



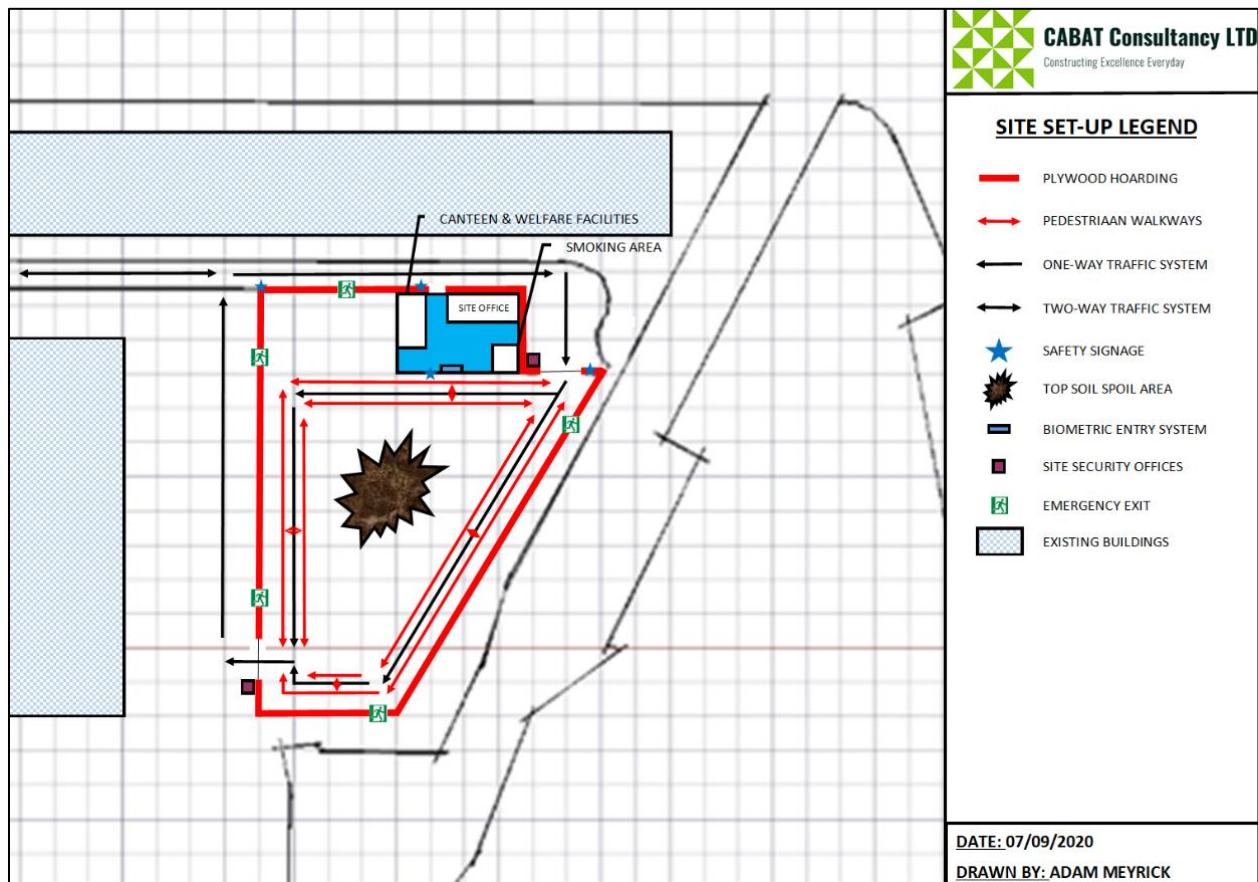
UWTSD Glyndŵr Development Site Set-up Narrative

The UWTSD Glyndŵr Development is anticipated to last longer than 30 days and involve more than 500 person days of construction work, therefore the submission of the F10 to the Health & Safety Executive (HSE) is required. HSE stipulates that given the magnitude of the development and the quantity of employees on site, CABAT must supply the following provisions within the site set-up set out on **Table 1**.

