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SWANSEA - ABERTAWE

PROJECT PLANNING, MONITORING AND CONTROL.

SITE LAYOUT.

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Executive Summary

The purpose of this report will be to describe the site logistics for the proposed development. Contained within the report are site layout plans of the development as it progresses, and how the services, plant, cranes, offices, facilities, storage and waste are managed throughout the project.

Terms of Reference

The principal focus are:

1. To illustrate the site layout plans for the proposed development.
2. To provide a description of how the site logistics are implemented throughout the scheme.

The report was constrained by the information given and researched and the need to complete it by 23rd January 2018.

Procedure

This section identifies the research sources used. The research included is from a variety of sources e.g. websites and text books secondary set out in the references.

Findings.

One of the most important tasks for site management within any construction project, is the site layout planning. A Poor site layout could result in cost overruns, especially on larger more complex projects. An effective site layout plan will enable all site personnel, site equipment and plant and external deliveries to work together throughout the duration of the project. Providing a detailed plan of the site layout and location of temporary facilities can enable the senior management to make substantial improvements by reducing travel time and waiting time, whilst improving worker morale by creating a better and safer working environment Chudley, R. & Greeno, R., (2005)

The Site planning process in particular, can be one aspect of the project that potentially can be neglected and therefore tends to be developed as the project progresses. It is important to realise that the site planning and layout will be the conditions that site personnel will have to adhere to for the duration of the construction period. Therefore, it is vital that adequate time and resources are allocated during the pre-planning phase. Furthermore, since the labour cost on a large project constitutes approximately 50 to 60% of the total project cost, significant saving can be achieved if the labour force moved freely and quickly within the site Chudley, R. & Greeno, R., (2005)

A well planned site layout including all the necessary temporary facilities and utilities will lead to the following:

- 1) Increasing productivity and safety.
- 2) A reduction in area(s) needed for temporary construction.
- 3) Maximizing utilization of the space available.

In preparation of the site layout plan for the proposed development, the following points have been considered through the development of each phase of the works;

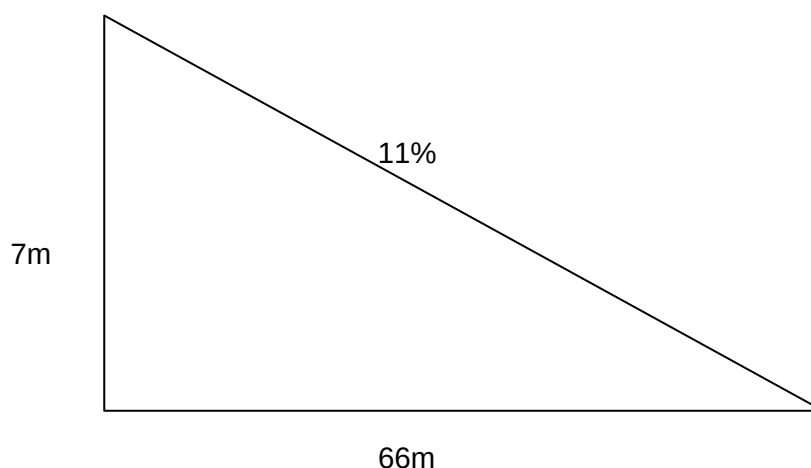
- Site Safety - Fire prevention: Fire is one major cause of damage on construction sites. Therefore, all facilities will be provided with fire extinguishers are basic requirements on this scheme. there will also be adequate provision of medical equipment on site to address any issues that may arise on site. Construction safety clothing personnel protective equipment (PPE) will be provided in the form of basic safety supplies like safety shoes, hard hats, gloves, and goggles must be used at all times by the various trade undertaking tasks on site Anon (2018). In addition to the other site safety aspects, the site will closed off with timber panel fencing. This is a requirement under the Highways Act 1980, a close boarded fence hoarding is required to be erected prior to the beginning of building operations if such operations are adjacent to a public footpath or highway. Implementing these measures will

ensure no unauthorised personnel will gain entry to the site Chudley, R. & Greeno, R., (2005).

