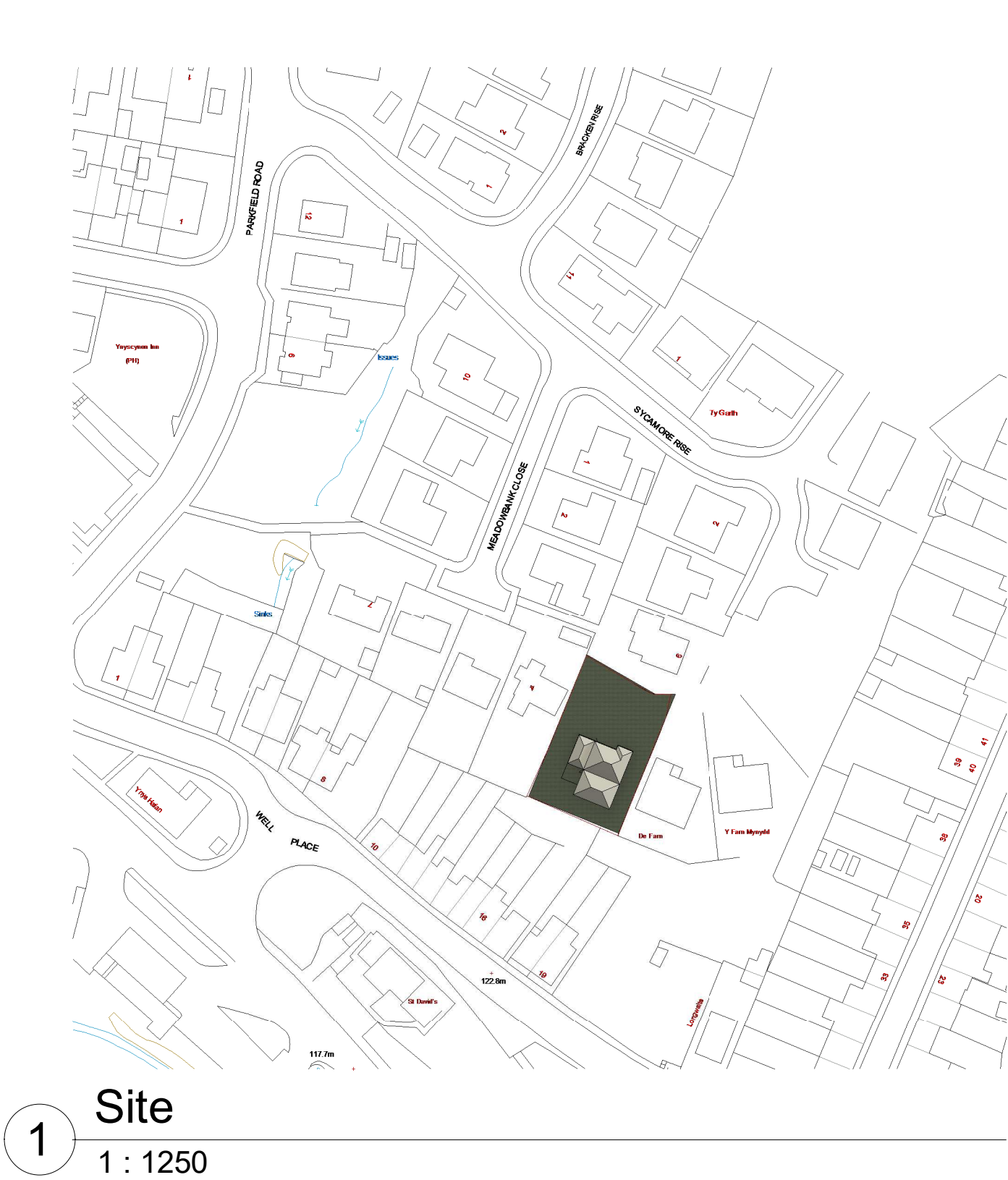
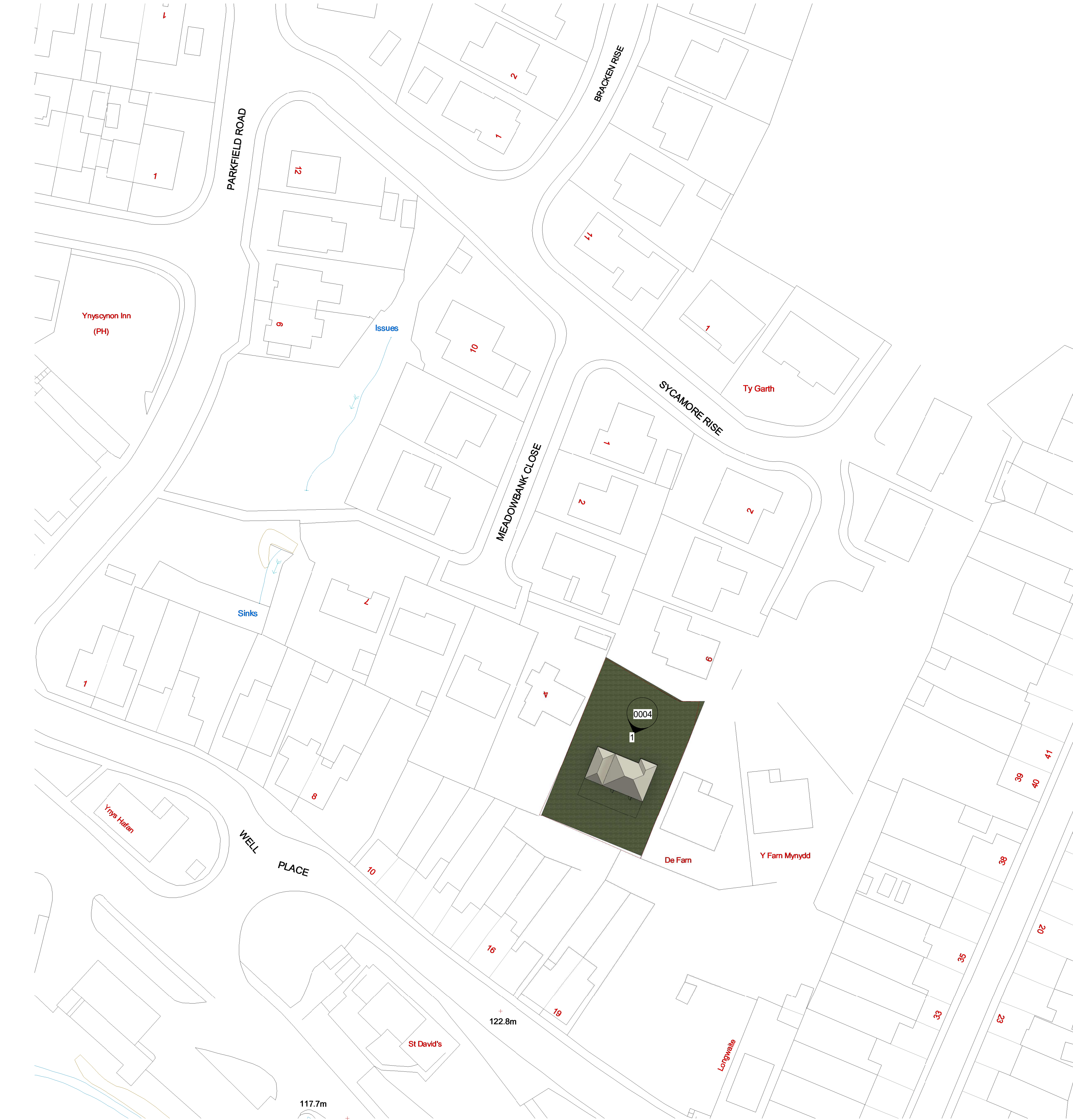
