BRACKNELL DATA CENTRE

Construction Traffic Management Plan

20305B-RPS-XX-XX-RP-P-9731

JNY10695-07
Bracknell Data Centre
Construction Traffic
Management Plan
Final
01 March 2021

Prepared by**:**

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1 INTRODUCTION

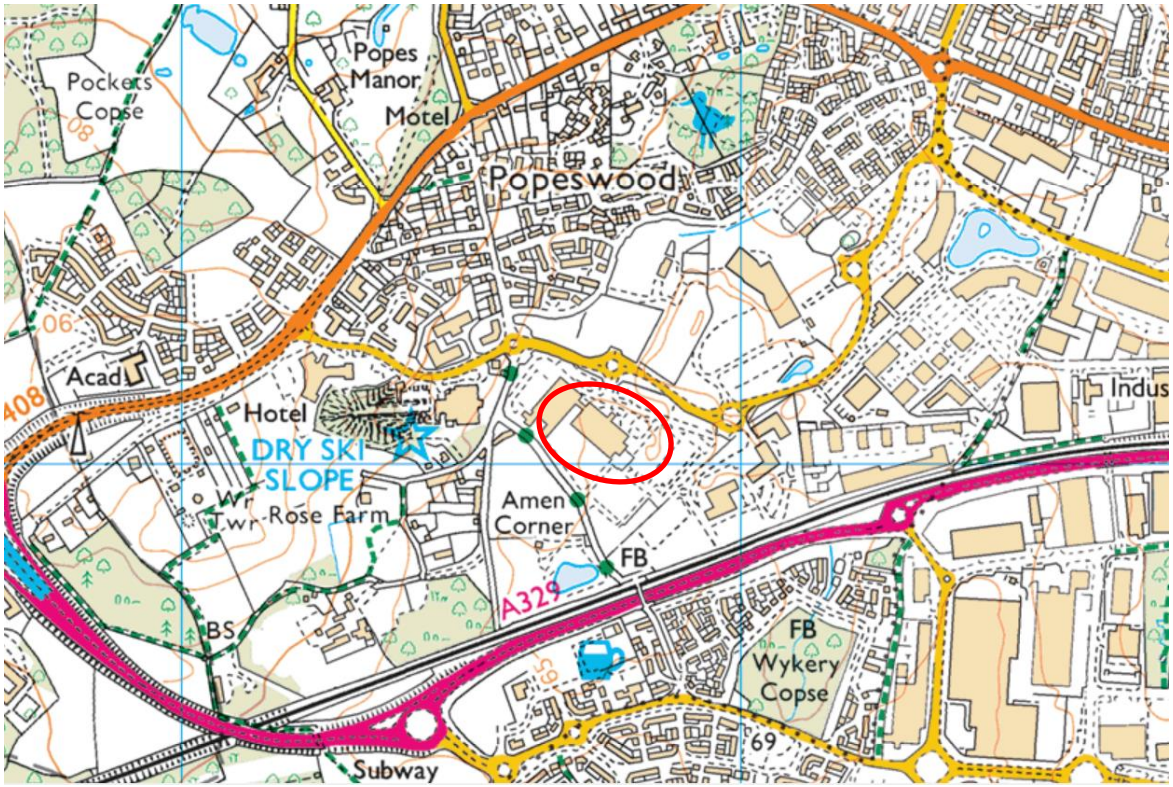
1.1.1 This Construction Traffic Management Plan (CTMP) has been prepared to support a planning application for the development of Land at Cain Road, Bracknell.

1.1.2 The application seeks full planning consent for a data centre building.

1.1.3 The location of the Application Site is shown on Figure 1 below and the site layout is shown on the proposed masterplan at Drawing 20305B-RPS-00-XX-DR-A-9501 Appendix A of this document.

1.1.4 The Application Site is made up of 2 distinct sections. The main site and an area of land to the south on the opposite side of Beehive Road (the 'Former Recreation Site'). The Former Recreation Site will not be utilised for construction activities associated with the main site.

Figure 1: Site Location.



1.2 Existing Site

1.2.1 The Application Site is located on the western edge of Bracknell, within the Amen Corner Business Park. The Application Site is bounded by Cain Road to the north and Beehive Road to the west. To the north of the Application Site is a residential area, with industrial buildings located to the east, west and south. To the south west is an area of open land.

1.2.2 The Application Site lies within the administrative area of Bracknell Forest Council (BFC).

1.2.3 The Application Site is currently accessed via two existing accesses on the northern boundary leading onto Cain Road.

1.3 Proposed Development

1.3.1 The application seeks consent for a data centre building, with associated office administration areas, emergency generators and emission stacks, diesel tanks and filling area, electrical switch room, a water sprinkler pump room and storage tank, a gate house / security building, site access, internal access roads, drainage infrastructure and hard and soft landscaping. It will include:

- data halls;
- associated electrical and AHU Plant Rooms;
- loading bay;
- maintenance and storage space;
- office administration areas; and
- plant at roof level.