- Site Accessibility and logistics - The site layout has been prepared to allow accessibility for equipment and vehicles to be safe, and also minimize the chance of accidents, and save time in manoeuvring to arrive at and leave the site. During phase 1 of the project (Appendix 1) vehicles will access the site from the adjoining highway, to enable the excavation works to be undertaken. The initial phase will consist of pilling works around blocks D and C, following which the excavation works can commence. Traffic will enter and exit in between the red barrier indicated on the drawing, the monitored by two member of staff during these initial works. Similarly during phase 2 (Appendix 2), vehicles will be using at different access from the adjoining highway to enable the remaining pilling and excavation works to be undertaken. Vehicles will enter an exit around exit point of the site, whilst also being supervised by two members of staff Juan . A Ferriz . Papi G. (2017). The site layout has also provided internal road to facilitate any traffic during the project. The route has been designed as a one way system to mitigate any turning movements within the site boundary. Also included in the plans is separate walkway for site personnel and visitors. Parking facilities have also been provided for the site management, trade personnel and visitors to site. These have been located near the site entrance, to allow all personnel to monitored at entrance gate. At the exit of site there will be a wheel wash system which will ensure that no site debris will carried out onto the public highway.
- Information Signs and a Site map - The proposed site layout highlight details of the project, and displayed in the office of the site supervisor or project manager and also posted at the entrance gate. Traffic regulatory signs have also been provided to provide assistance in guiding the traffic on the site and avoid accidents to a considerable extent Porth P & R (2016). All the relevant documentation will be provided on site, which will include labour relations' policy and safety rules .This in turn will help in eliminating any disputes between labour and management. Also the emergency escape route will be displayed on every floor as the building progresses
- Security - Entrance: Site traffic will use the one way system which have been indicated on the plans, therefore the security access point at the entrance and exit of the site to ensure site safety of all personnel, and also to keep track of all visitors to the project.
- Accommodation (Site offices and Welfare facilities) - Site office and welfare facilities have been provided for this project, and have identified on the planes (Appendix 1-

- 3). These have been situated close safe and secure location in close proximity to the project. These facilities will consist of toilets, drying room, lunch area and also a storage area for the clothes and PPE. The site offices have been positioned near the entrance of the site to ensure all site staff and visitors are properly inducted and the relevant qualifications prior to entering the site Porth P & R (2016).
- Materials Storage and Waste management system on site - Provided within the plans is a storage are two separate areas for materials and a waste management section. Both areas have been situated near the access road throughout the site for easy access. Materials deliveries can be stored via use of the carne allocated on site. Furthermore, the variety of waste from the site can be dealt with quickly and effectively with use of skips for the different materials. Shute's will be used to transfer the waste from the various floors during construction and in turn disposed of the appropriate areas Anon (2018).
 - Crane selection - For this project a single crane has been selected to facilitate the needs of the site. The crane will manage all the deliveries whilst also supplying the different trades on site. (Appendix 3) identifies the location of the crane and how a single crane will be able to supply the entire site. Phase 3 identifies how the crane boom interacts during the development and the will not interfere with the surrounding structures. It is vital that schedule of works for the crane is put in place to ensure that everyone on can be productive at all times, and deliveries can be dealt with accordingly.

Excavation Ramp.



As part of the excavation works a access ramp would be required to carry out the works.
The image above represents the proposed excavation ramp which has been calculated as follows; $\text{Rise} = \frac{7}{66} = 11\%$

Run 66

Therefore the ramp is considered to be a suitable gradient to undertake these works.

Car park facility.

Site Entrance.

Site office and welfare facilities.

Material Storage compound.

Piling Rig area.

Waste management area.

Access road throughout the site.

Pedestrian Walkway.