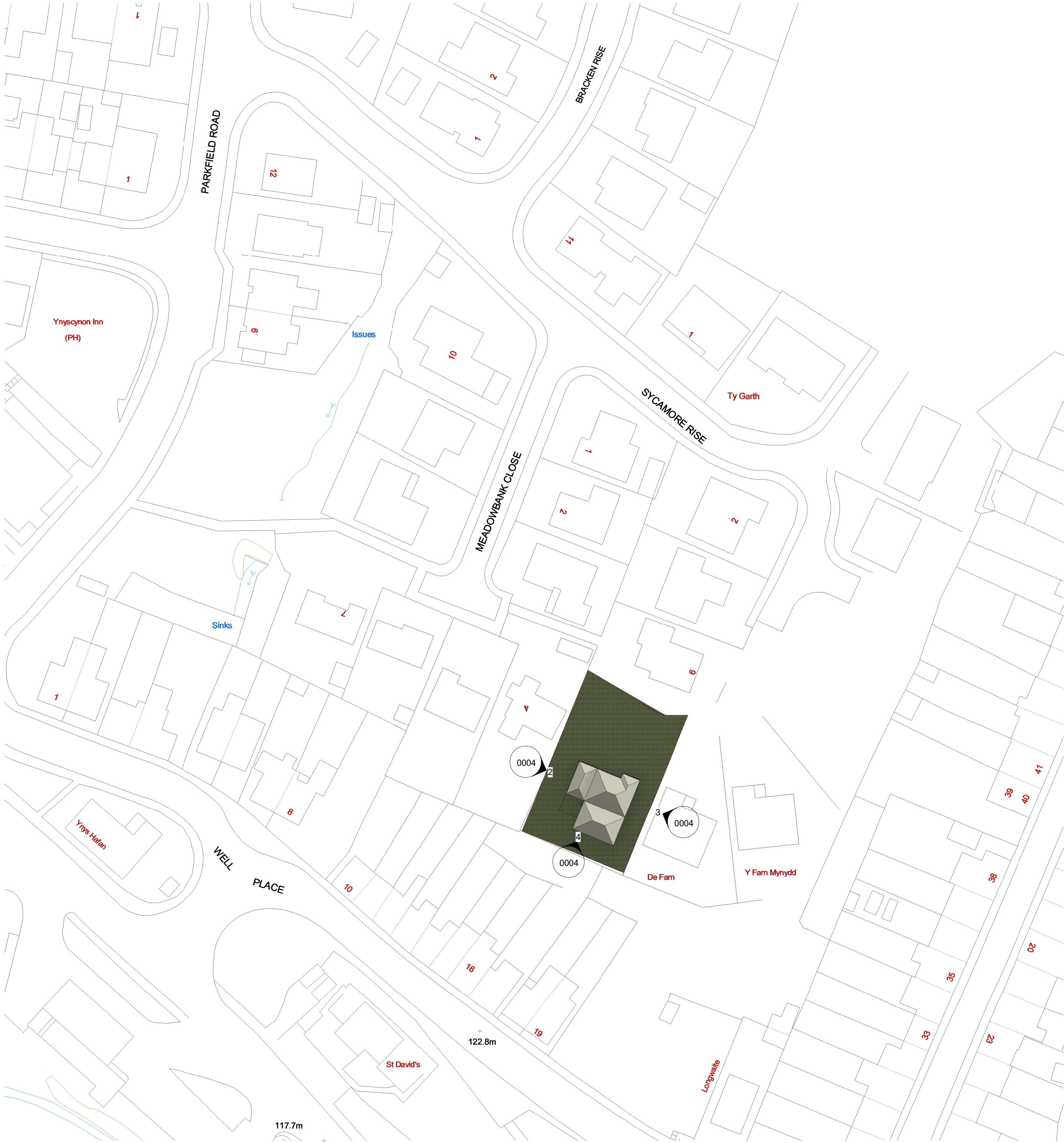