1.4 Context and Scope

1.4.1 The principal aim of this CTMP is to ensure that the construction works are organised and delivered in a manner that minimises impacts on the highway and maintains highway safety and the amenity of the area surrounding the site.

1.5 CTMP Structure

- **Section 2** summaries the different phases of work and sets out the construction process and working hours;
- **Section 3** outlines the anticipated composition and volume of traffic during the construction phase of the proposed development along with the proposed routing of traffic;
- **Section 4** provides an appraisal of the identified construction route, having regard to current design guidance in combination with the volume and type of traffic generated by the proposed development;
- **Section 5** focuses on the proposals to ensure that a suitable management strategy and structure is in place to control activity on the Application Site and to ensure a suitable reporting procedure for local residents and stakeholders; and
- **Section 6** outlines the Travel Plan measures.

2 CONSTRUCTION PROCESS

2.1.1 This section outlines the proposed indicative development schedule and construction methodology.

2.2 Delivery of Plant and Materials

2.2.1 The construction phase of is estimated to take 10 – 12 months to complete and will comprise external construction and civils activities. At the end of that period all external construction activities and civils work will be completed, including:

- hard and soft landscaping;
- security and access areas;
- perimeter fencing;
- internal access roads and car parking areas;
- drainage and attenuation;
- the shell and core construction of the main data centre building and administration block.

2.2.2 The construction phase will be followed by the installation and testing of the IT equipment (data storage and data processing technology) and then the creation of the data networks and various cloud computing services that will operate from the facility. These are then tested prior to becoming available for Customer data. All the Electrical, Mechanical & IT across the entire facility will not be deployed all at one time. Instead, internal fitout will occur in phases, the initial phase commencing within the site construction works, with follow on phased fit out determined by Customer demand The reason for this is that having unused data servers and associated mechanical and electrical support systems would unnecessarily consume energy and also require ongoing maintenance and servicing. Thus, they are deployed close to the anticipated Customer needs.

2.2.3 Fit out works associated with these subsequent phases will primarily be carried out inside the completed building and be of circa 6 months duration. There will be limited external works involving the installation of generator sets and roof mounted mechanical equipment, associated with that phase. The principal foundations for each generator set will be built during the main construction period, as described above.

2.2.4 All materials and plant associated with the development process will be stored within the footprint of the Application Site. A loading and unloading area for plant and materials will be provided within the site boundary. It is anticipated that the majority of deliveries will be made via articulated low loader vehicles and rigid HGVs.

2.3 Working Hours

Normal Working Hours

2.3.1 Working hours will be conducted as per the below:

- Monday to Friday: - 07:00 to 19:00
- Saturday – 07:00 to 14:30
- Sundays and Bank Holidays - no working.

2.3.2 Construction traffic management will seek to minimise vehicle movements during the network peak hours.

Activities Outside Normal Working Hours

2.3.3 Non-noisy activities such as the internal fit out of buildings may be undertaken outside of the normal working hours, where these activities will not cause disturbance off site and construction HGV movements would not occur.

3 CONSTRUCTION TRAFFIC GENERATION

3.1.1 This section of the report sets out the estimated volume and type of vehicles that will be generated throughout the construction phase of the proposed development. This information has been used in subsequent sections that consider the geometry and safety of the adjoining highway networks, in order to inform the suite of management measures proposed.

3.1.2 It should be noted that the construction programme and corresponding construction traffic strategy may be subject to change following the appointment of a Principal Contractor and prior to work commencing on the Application Site. Any substantial changes in the build program and / or number of vehicular movements will be communicated to BFC in advance of construction.

3.2 Construction Vehicles

3.2.1 The trip generation potential of the construction phase of proposed development has been informed though discussion with the Applicant on the anticipated construction programme and is based on experience of delivering similar developments in the United Kingdom.

3.2.2 The construction period is anticipated to last for 10 to 12 months, commencing shortly after granting of consent. Construction will consist of a mixture of construction staff vehicle movements, LGVs and HGVs. Using data derived from a similar data centre construction as received from the prospective operator, the following numbers have been derived:

- an average of 275 construction staff on site per day,
- a peak (first three months of construction) of 400 construction staff per day;
- an average of 50% of staff as car drivers with the remaining 50% car sharing and arriving by sustainable means of transport;
- taking into account 50% of construction staff will car share or arrive by sustainable means of transport, an average of 138 construction staff vehicles on site, equating to 275 two-way vehicle movements per day (accounting for one arrival and one departure);
- taking into account 50% of construction staff will car share or arrive by sustainable means of transport, a peak (during first three months of construction) of 200 construction staff vehicles on site, equating to 400 two-way vehicle movements per day (accounting for one arrival and one departure);
- an average of 75 HGVs on site per day, equating to 150 two-way HGV movements per day;
- a peak (during first three months of construction) of 110 HGVs on site per day, equating to 220 two-way HGV movements per day; and
- a peak (during first three months of construction) of 30 LGVs on site per day, equating to 60 two-way LGV movements per day.

3.2.3 Deliveries are expected to fluctuate during the construction this period. It is envisaged that the majority of movements would be Monday to Friday with only a limited number of movements on Saturdays.