Table 1: Essential components of the site set-up and the justification for their provision.	
Component	Provision
Rest Facilities	Facilities should be available for taking breaks and meal breaks. The facilities should provide shelter from the wind and rain and be heated, as necessary. The rest facilities should have: ▪ Tables and chairs. ▪ A kettle or urn for boiling water. ▪ A means of heating food (e.g. a gas or electrical heating ring, or microwave oven).
Toilets	The HSE also recommends a ratio of 1 toilet to 7 persons where portable toilets are emptied once a week. Given the maximum number of laborers on site at peak time is 35, there is the necessity for 5 toilet cubicles.
Drinking Water	A supply of drinking water should be readily available. Where possible, it should be supplied direct from the mains.
Washing Facilities	On all sites, provide basins large enough to allow people to wash their faces, hands and forearms. All basins should have a supply of clean hot and cold, or warm, running water. If mains water is not available, water supplied from a tank may be used.
Changing Rooms	Every site should have arrangements for securely storing personal clothing not worn on site and for protective clothing needed for site work. Men and women should be able to change separately.
First Aid equipment and Areas	The Health and Safety (First Aid) Regulations 1981 requires Kier to provide adequate and appropriate equipment, facilities and personnel to enable first aid to be given to employees if they are injured or become ill at work. The minimum provision for all sites is: ▪ A first aid box with enough equipment to cope with the number of workers on site. ▪ An appointed person to take charge of first-aid arrangements. ▪ Information telling workers the name of the appointed person or first aider and where to find them.

	The number of qualified first aiders required depends on the risk of injury on site. As a guide: <table> <tr> <th>Numbers employed at any location</th><th>Number of first aid personnel</th></tr> <tr> <td>Fewer than five</td><td>At least one appointed person</td></tr> <tr> <td>5 to 50</td><td>At least one first aider</td></tr> <tr> <td>More than 50</td><td>One additional first aider for every 50 employed</td></tr> </table>	Numbers employed at any location	Number of first aid personnel	Fewer than five	At least one appointed person	5 to 50	At least one first aider	More than 50	One additional first aider for every 50 employed
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Waste Management	Designate storage areas for plant, materials, waste, flammable substances (e.g. foam plastics) and hazardous substances (e.g. pesticides). Flammable materials will usually need to be stored away from other materials and protected from accidental ignition. Do not store materials where they obstruct access routes or where they could interfere with emergency escape, e.g. do not store flammable materials under staircases or near to doors or fire exits								
Site Boundaries	Construction work should be fenced off and suitably signed. This will protect people (especially children) from site dangers and the site from vandalism and theft.								
Site Access	There should be safe access onto and around the site for people and vehicles. Kier should also plan how vehicles will be kept clear of pedestrians, especially at site entrances where it may be necessary to provide doors or gates to achieve this segregation. Doors that open onto traffic routes may need viewing panels or windows. The plan should include how vehicles can be kept clear of pedestrians at vehicle loading/unloading areas, parking and manoeuvring places and areas where drivers' vision may be obstructed.								
Source: <i>Health and safety in construction, HSE, (2006).</i>									

Essential to the success of this project is the evolving configuration of the site set-up. CABAT have aligned each configuration against the completion of key milestones and change of project scope in order to maintain the public satisfaction with construction activity and moreover to comply with the Construction (Design & Management) Regulations 2015 to keep everyone on site and in the locality safe. Five major site alterations occur across the longevity of this project, of which, each are sequentially presented and described in the following segments.

Setup 1: Site Establishment (17/08/20) to (09/09/20)**Figure 1:** Site set-up 1.

There are many intricacies of this site set-up, necessitated by the site's proximity to the SA1 historical dockland and adjacent residential high-rise structures. The site is bordered by 2m-high plywood hoarding to discourage trespassers, this hoarding encapsulates three main access and egress points to the site, one for pedestrian access to site office safe areas and two for the one-way flow of site vehicle traffic. This high-timber hoarding also serves the purpose of attenuating noise from construction activities, minimizing the noise impacts upon the residential assets to the North of the site. Several emergency exit locations can also be identified, which will be communicated to all workers upon site induction. Fixated upon the site hoarding there will be safety signage spaced repeatedly (**Figure 1**), as well as within site safe areas, as illustrated on **Figure 2**. The site safe area comprises canteen & welfare facilities for workers, site offices, induction & training rooms and a smoking shelter. Furthermore, within the site, traffic flows will also be dictated through signage, as illustrated on **Figure 3**.