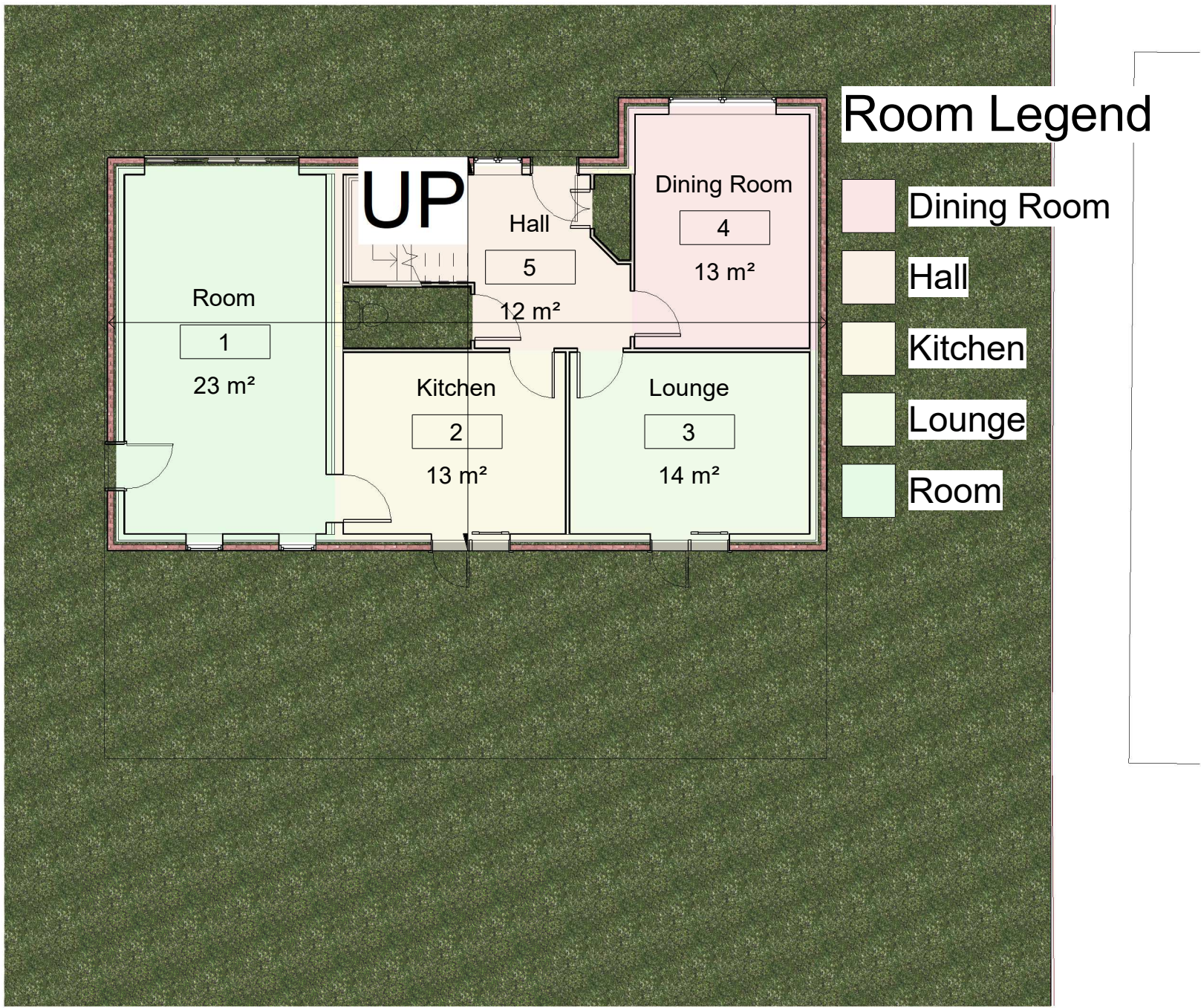
1 Site
1 : 1250



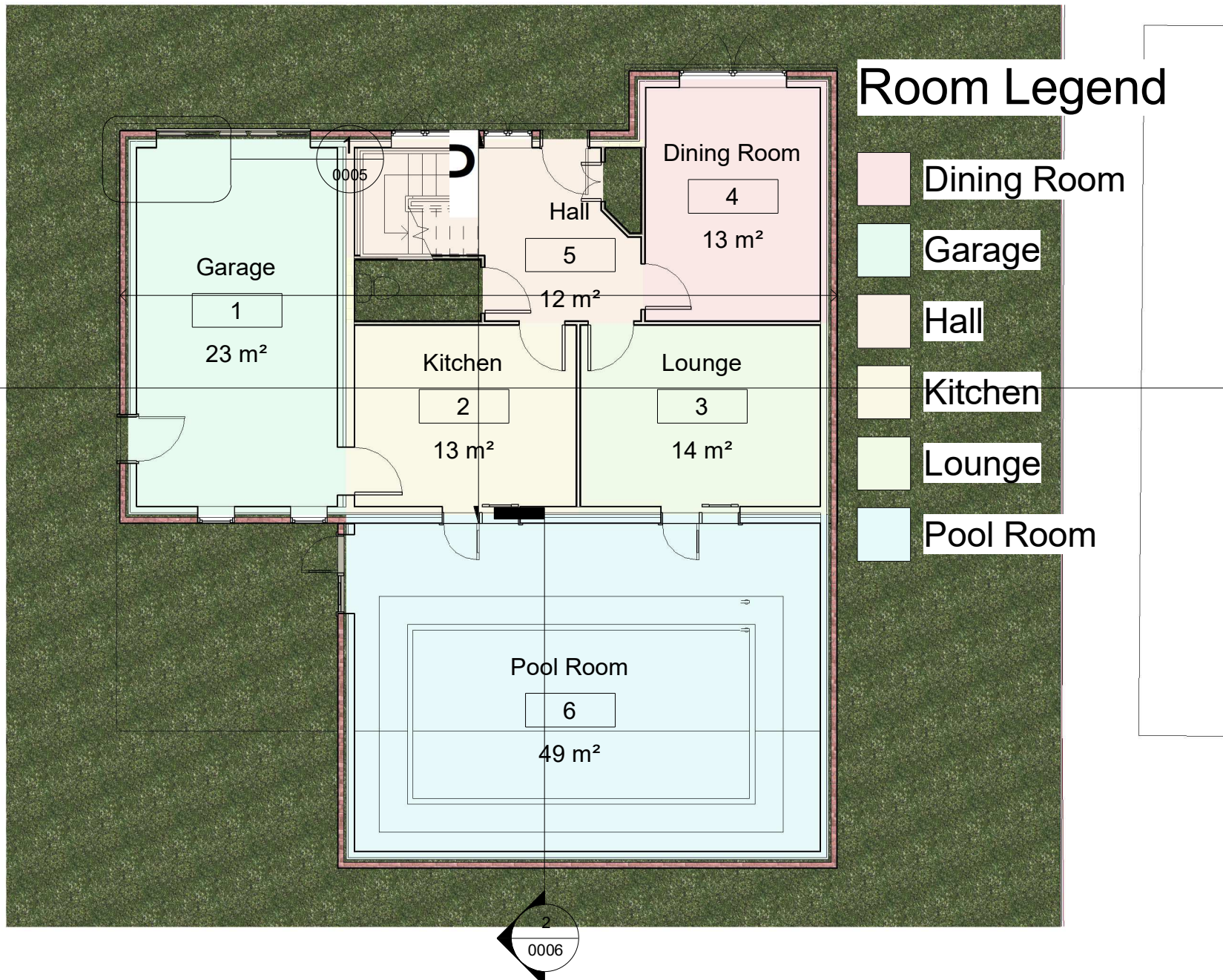
2 Existing Site Plan
1 : 500



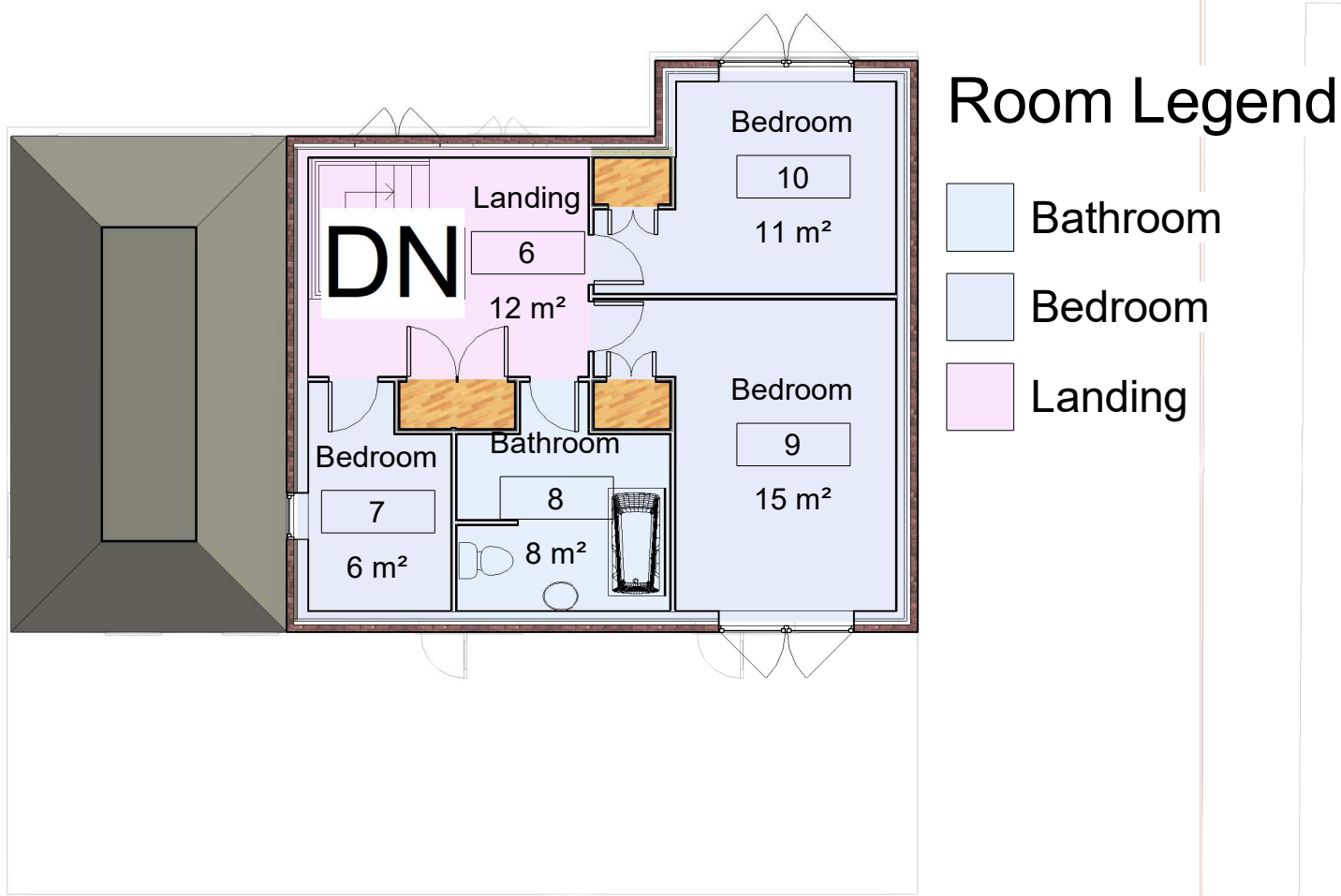
1 Proposed Site Plan
1 : 500



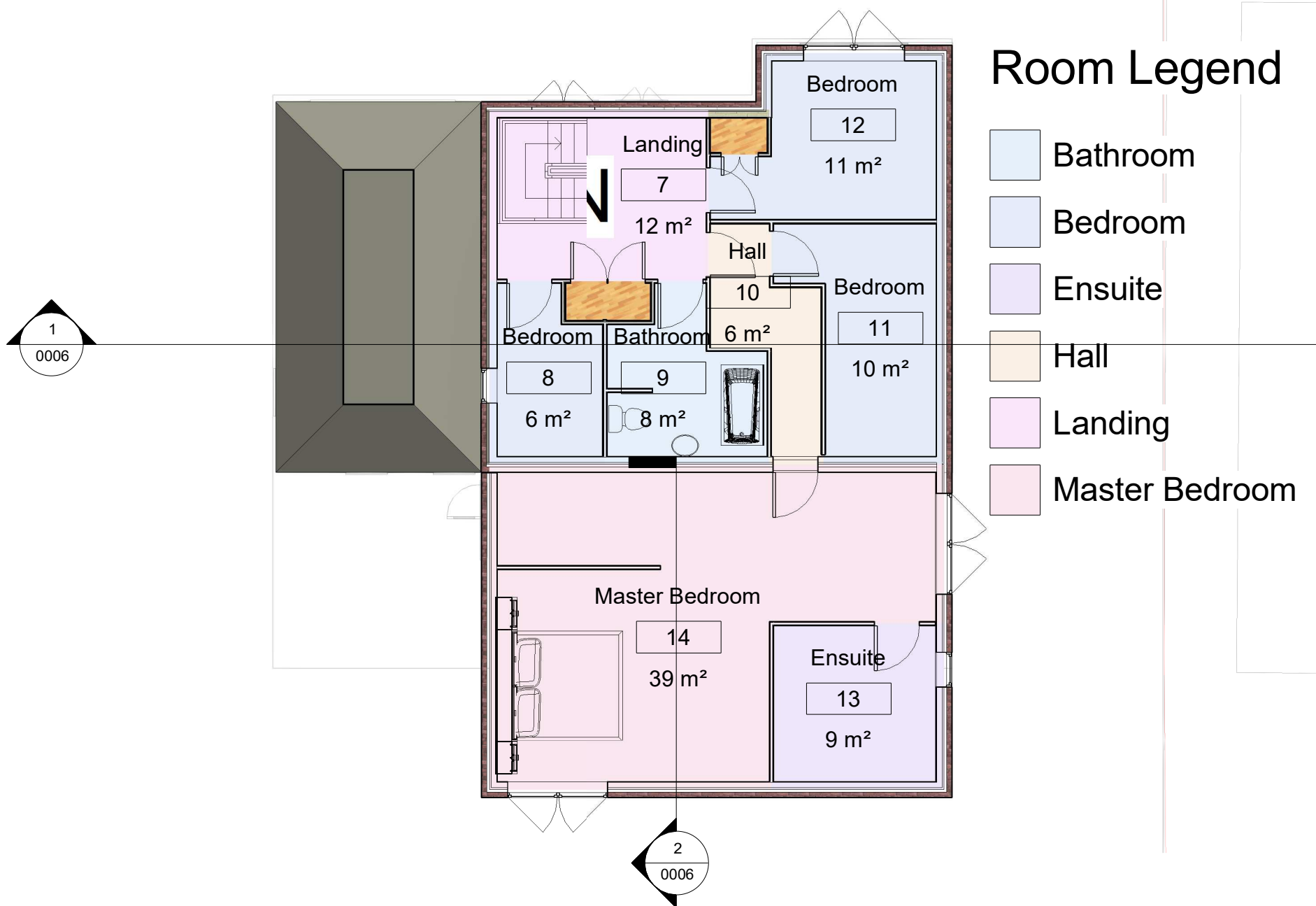
1 0 - Ground Floor Existing
1 : 100



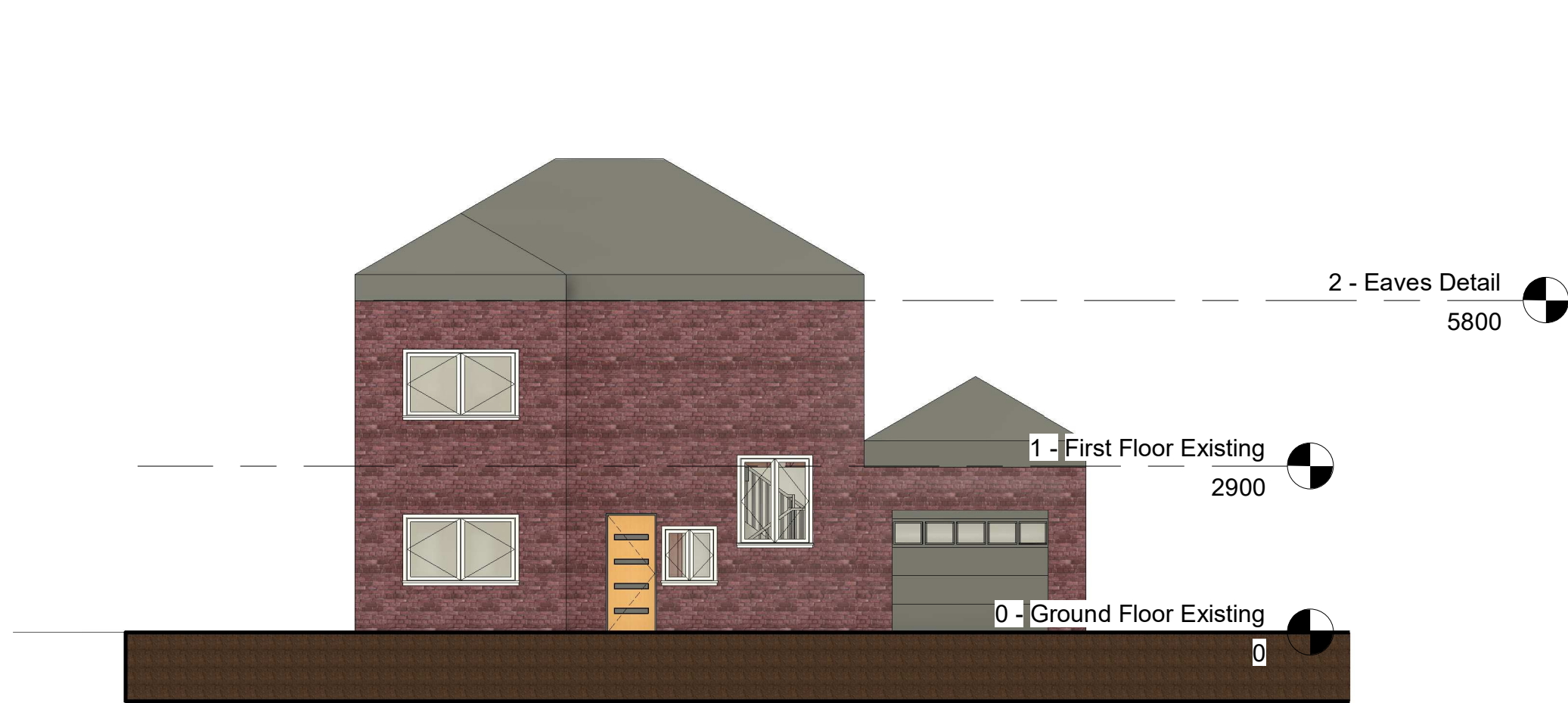
2 0 - Ground Floor Proposed
