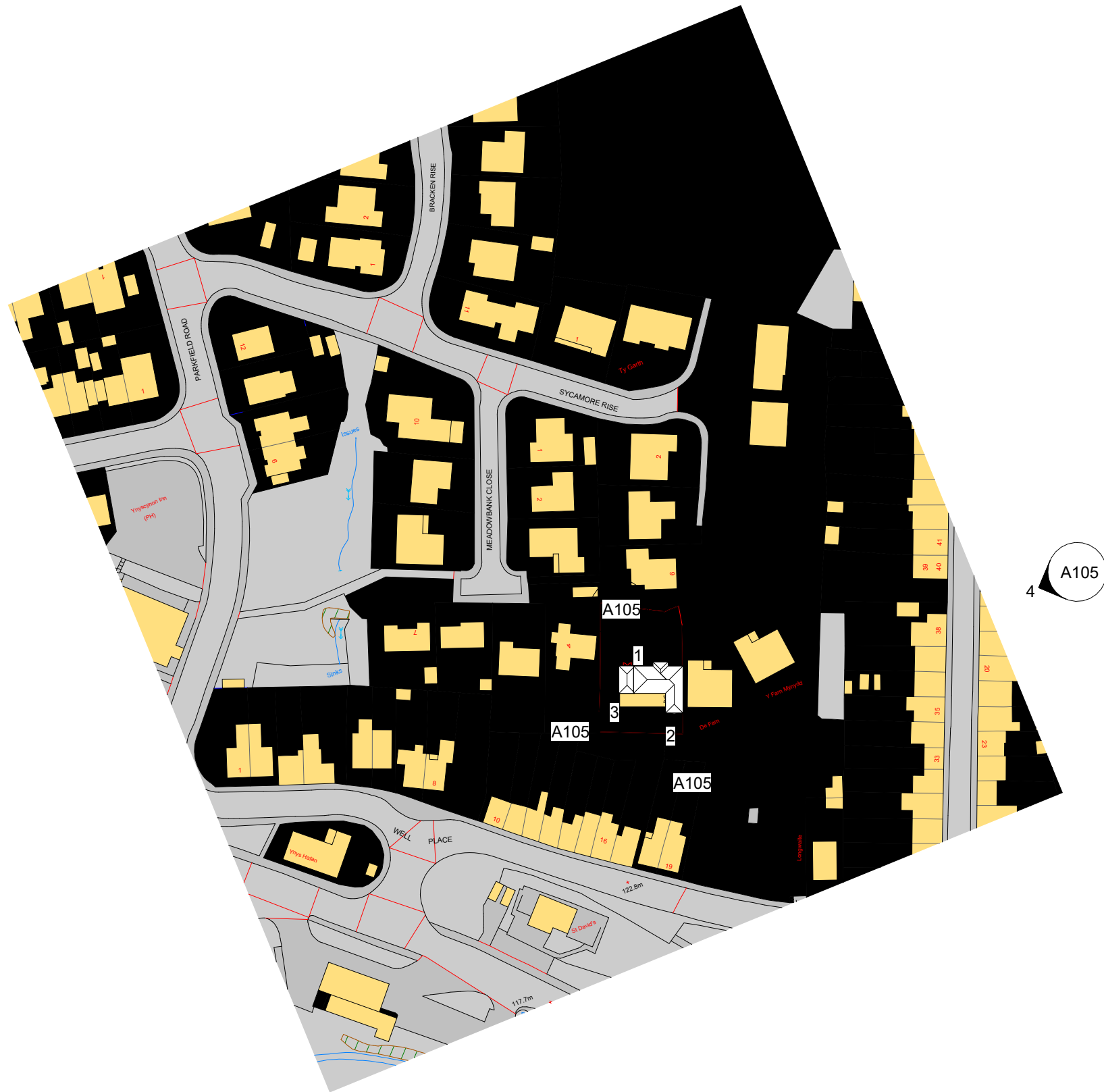


3 Existing First Floor
1 : 100

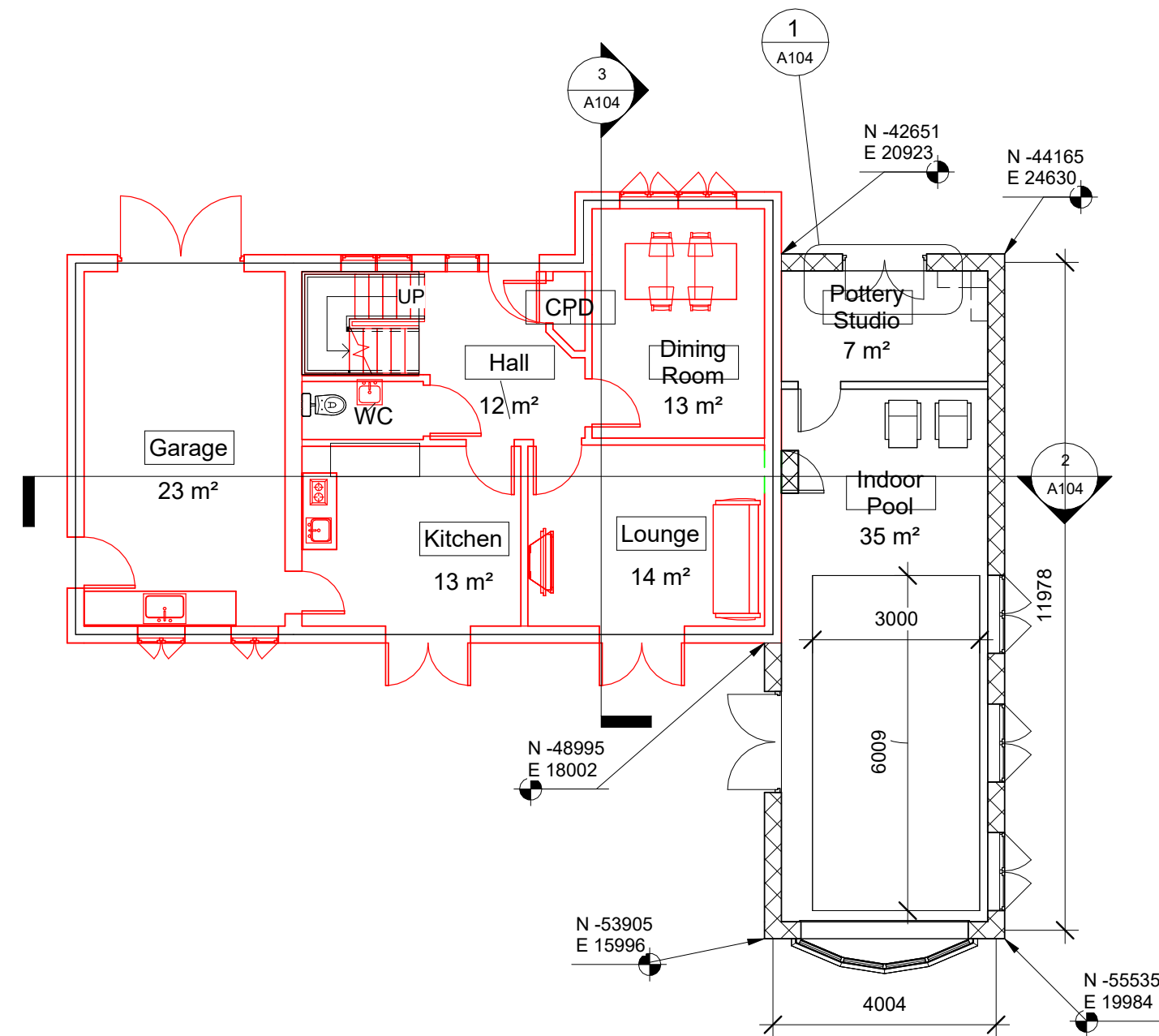


4 Existing Eaves
1 : 100

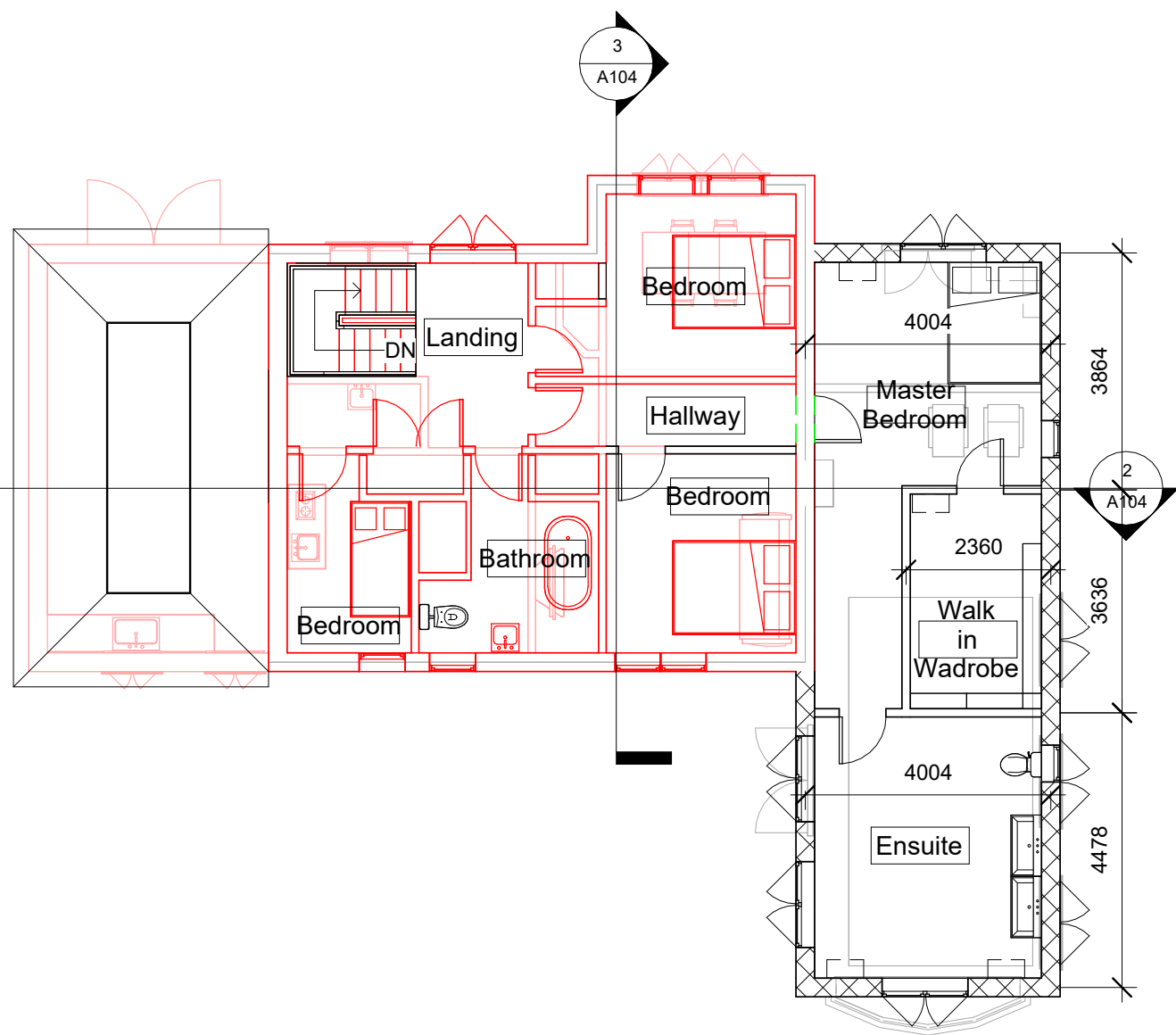
Property Title House extension	Detail Existing Floor Plans/Site Plans	Property — Originator — (Zone) Functional Breakdown — (Level) Spatial Breakdown — (Type) Form — Role — Number — Description — Suitability — Revision	scale As indicated	drawn T.Caddell	 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Rev/Date/By Revision
		0001 — Ex-001 — XX — — Designer A102 — Existing Floor Plans/Site Plans — Concept —	date 03/11/24	checked SA1 Campus Kings Road Swansea SA1 8HQ			
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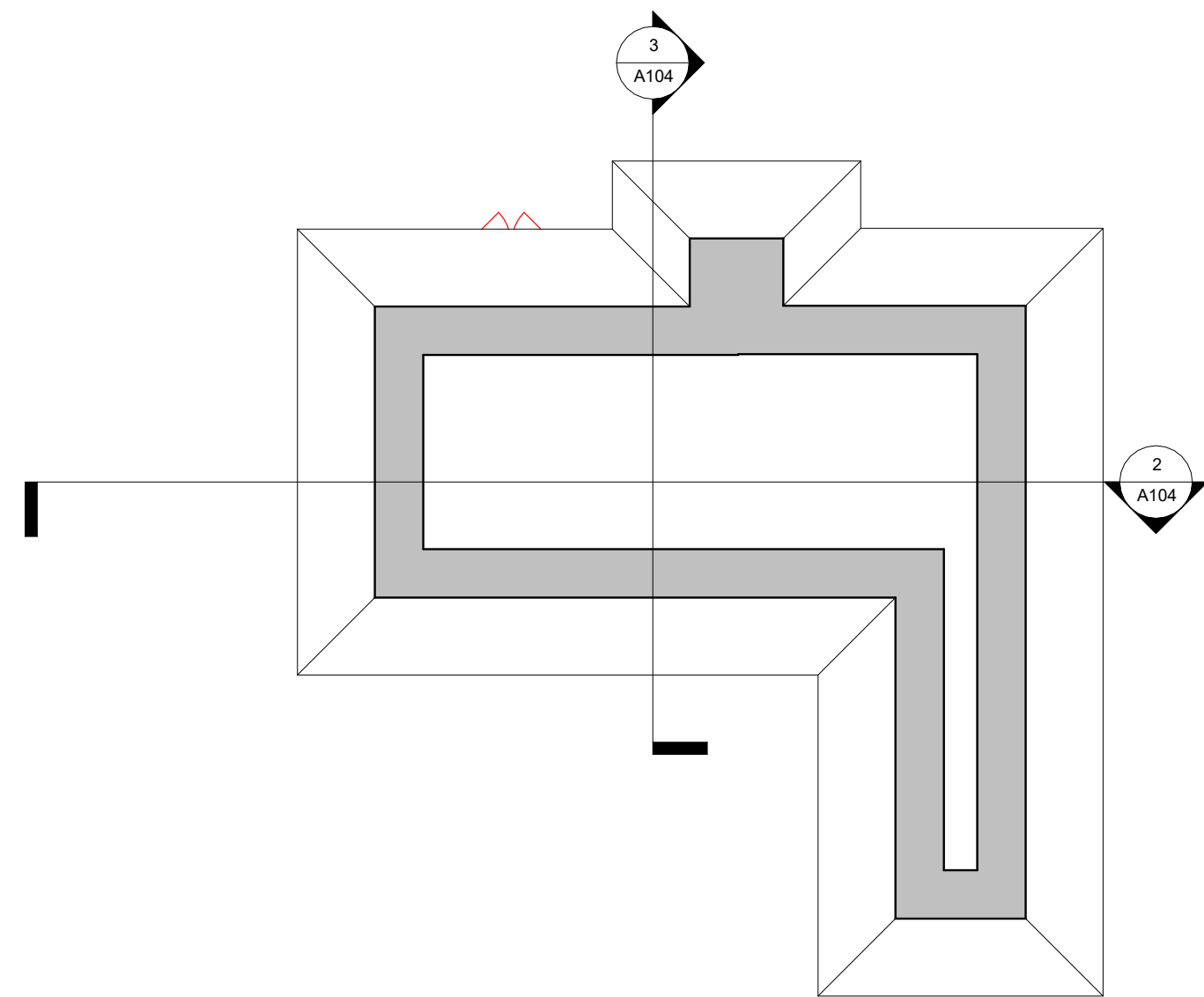
1 Proposed site plan
1 : 1250