**Fig.2:** Safety Signage (HSE).**Fig. 3:** Safety Signage (HSE).**Fig.4:** Diversion Signage (HSE).

At both vehicle access and egress locations to the site, site security offices are implemented to control traffic flow, check permits and licences and for general security of the site. Worker access to the site is dictated through a biometric entry system, where each workers CSCS card and permit to work are tethered to an online database to permit entry. An area at the centre of the site has been designated for site clearance and excavation spoil.

Setup 2: Substructure (09/09/20) to (18/11/2020)

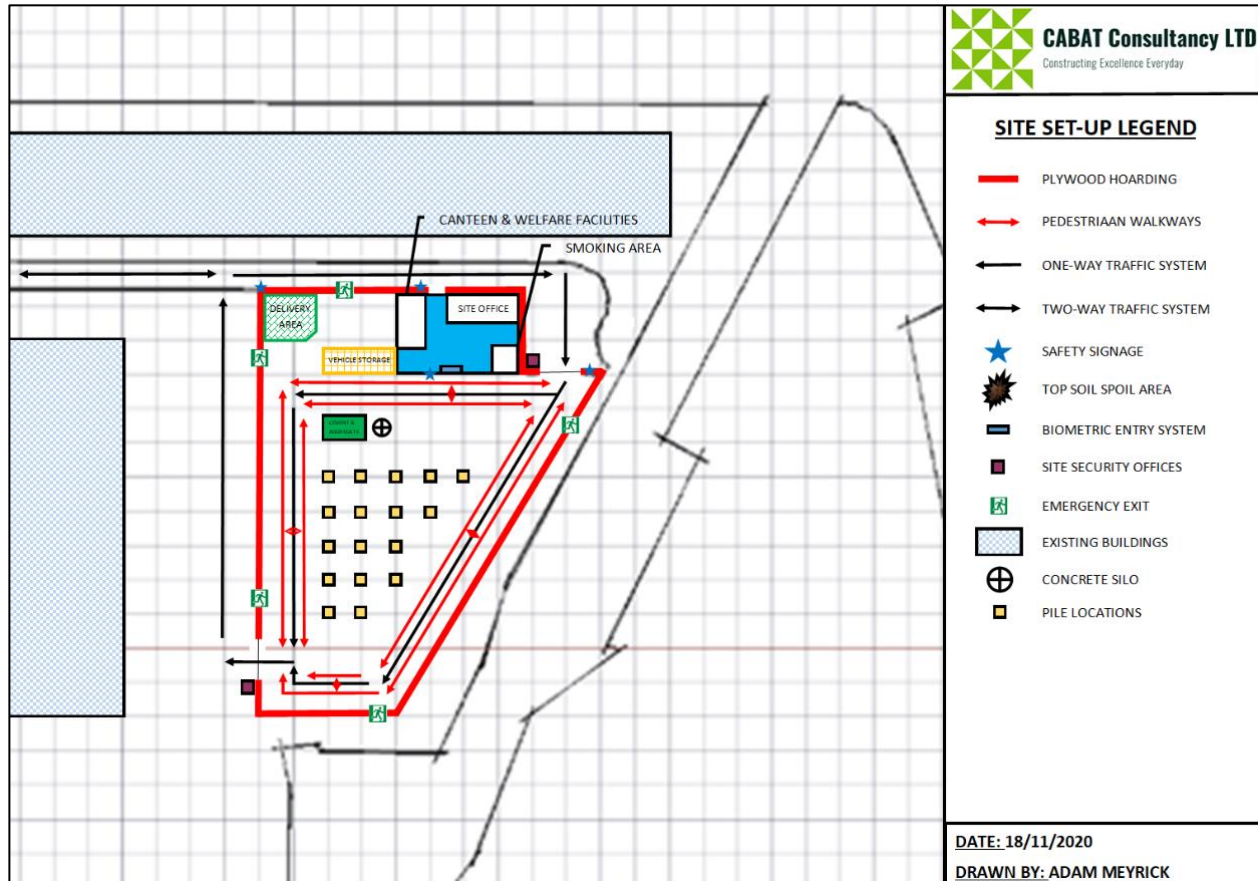
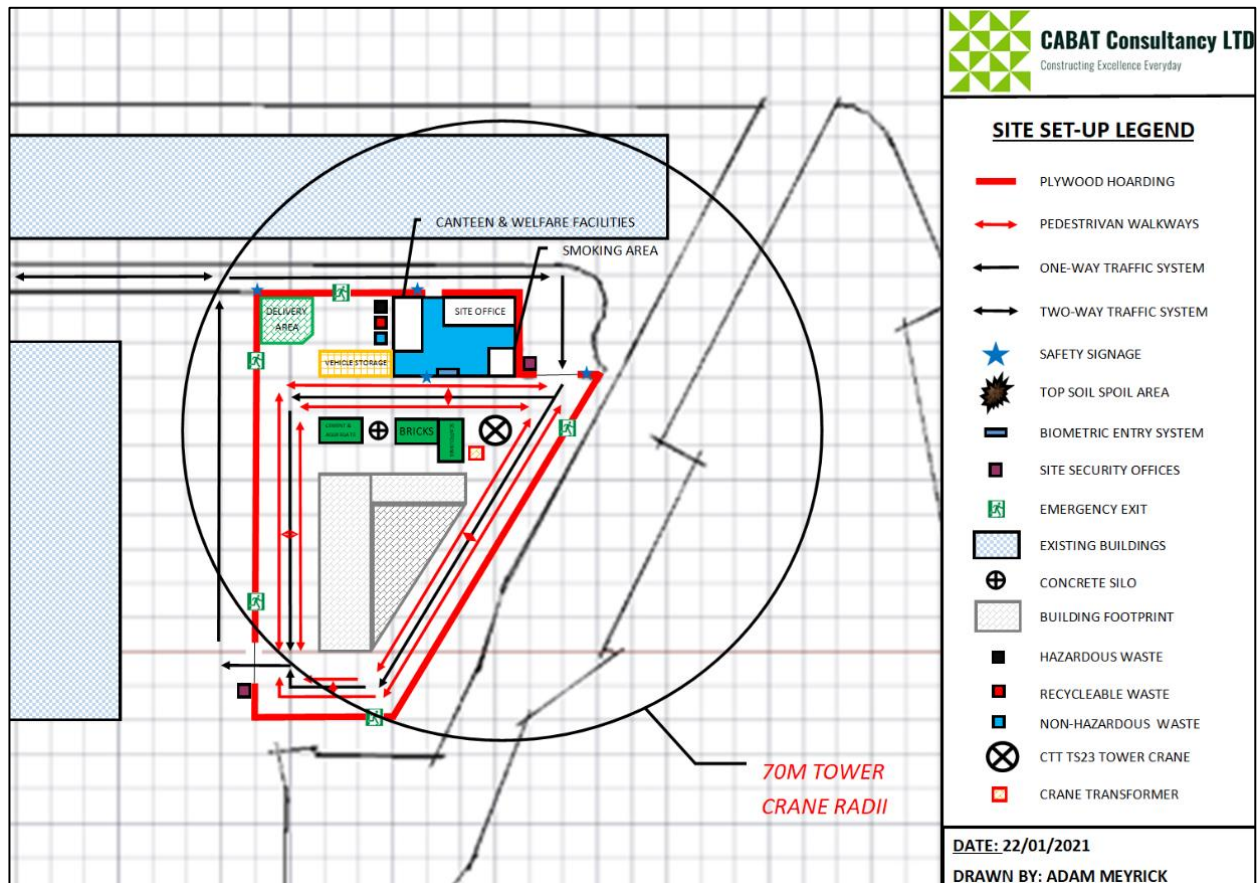
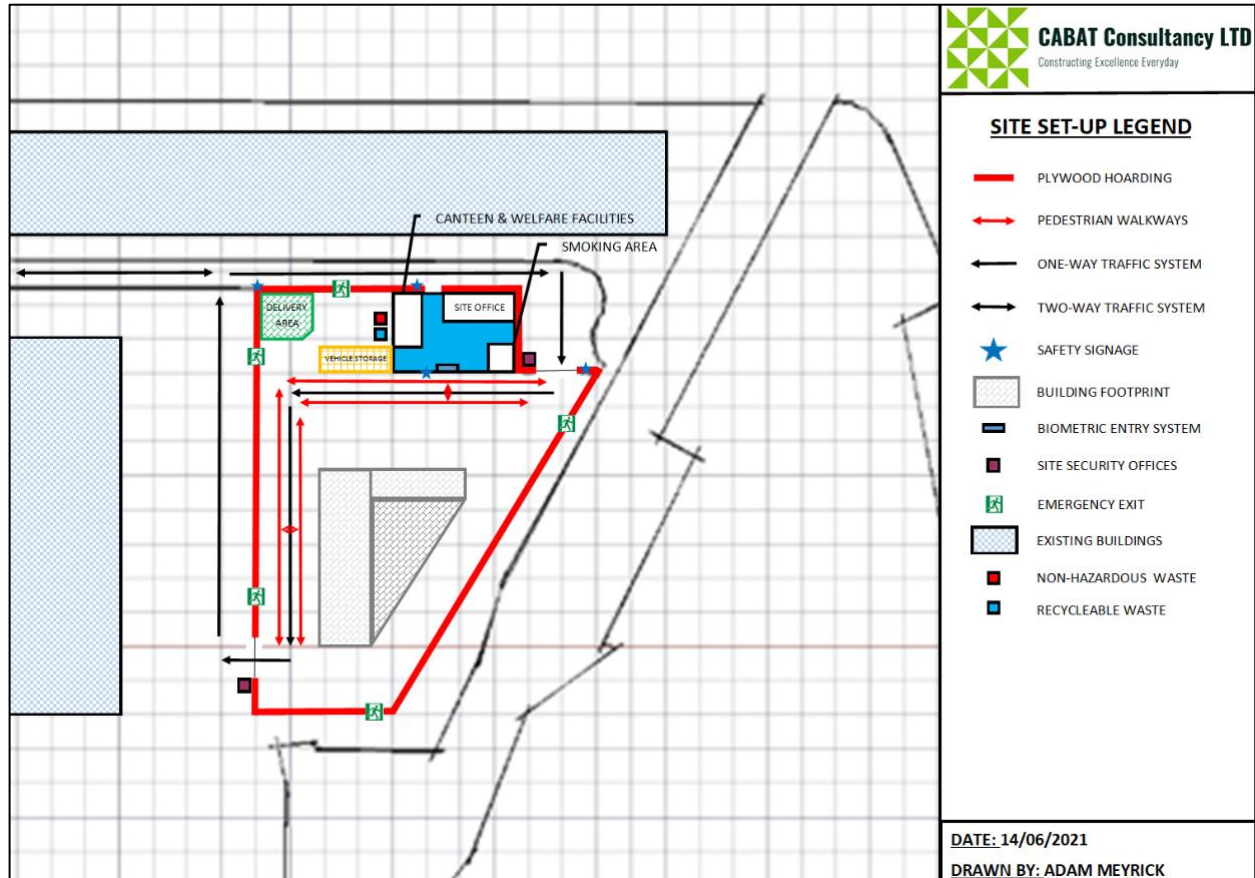