1 : 100



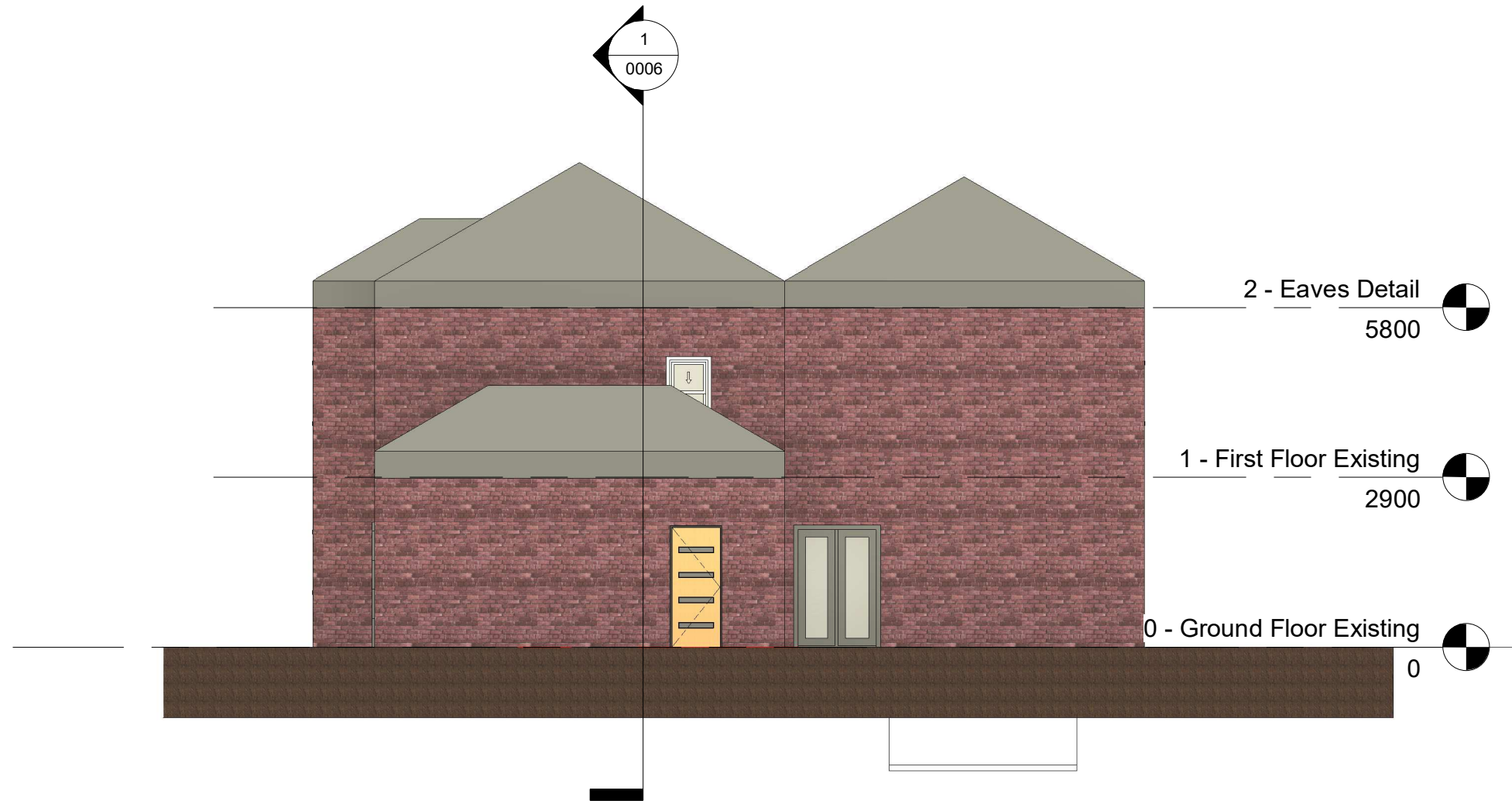
3 1 - First Floor Existing
1 : 100



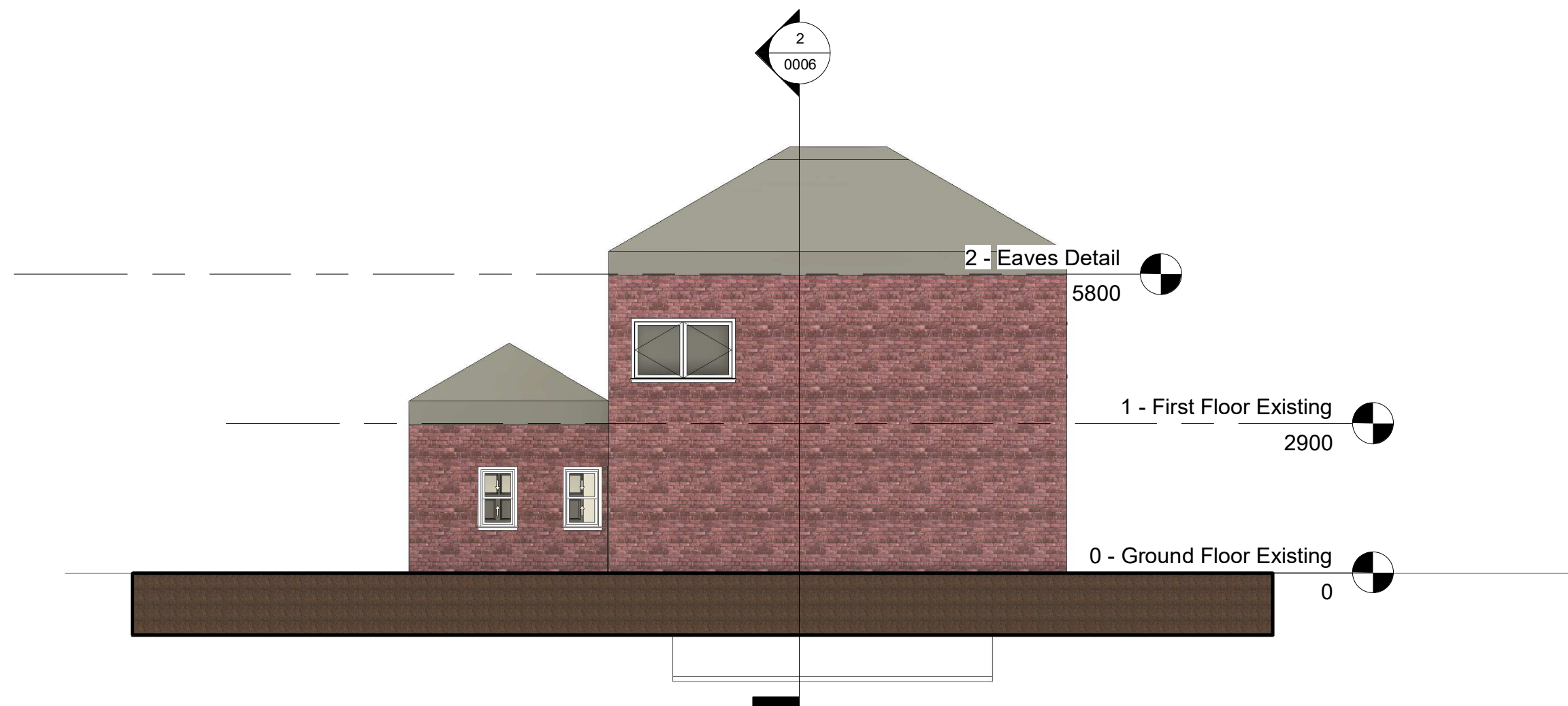
4 1 - First Floor Proposed
1 : 100



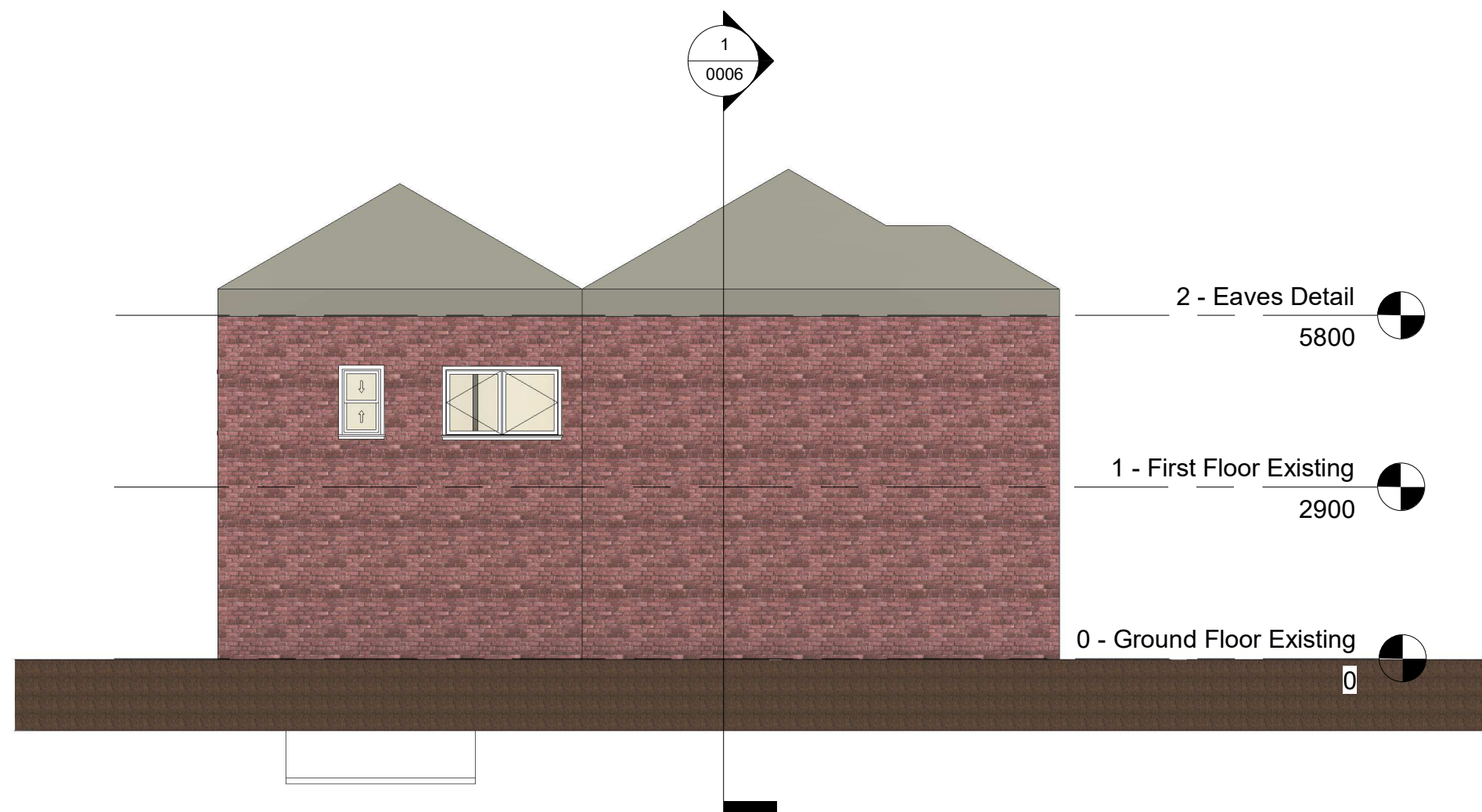
1 North East Elevation
1 : 100



2 North West Elevation
1 : 100



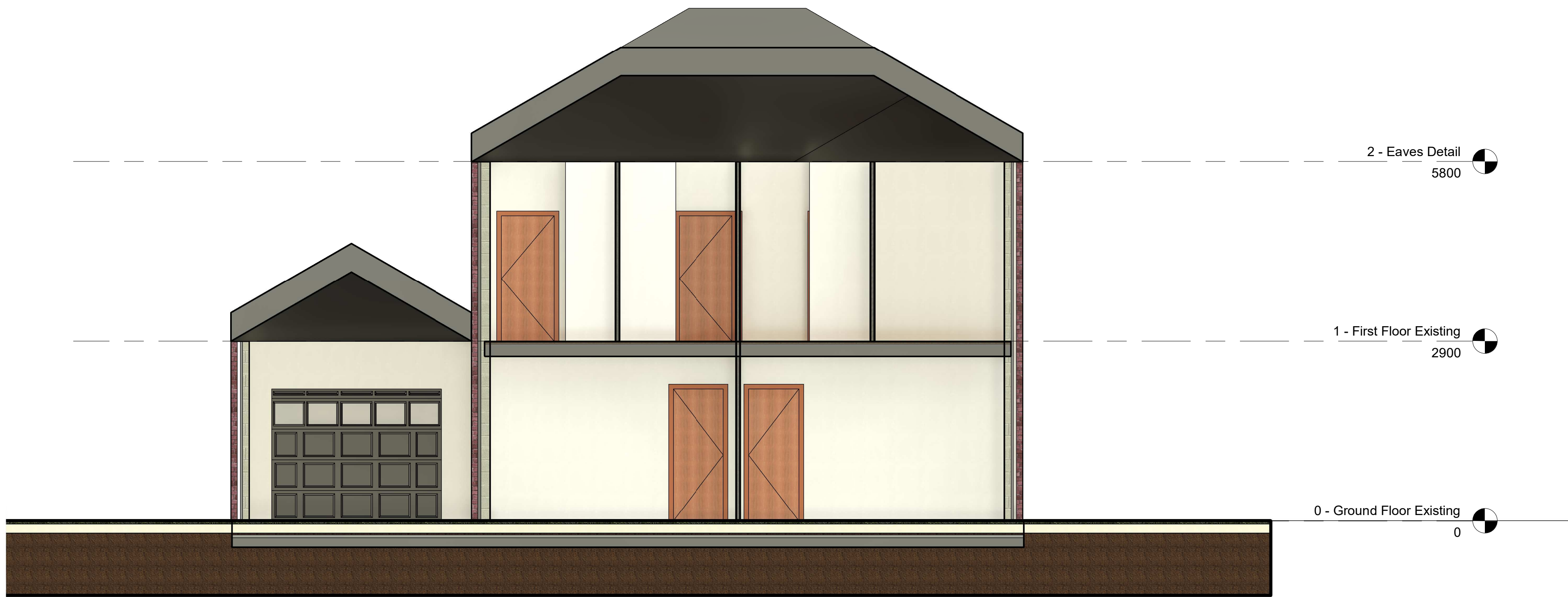
4 South West Elevation