2 Proposed Ground Floor
1 : 100

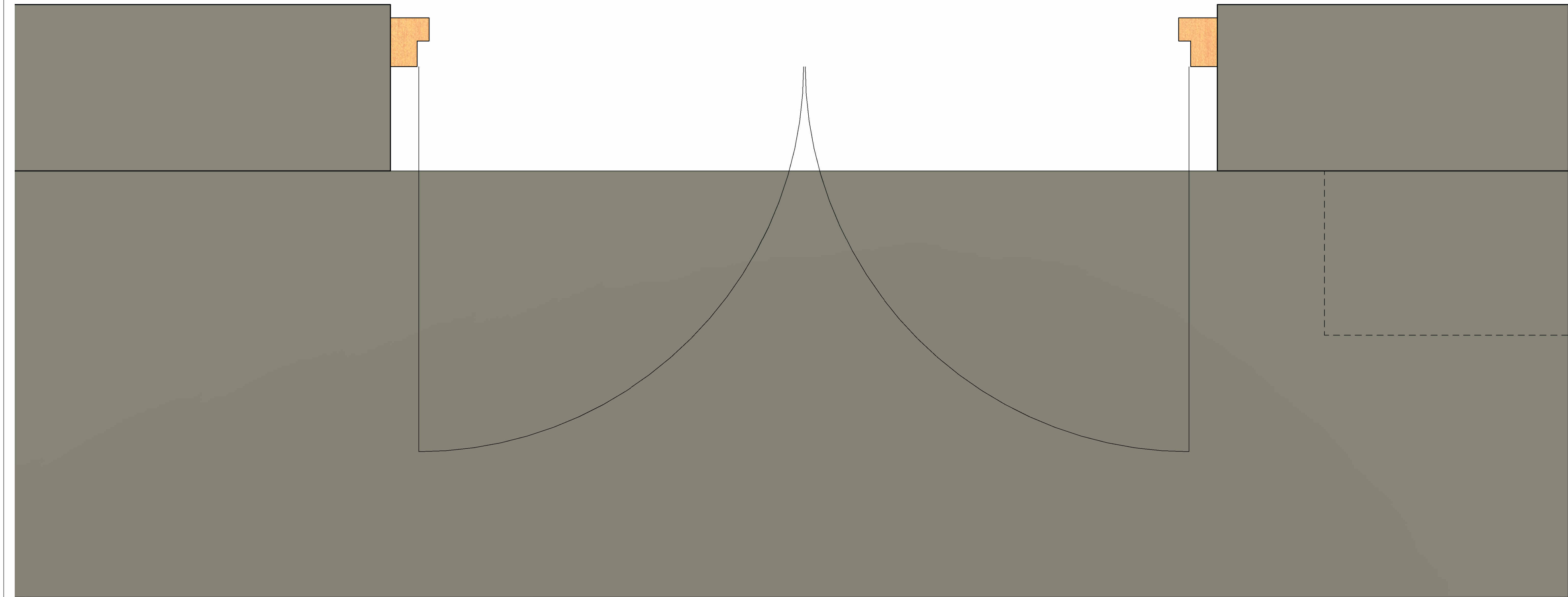


3 Proposed First Floor
1 : 100

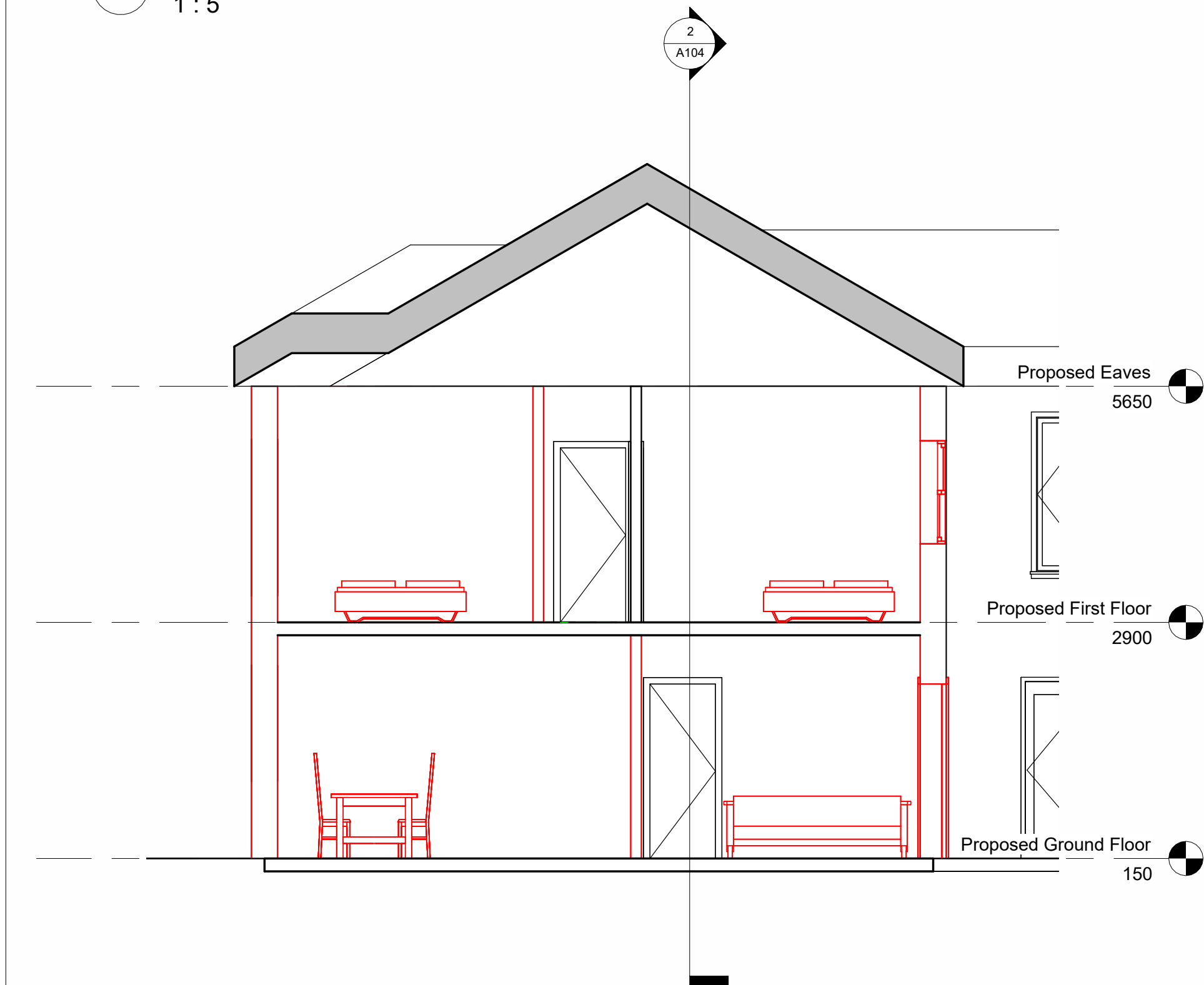


4 Proposed Eaves
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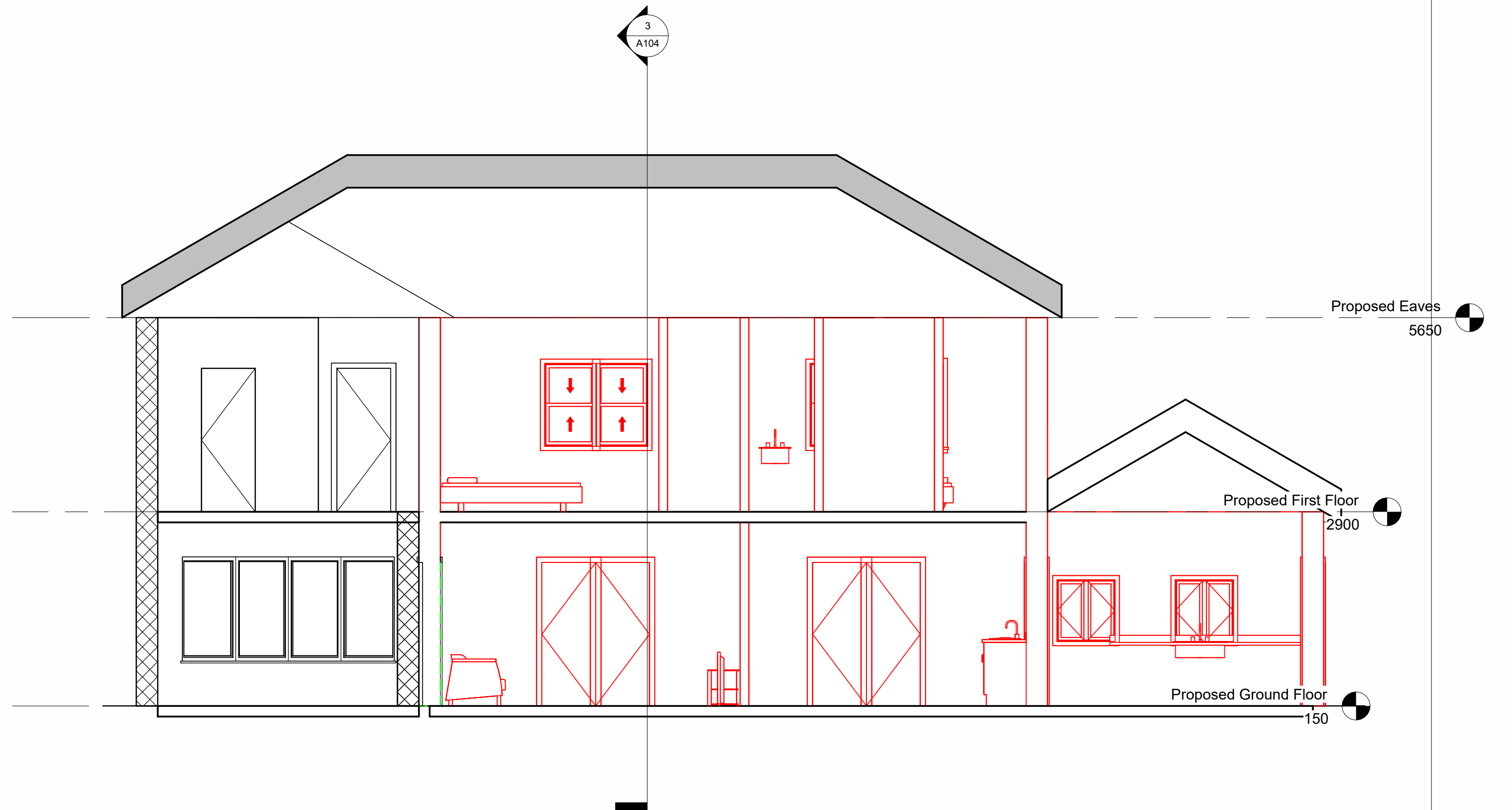
Property Title House extension	Detail Proposed Floor Plans/Site Plans	Property — Originator — (Zone) — (Level) — (Type) — Role — Number — Description — Suitability — Revision	scale As indicated	drawn T.Caddell	 Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Rev/Date/By Revision
		0001 — Ex-001 — XX — — Designer A103 — Proposed Floor Plans/Site Plans — Concept —	date 04/22/24	checked Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David			
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1 Ground Floor - Callout 1
1 : 5