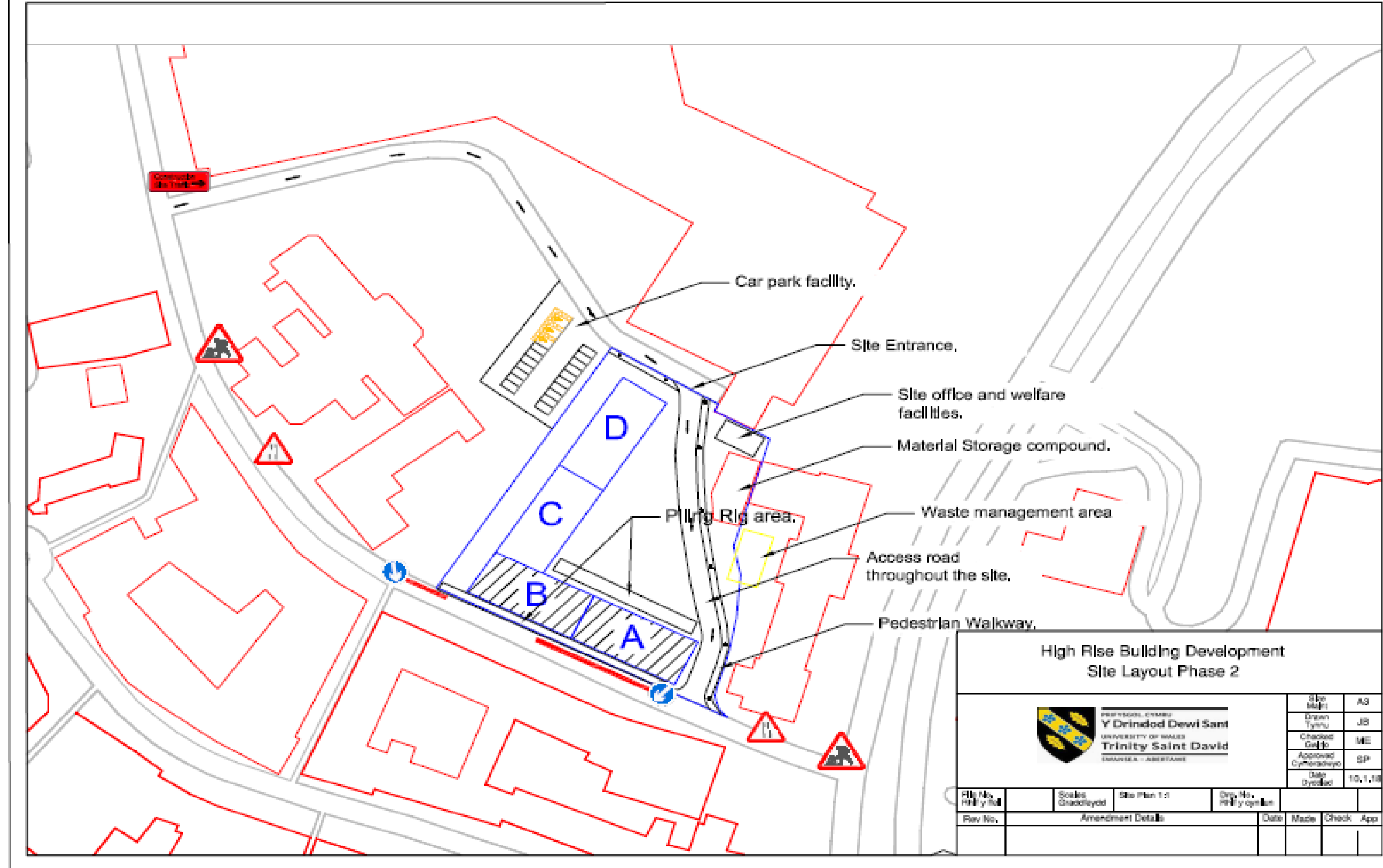
High Rise Building Development
Site Layout Phase 1