1 : 100



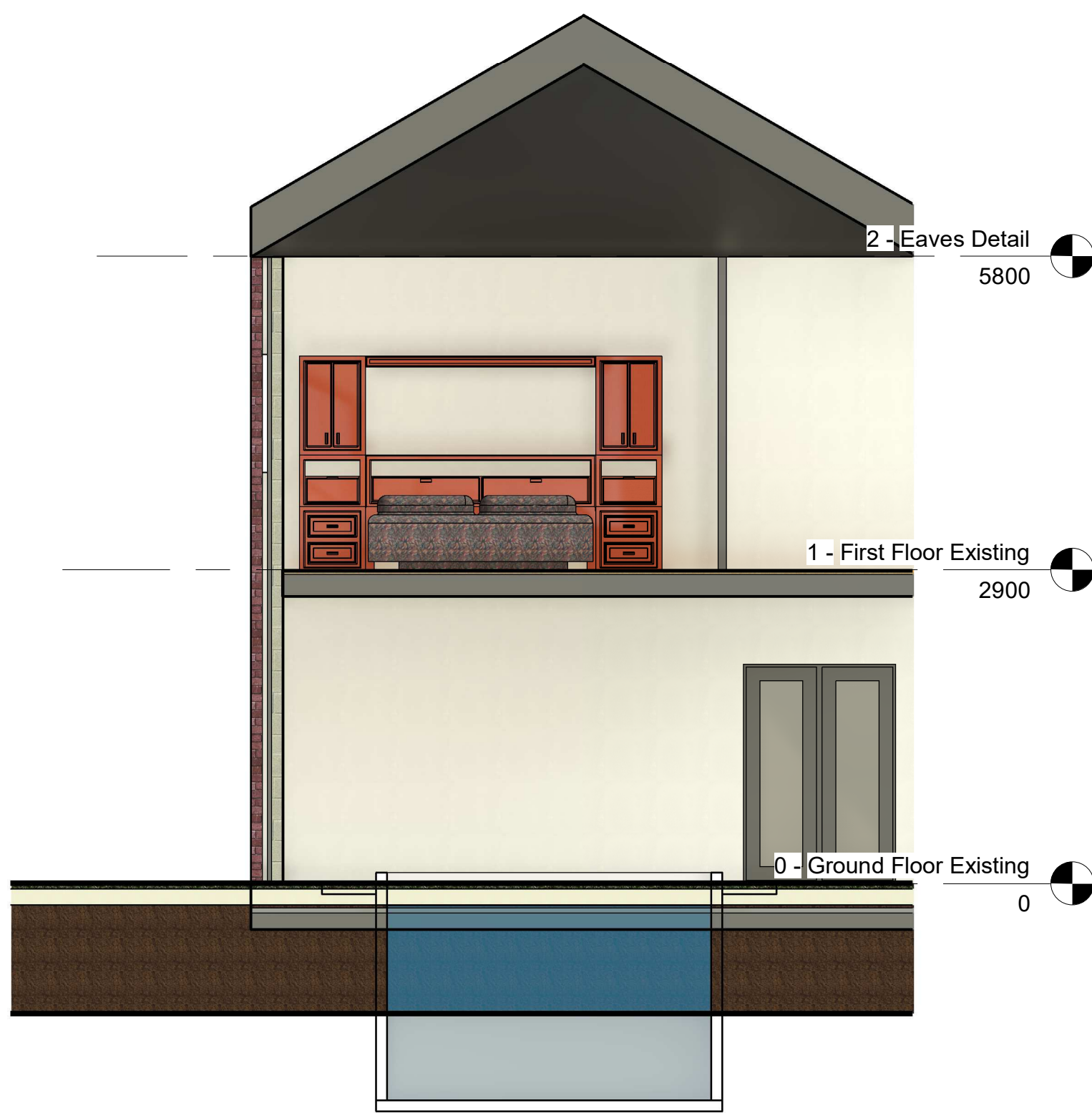
3 South East Elevation
1 : 100



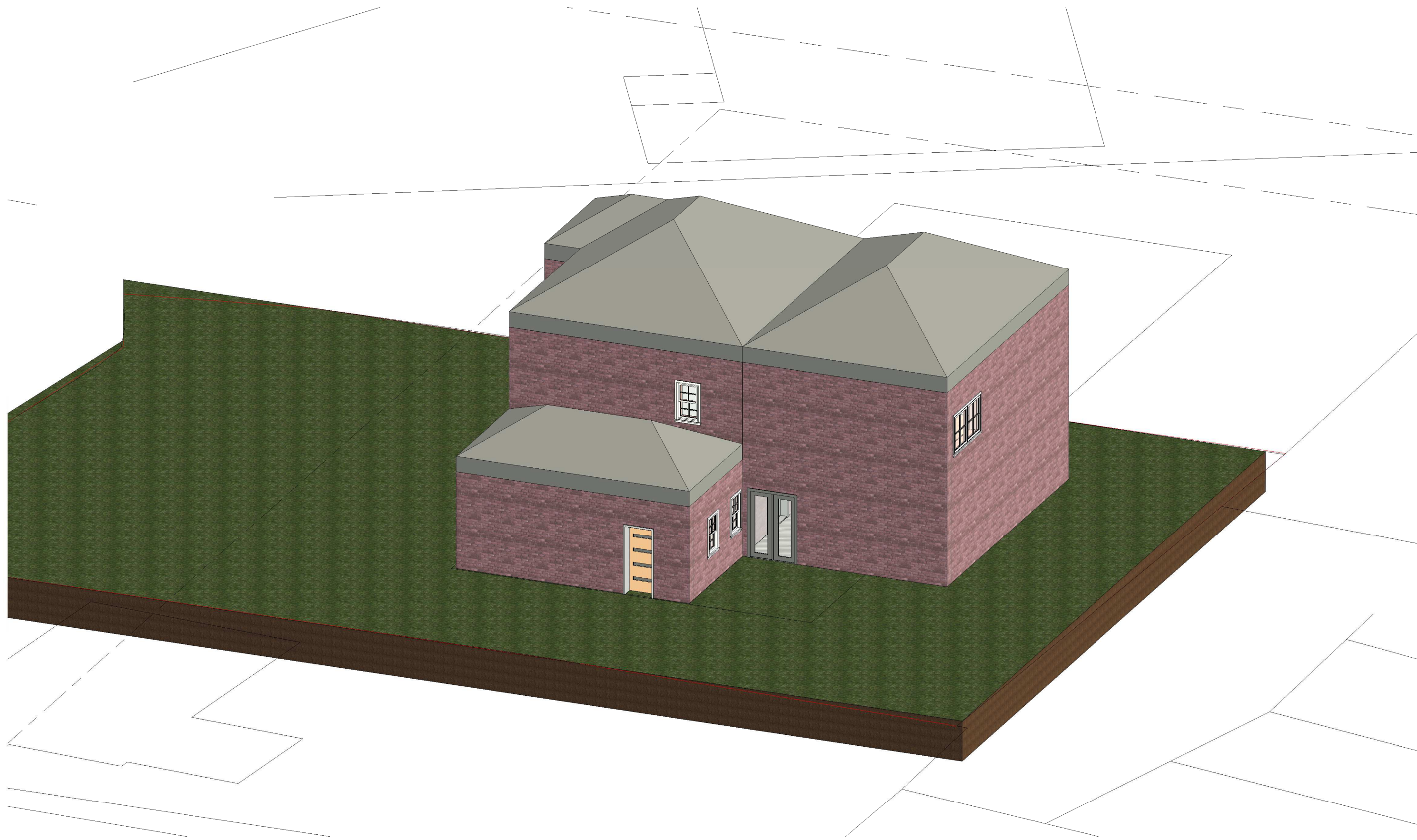
0 - Ground Floor Proposed -
1 Callout 1
1:5



1 Long Section
1 : 50



2 Short Section
1 : 50



3 3D Viewport

Common Data Environment

A common data environment in construction is a cloud-based space where any information relative to construction projects is stored. The information stored on the cloud is vital to the success of a project. The information is then easily accessible to any person involved in that project. (Oracle, 2024) Each member having easy access ensures that everyone is working on the same page, resulting in a more successful end product. The use of a CDE also assists in building trust between parties working on a project as it withholds all information that has been changed and added to the schemes. The project team working as a collective ensures that the best possible results for the project are achieved. The below illustrates the time saved by using a Common Data Environment.