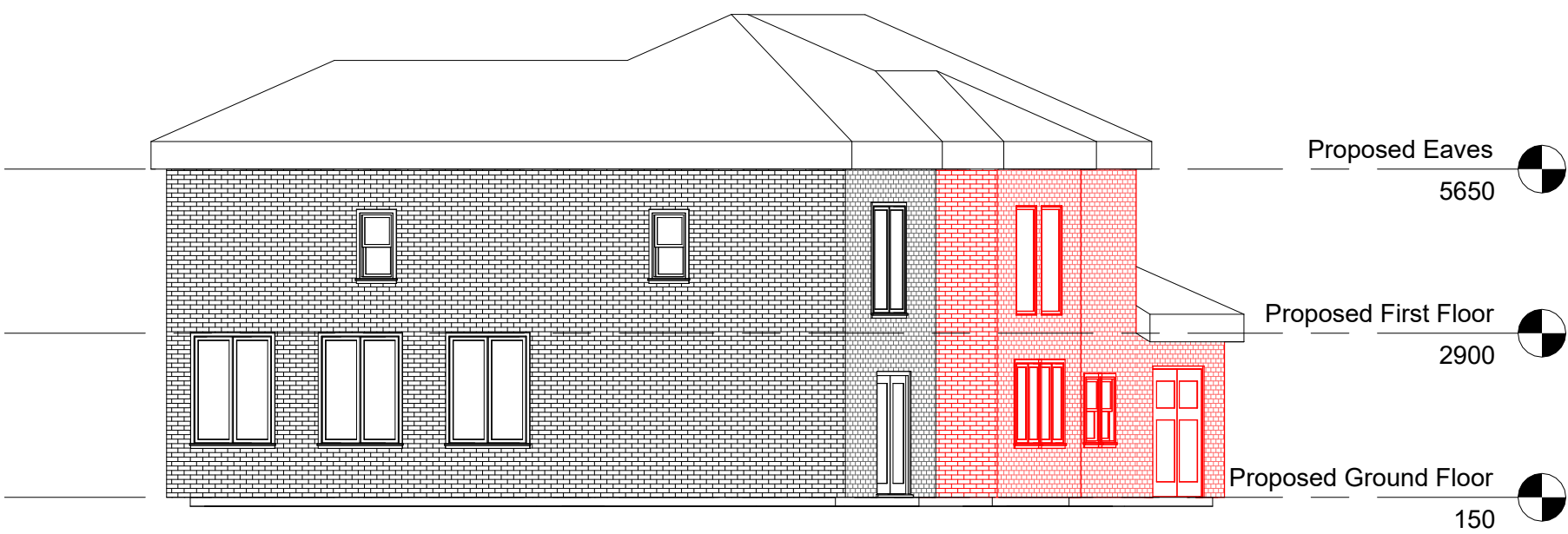
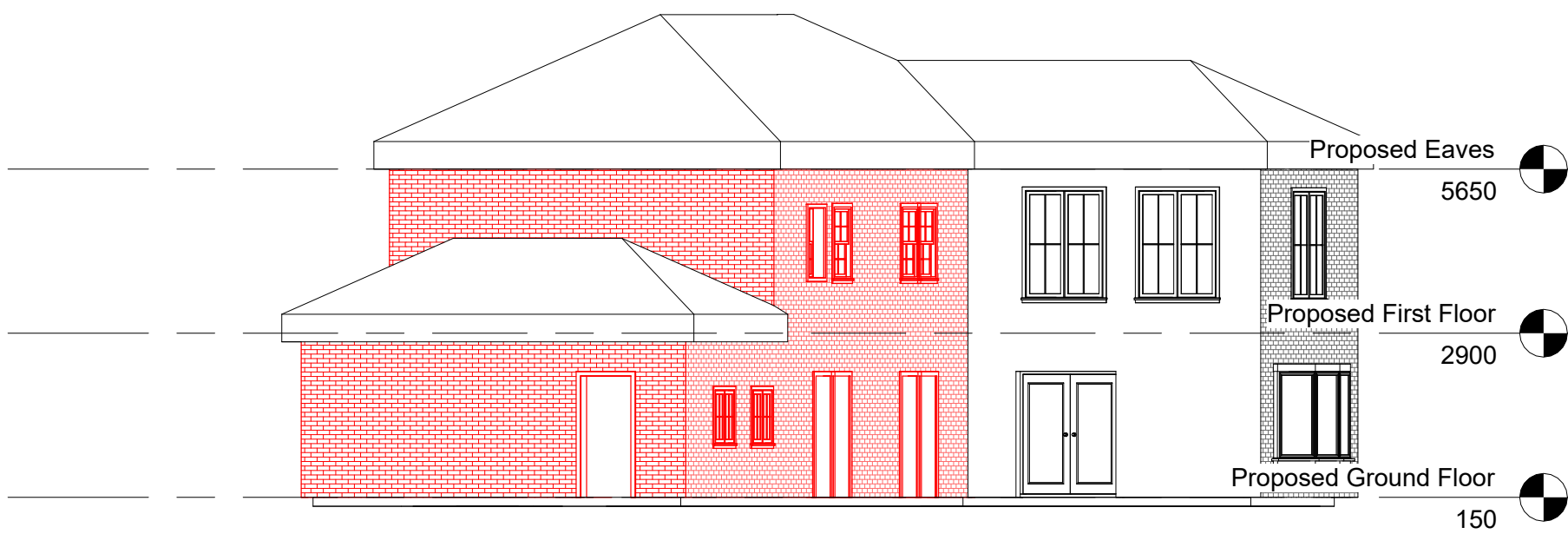