Figure 5: Site set-up 2.

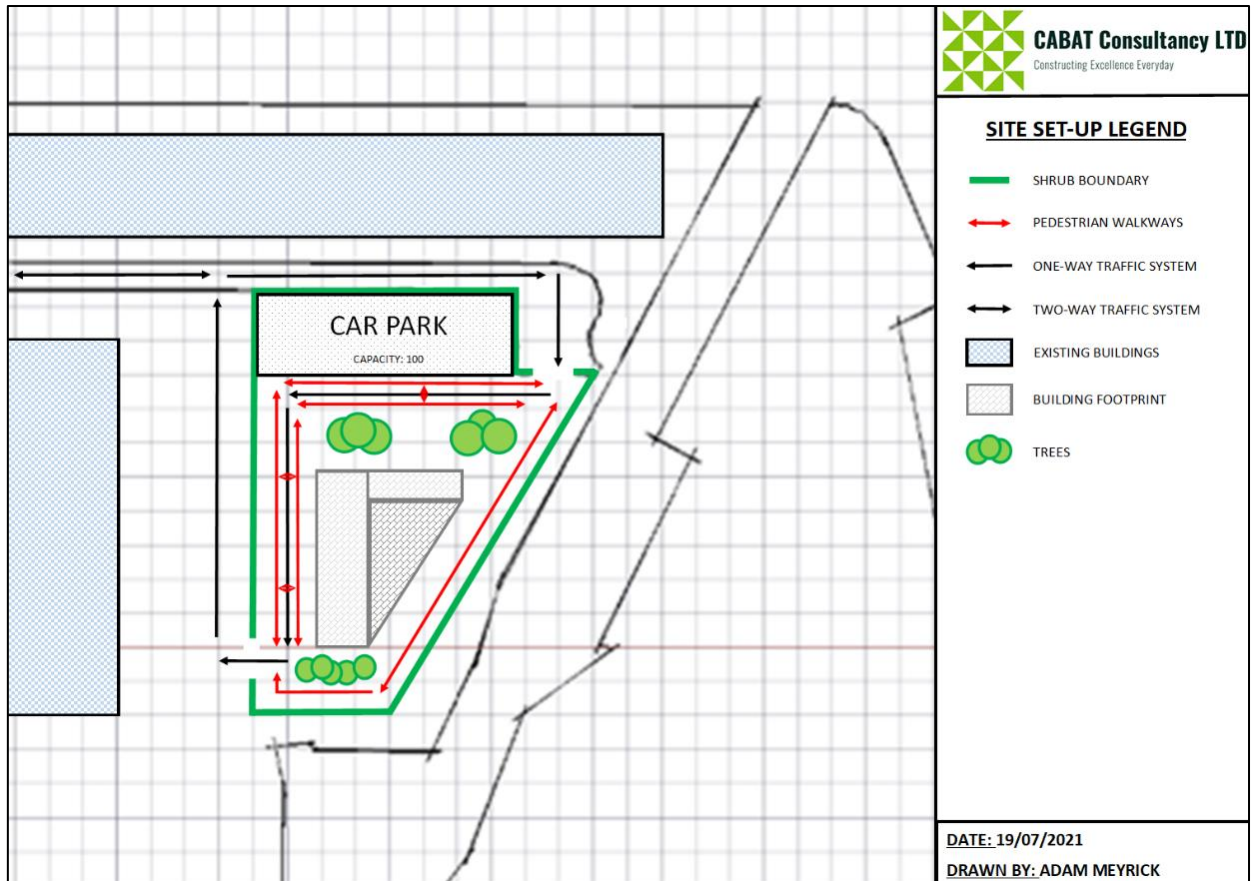
Traffic flows, access/egress and site safe areas remain unchanged at this stage. Pedestrian routes have been segregated and diverted away from the site to allow nearby assets to continue functioning, with the greater goal of keeping the public safe. The addition of a designated delivery area in the North-West corner of the site is accompanied by a vehicle's storage area, necessary for a large site. Access to these two are served efficiently by the traffic system, and their proximity to the building footprint is desirable. Shown on this set-up is the pile locations, beginning to show the building footprint. To complete the changes, a cement & aggregate storage area has been instigated, adjacent to a concrete silo, crucial concreting works in the substructure.

Setup 3: Superstructure (09/11/20) to (21/01/21)**Figure 6: Site set-up 3.**

Traffic flows, access/egress and site safe areas remain unchanged at this stage. Set-up 3 reflects the complexities of a sensitive site. The footprint of the structure can now be clearly seen encapsulated within the site traffic management system. The addition of, hazardous, recyclable and non-hazardous waste areas has also been established. It is essential that the hazardous waste is controlled and kept away from all others. Additional storage areas for bricks and scaffold accompany the pre-existing bricks & cement facility. To complete the changes, the implementation of an CTT TS23 tower crane with an 70m radii with oversailing prevention technology has been installed in the North-East of the site, supplemented by a transformer electrical power supply.

Setup 4: Envelope, Internals and Externals (18/01/21) to (14/06/21)**Figure 7: Site set-up 4.**

There is a lot of change following the completion of the superstructure. To start, the removal of transport movement systems has begun, beginning with the North-East to South-West flow. This is a direct result of the removal of the cement & aggregate, bricks and scaffolding storage area once serving the road. Additionally, the concrete silo, tower crane and electrical transformer have been eradicated respectively, allowing soft landscaping of said areas to begin. To conclude these changes, the hazardous waste storage area and its contents has been removed and taken for lawful disposal.

Site set-up 5: Testing & Commissioning (16/06/21) to (19/07/21)**Figure 8:** Site set-up 5.

The delivery and vehicle storage areas have been removed as well as the non-hazardous and recyclable waste zones. The site safe area and all its internals has also been removed by a vehicle crane for re-use. These areas have then undergone cut n' turn procedures to be tarmacked, forming the 100-capacity carpark for the facility. The site traffic flow system remains but has been tarmacked, forming the main vehicle route around the facility. Following the removal of the site security offices, the former access and egress points remain, as well as the one-way system. The plywood site boundary has also been replaced by a planted shrub boundary, to complete the flora, trees have also been planted in both the North and South Elevations to promote biodiversity and occupant well-being.