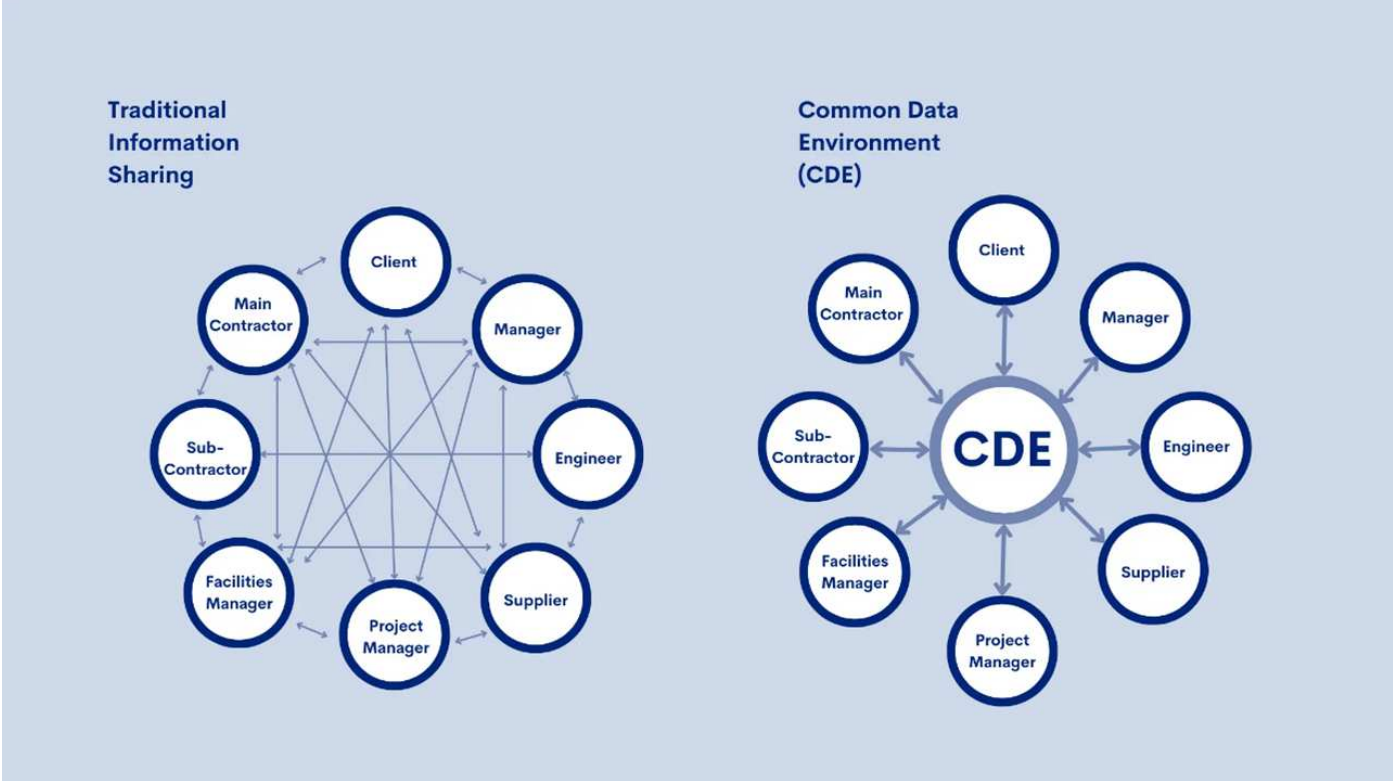


Figure 1 Shows the comparison between both Traditional Information Sharing and the Use of a Common Data Environment (Jerin Biju, 2022)

RFI’s often caused long delays on projects due to each party involved having to circulate the required information to one another. This allowed no margin for error as there was already a battle against time to share information. Matt Kirby states that “A common data environment streamlines this document-centric workflow.” (Matt Kirby, 2022) The use of this allows all information requests to be stored in a neutral space, where each person can act upon it as and when they are required to. Each person would be notified when an RFI was uploaded, so it could be acted upon as soon as possible.

Common Data Environments also allows people that generally would not have access to BIM software to view the relevant drawings and updates without the requirement to purchase the software. BIM software packages are often expensive, resulting in only the design team having access to them. This ability assists the contractors as they can then extract any information that is relevant and use it on site without any unnecessary spending. The cloud will ensure that each party is held accountable for their actions. Using the cloud enables each role to be clearly outlined and completed (Builder Storm, 2019). Each person accessing the cloud will be able to understand their responsibilities as well as those of the other parties working on the project. The cloud often has a full audit history, enabling each member to see who has done what and when they have done it. This is important as it allows visibility of the performances of the team and shows who is causing any delays. The ability to view the audit history also allows each member to chase up any information that is yet to be actioned.

The most beneficial factor of using a common data environment is that it improves efficiency and quality of projects. The information that is stored is coordinated, resulting in a reduced time to analyse and reissue it. (Rachel Carey, 2020) The information on the cloud is also available to all project members regardless of their time or location. The improvement of efficiency is vital to the success of a project as it prevents the waste of resources where they could be spared or used more effectively.

When a project is completed, the common data environment allows the information to be accessed to then be used on future projects. (Egnyte, 2023) The ability to do so allows future projects to be started with experience of similar work. Having access to similar projects minimises the potential risks that would have not have previously been clear.

Common Data Environments go hand in hand with Building Information Modelling (BIM). The BIM plays a vital role on the cloud as it allows for easier planning of a project. The drawings will show accurate representations of what is required on site to be provided to a contractor. A contractor will be allowed access to the cloud and then will be able to produce accurate costs with a fast return. The construction industry’s requirement for quick turnarounds on projects is increasing over time, so this solution is largely beneficial in supporting it. Autodesk is a provider of the BIM software and states that “The common data environment (CDE), is the single source of information used to collect, manage and disseminate documentation, the graphical model and non-graphical data for the whole project team” (Autodesk, 2021)

The use of a collaborative system provides additional security to a project and its data. Symetri discuss this, stating that “Administrators and IT specialists have better control over data and information with a CDE” (Symetri, 2022). This is important as it protects the confidentiality of the data on each project and the people working within it. The storage system will only allow access to the correct parties, so will ensure that the project information is kept secure.

Summary
Common Data Environments are vital in the continuous development of the construction industry. They provide stability to each project, ensuring that all information is stored in a reliable and accessible location. Every project should be aiming towards using a common data environment if they are striving to become more successful. The resources saved from using this software show that they should be the priority for all future projects.

References
Autodesk (2021). What is a Common Data Environment and Why It Matters [Infographic] Available from: [https://www.autodesk.com/blogs/construction/construction-common-data-environment/#:~:text=The%20common%20data%20environment%20\(CDE,%2C%20says%20the%20BIM%20Wiki](https://www.autodesk.com/blogs/construction/construction-common-data-environment/#:~:text=The%20common%20data%20environment%20(CDE,%2C%20says%20the%20BIM%20Wiki). [Accessed on 20/04/2024]
Biju, J (2022). How to Manage the Common Data Environment and why it matters? Available from: <https://www.desapex.com/blog-posts/how-to-manage-the-common-data-environment-and-why-it-matters> [Accessed on 18/04/2024]
Builder Storm (2019). What are the benefits of a Common Data Environment? Available from: <https://www.builderstorm.com/blogs/what-are-the-benefits-of-a-common-data-environment/> [Accessed on 18/04/2024]
Carey, R (2020). Why a Common Data Environment is Essential for Your Project? Available from: <https://www.asite.com/blogs/what-is-a-common-data-environment> [Accessed on 20/04/2024]
Egnyte (2023). Understanding CDE and BIM. Available from: <https://www.egnyte.com/guides/aec/common-data-environment/#:~:text=A%20common%20data%20environment%2C%20or%20CDE%2C%20supports%20BIM%20projects%20by,encryption%20and%20controlled%20user%20access>. [Accessed on 19/04/2024]
Kirby, M (2022). What Is a Common Data Environment and How Is It Used In Construction? Available from: <https://constructible.trimble.com/construction-industry/what-is-a-common-data-environment-and-how-is-it-used-in-construction> [Accessed on 19/04/2024]
Oracle (2024). What is a common data environment (CDE) in construction? Available from: <https://www.oracle.com/uk/construction-engineering/what-is-cde-and-bim/#:~:text=What%20is%20a%20common%20data,well%20as%20their%20contractual%20obligations>. [Accessed on 18/04/2024]
Symetri (2022). WHAT IS A COMMON DATA ENVIRONMENT AND WHY IT MATTERS? Available from: <https://www.symetri.co.uk/insights/blog/what-is-a-common-data-environment-and-why-it-matters/> [Accessed on 20/04/2024]

Property Title House Extension	Detail Common Data Environment (CDE)	Property — Originator — (Zone) Functional Breakdown — (Level) Spatial Breakdown — (Type) Form — Role — Number — Description — Suitability — Revision	scale	drawn	 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	
		4005 — UWTS — XX — — D — Designer0007 — Common Data Environment (CDE) — S0 —	date	checked			Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David
		File Path: \\TRJSERV\Folder Redirection\Joshuahughes\Desktop\Josh Hughes\UNI Work\Year 2\Digital Tech & BIM\Revit Assignment.rvt	04/22/24	GT			SA1 Campus King's Road Swansea SA1 8HQ

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