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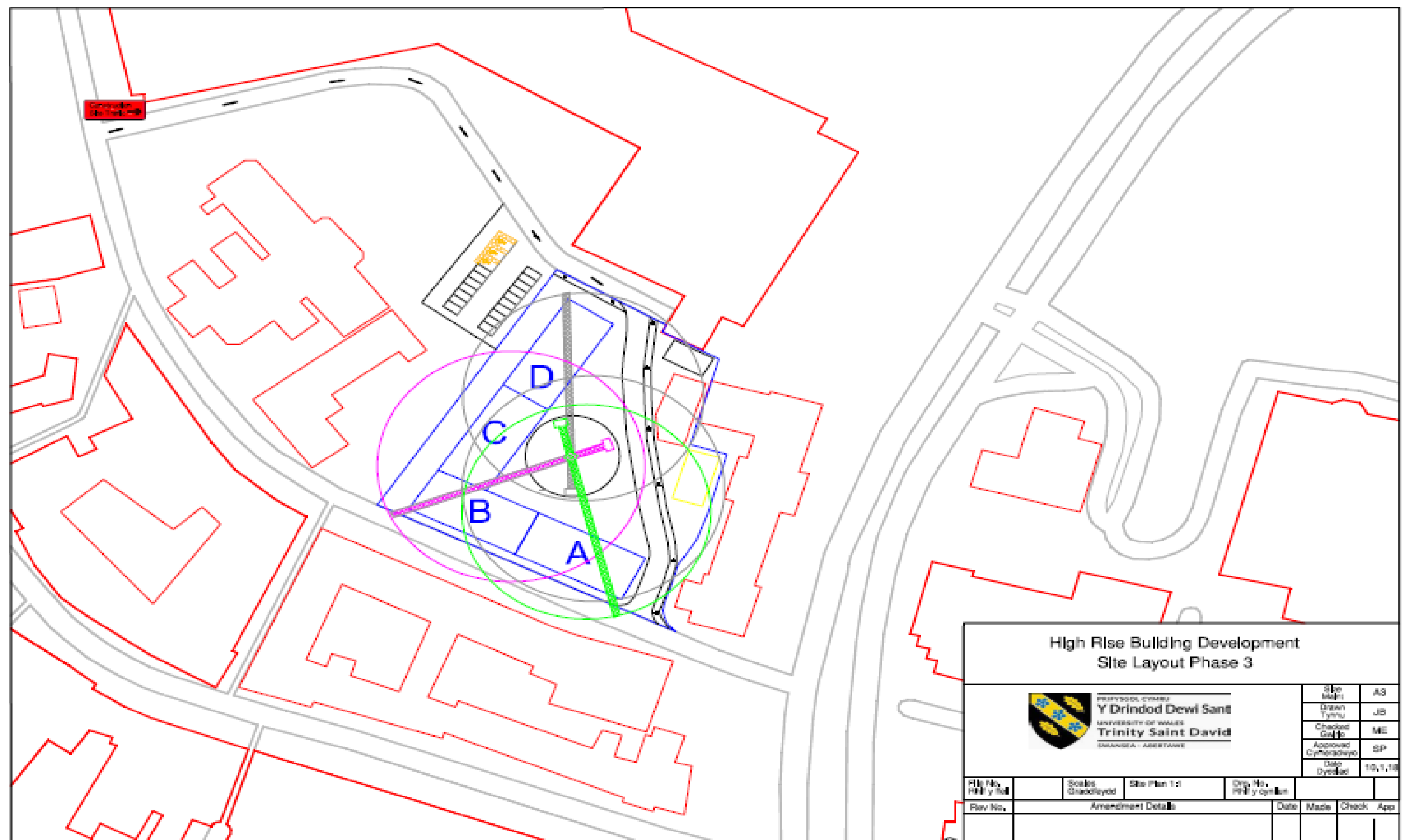
Site Map	A3
Drawn	JB
Checked	ME
Approved	SP
Date	10/1/18

Plan No.	Scale	Site Plan 1:1	Drawn By	JB
Rev No.	Amendment Details	Date	Made	Check

Appendix 2



Appendix 3



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