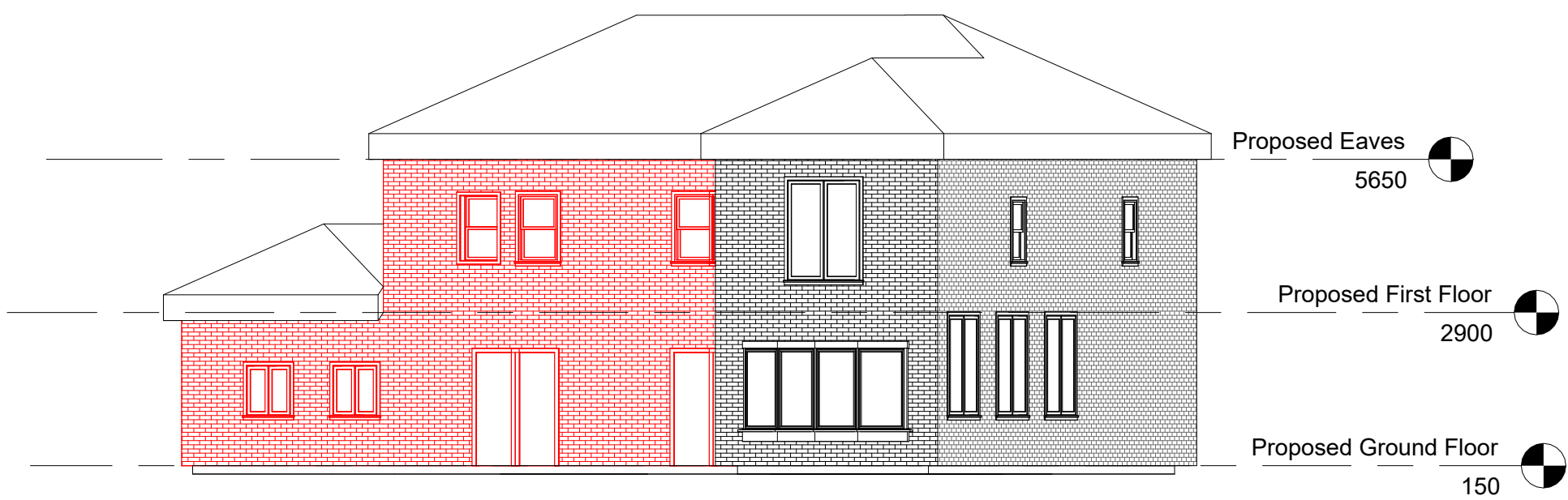
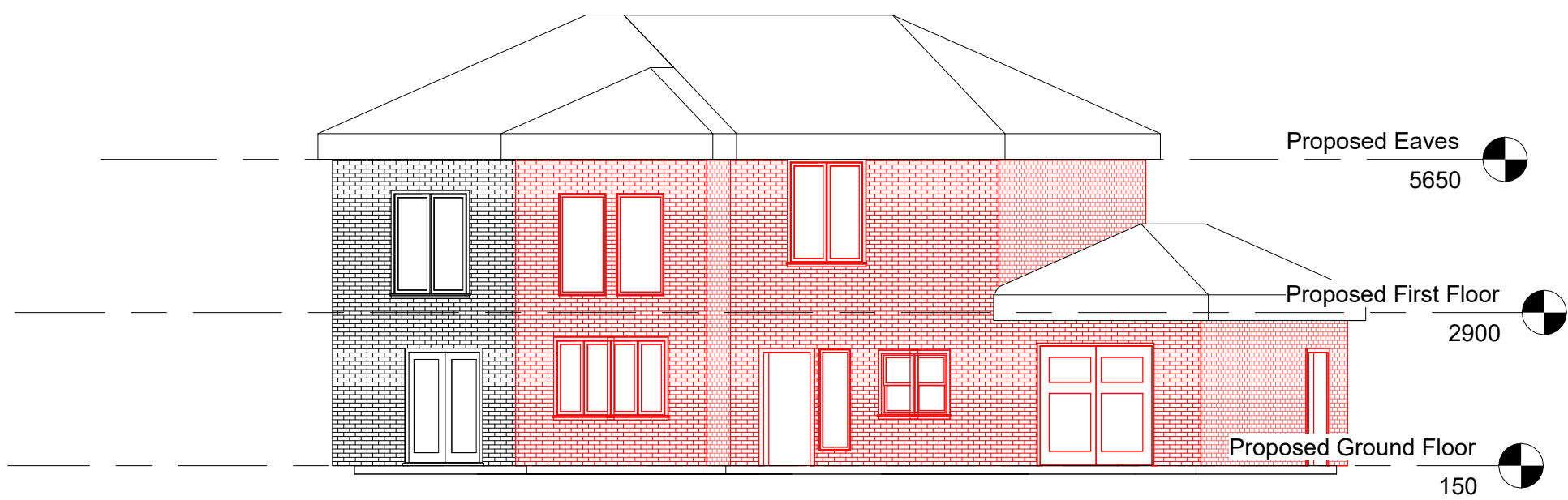


3 Short Section
1 : 50



2 Long Section
1 : 50

Property Title	Detail	Property	Originator	(Zone) Functional Breakdown	(Level) Spatial Breakdown	(Type) Form	Role	Number	Description	Suitability	Revision	scale As indicated	drawn T.Caddell	 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
House extension	Section Details/Visualisations	0001	Ex-001	XX			Designer	A104	Section Details/Visualisations	Concept		date 04/25/24	checked			Revision
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Property Title House extension	Detail Elevations	Property — Originator — (Zone) Functional Breakdown — (Level) Spatial Breakdown — (Type) Form — Role — Number — Description — Suitability — Revision										scale 1 : 100	drawn T.Caddell	 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
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Title: Comprehensive Data Management: The Key Methods and Principles of CDE in the BIM Process

In the rapidly evolving landscape of construction and engineering, Building Information Modelling (BIM) stands out as a transformative approach, revolutionizing how projects are conceptualized, designed, and executed. At the heart of this methodology lies the Comprehensive Data Environment (CDE), a crucial component that facilitates collaboration, coordination, and information management throughout the project lifecycle. This essay explores the key methods and principles of CDE and elucidates its essential role in the BIM process. (n/a, 2024)

Firstly, it's imperative to understand what CDE encompasses. Essentially, CDE serves as a centralized repository for all project-related information, ranging from design documents and specifications to schedules and cost data. It acts as a single source of truth, ensuring that stakeholders have access to accurate and up-to-date information throughout the project's duration. CDE integrates various technologies, standards, and processes to streamline data exchange and communication, fostering seamless collaboration among project participants. (Kirby, 2022) (Jeong, 2022)

One of the fundamental methods of CDE is data standardization. Consistency in data format, structure, and naming conventions is essential for effective communication and interoperability among different software platforms and disciplines. By adhering to established standards such as Industry Foundation Classes (IFC) and COBie (Construction Operations Building Information Exchange), CDE ensures that information can be exchanged seamlessly between various BIM tools and across different project phases. Standardization also enhances data integrity and reduces the likelihood of errors or discrepancies, thus improving overall project efficiency and quality. (Wiki, 2024)

Another key method of CDE is version control and revision management. In a dynamic project environment where design iterations and changes are frequent, it's crucial to maintain a clear audit trail of revisions and updates to project documents. CDE provides robust version control mechanisms that track changes, document revisions, and manage access permissions. This ensures that stakeholders always have access to the latest information while safeguarding against unauthorized modifications or data loss. Version control not only enhances transparency and accountability but also mitigates the risk of errors resulting from outdated or conflicting information.

Data security and access control are also paramount considerations in CDE implementation. Given the sensitive nature of project information and the potential consequences of unauthorized access or data breaches, CDE employs robust security measures to protect confidential data and intellectual property. Role-based access control mechanisms ensure that only authorized users have access to specific information, based on their roles and responsibilities within the project. Encryption, authentication, and audit logging further enhance data security, safeguarding against cyber threats and ensuring compliance with relevant privacy regulations.

Interoperability is another principle that underpins CDE and is essential for seamless data exchange and collaboration across diverse software platforms and disciplines. By adopting open standards and interoperable file formats, CDE facilitates integration between different BIM tools, allowing stakeholders to work collaboratively regardless of their preferred software environment. Interoperability also enables the integration of data from various sources, such as geographic information systems (GIS), asset management systems, and enterprise resource planning (ERP) systems, enriching the BIM model with additional context and functionality.

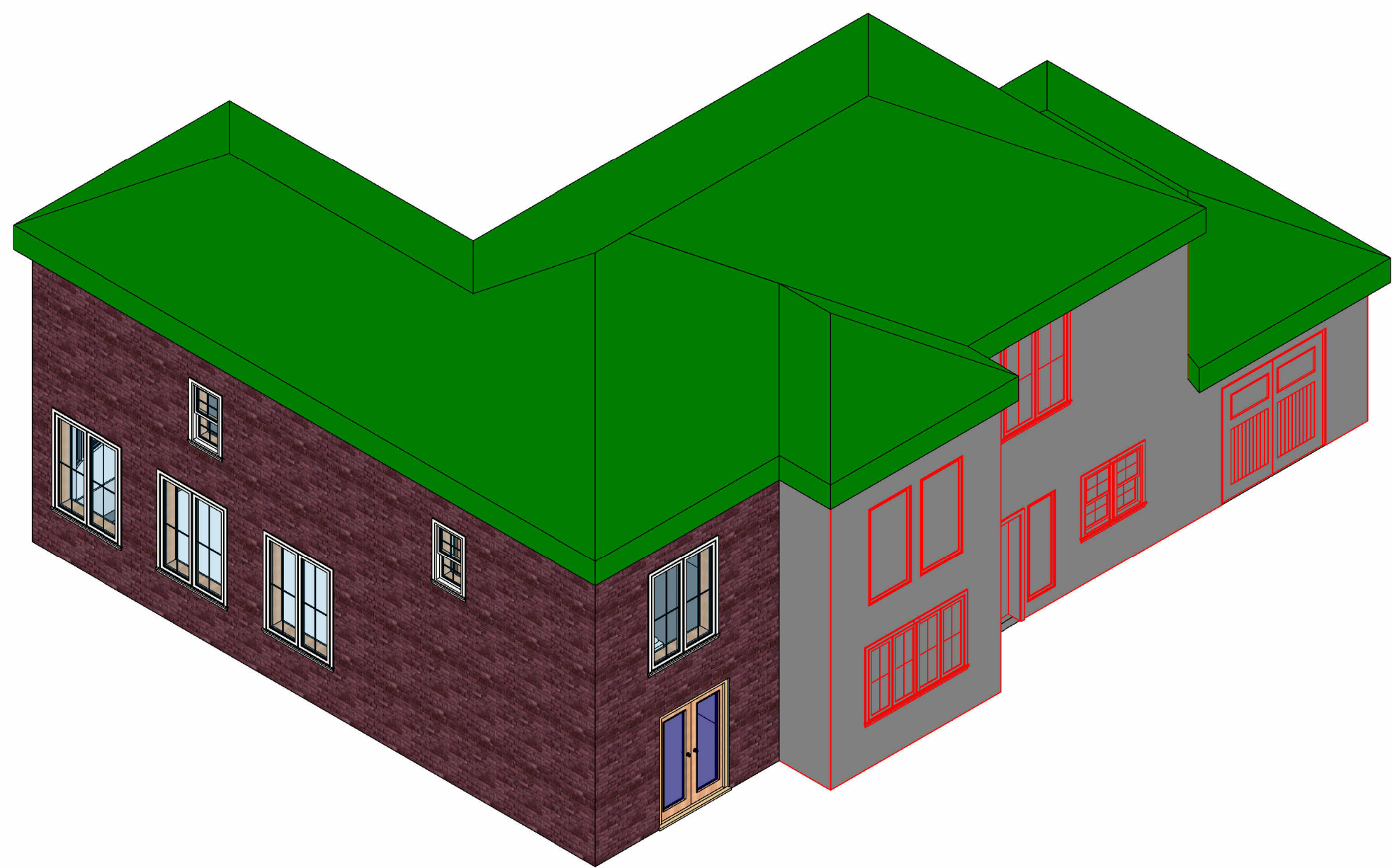
Furthermore, CDE supports data validation and quality assurance processes to ensure the accuracy, completeness, and consistency of project information. Automated validation checks and rule-based workflows help identify errors, inconsistencies, and compliance issues early in the project lifecycle, minimizing rework and costly delays. By establishing clear data validation criteria and quality standards, CDE promotes a culture of continuous improvement and accountability among project participants, driving higher levels of performance and efficiency. (Bimspot, 2023)

Collaboration and communication are at the core of the BIM process, and CDE plays a pivotal role in facilitating effective communication and information exchange among project stakeholders. By providing centralized access to project information, communication tools, and collaboration workflows, CDE fosters transparency, trust, and alignment among project teams, leading to better decision-making and outcomes. Real-time collaboration features such as cloud-based document sharing, markup tools, and instant messaging enable stakeholders to work together seamlessly, regardless of their geographical location or time zone.

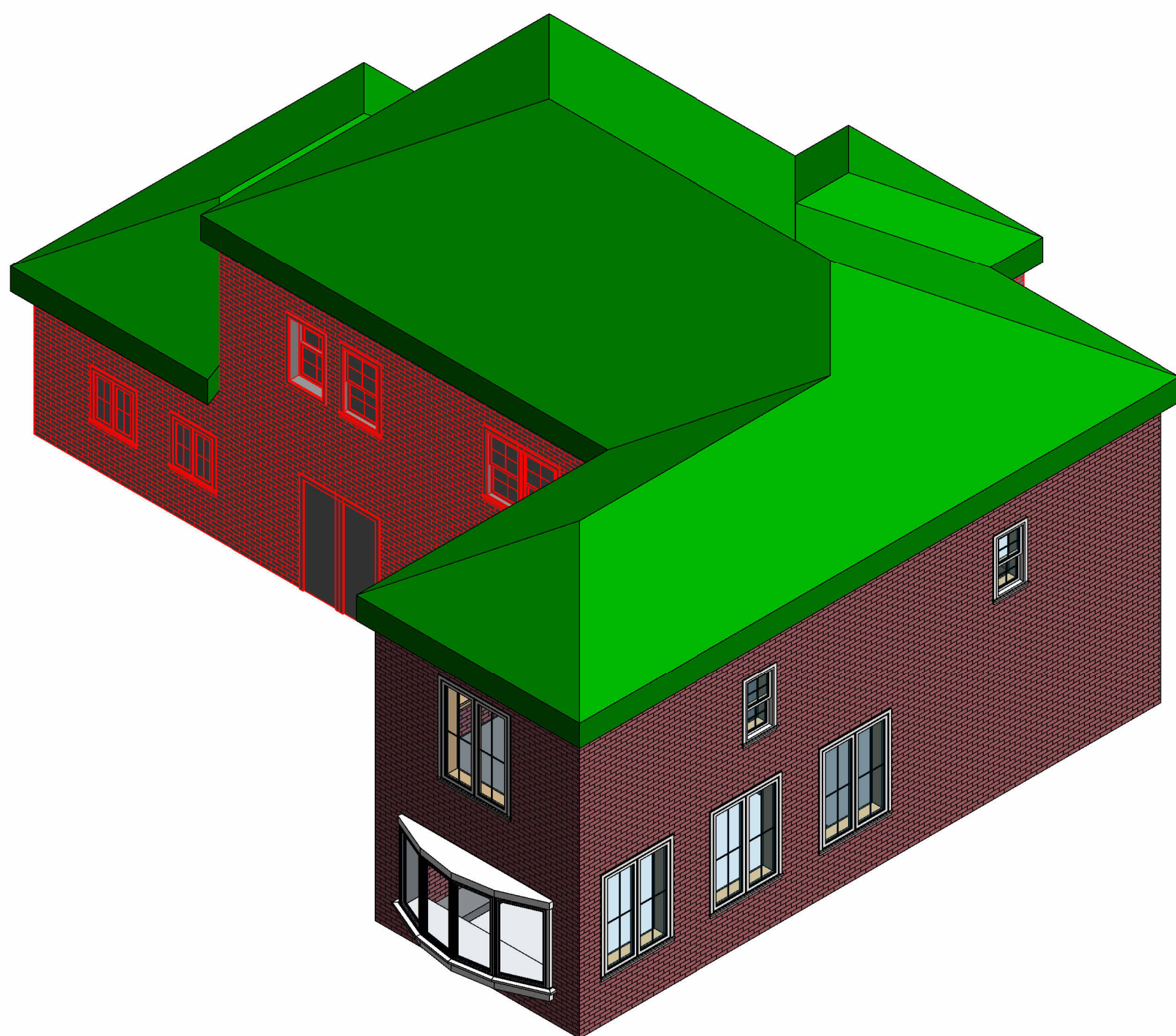
In conclusion, the Comprehensive Data Environment (CDE) is a cornerstone of the Building Information Modelling (BIM) process, providing the infrastructure and framework for effective data management, collaboration, and communication throughout the project lifecycle. By adhering to key principles such as data standardization, version control, security, interoperability, and quality assurance, CDE enables project stakeholders to work collaboratively, make informed decisions, and deliver successful outcomes. As the construction industry continues to embrace digital transformation, the role of CDE in driving innovation and efficiency will only become more pronounced, cementing its status as an indispensable tool for modern project delivery.

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1 Front of House



2 Back of House