3.3 Delivery Vehicle Dwell Times

3.3.1 Delivery vehicles are likely to attend the Application Site for up to a maximum of approximately one hour per vehicle, depending upon the load being unloaded or loaded. There will be sufficient space within the curtilage of the Application Site to ensure that no vehicles would have to wait on the surrounding highway network.

3.4 Construction Staff and Parking

3.4.1 During construction, there is a balance to be made between the intensity of on-site activity and duration of activity. It has been advised by the Applicant, using data from the construction of another Data Centre, that the average number of construction staff on the Application Site will be approximately 275, with a peak of 400 staff.

3.4.2 Experience of similar developments elsewhere suggests that where car sharing is promoted by the Principal Contractor the number of cars brought to site reduces. This will be achieved through management of staff travel patterns and actively encouraging car sharing as set out further in **Section 6**.

3.4.3 Most construction staff are anticipated to arrive at the Application Site during the 30-minute period preceding the start of the operating day and depart during the 30-minute period that follows the end of the operating day. Staff trips are likely to travel to / from different destinations and hence spread their movement across the highway network.

3.4.4 Provision will be made to ensure that all vehicles are able to park on the Application Site, to avoid obstruction to the operation of the public highway. This shall be strictly enforced.

3.4.5 **Section 6** sets out full details on construction worker trips and also contains a Construction Worker Travel Plan that seeks to minimise construction workers' travel.

4 CONSTRUCTION VEHICLE ACCESS AND ACCESS ROUTE

4.1.1 The Application Site will be accessed from Cain Road, which is subject to a 40mph speed limit. Details of the access arrangements are set out below.

4.2 Construction Traffic Routeing

4.2.1 HGV construction traffic will route via the A329 from the west of the Application Site, unless HGVs have an origin or destination from Bracknell Town Centre. The north-western Cain Road existing access, along the northern boundary of the Application Site will be the only access utilised for the main build construction. Once constructed, the north-eastern Cain Road existing access will be utilised for the phased fit out to keep fit out and operational traffic separate.

4.2.2 It is envisaged that HGVs delivering materials to the Application Site will route from the A329 and access the Application Site from the west, via Cain Road, John Nike Way and the B3408 London Road. Some HGVs may use alternative routes if their origin / destination is in the local area to the Application Site.

4.2.3 It is considered that the proposed routeing minimises the use of minor roads, maximises the use of the major strategic roads and avoids sensitive receptors (e.g. residential areas and schools) where possible. It is proposed that temporary signage is used to direct construction traffic to the site along the proposed construction traffic route utilising existing street furniture.

4.2.4 A construction compound area will provide an area for loading and unloading of vehicles and will provide a turning area to allow vehicles to exit the site in forward gear. All delivery drivers and construction workers will be advised of the construction route prior to making their delivery or commencing work by the Site Manager. This may be in the form of route maps.

4.2.5 It is considered appropriate to avoid routes where scheduled road works and construction vehicles could conflict. The Site Manager will keep up to date on scheduled roadworks in the area using the https://one.network/uk website and advise construction staff. Any major roadworks on the preferred route that result in the deviation of the preferred route will be agreed with officers at BFC in advance.

4.1 Construction Access

4.1.1 The site is currently served by two existing access points on Cain Road, on the northern boundary of the Application Site. Construction vehicles will utilise the western existing access on Cain Road. Once constructed the eastern existing access on Cain Road will be utilised for the phased fit out, to keep fit out and operational traffic separate.

4.1.2 The site will include a controlled access enclosure involving a series of secure barriers, electronic bi-fold gates and an intercom system linked to the Security Gatehouse.

4.1.1 Vehicles accepted onto the site will pass through the security gates and past the security gatehouse. Vehicles rejected from site will reverse and turn (within the Application Site). Vehicles will then be able to turn and exit onto the highway. Any reversing and turning of rejected vehicle would occur off the highway.

4.2 Access Signage

4.2.1 It is proposed that temporary signage be located in the vicinity of the site access during the construction period to warn drivers of the site entrance, as shown on **Plate 1**. The exact location will be determined by the Site Manager.

Plate 1: Temporary Signage at Site Access

4.3 Highway Safety

4.3.1 An investigation of Personal Injury Accident data on the local network has been undertaken using www.crashmap.co.uk. Personal Injury Accidents for the latest available five years (January 2015 to December 2019) have been assessed. The study area included the length of Cain Road, from the roundabout with John Nike Way to the roundabout with Western Road.

4.3.2 There have been no injury accidents recorded within the study area during the five-year analysis period.

4.3.3 The review of these links indicates that there are no significant highway safety issues in the vicinity of the site that needs to be accounted for in this CTMP.

5 MEASURES, MANAGEMENT AND CONTROL PROCESSES

5.1.1 This section sets out the measures, management structure and control processes that will be put in place to implement, monitor and manage the CTMP. The Site Manager will be responsible for the site works which will ensure that the control processes are efficiently implemented.

5.2 Public Rights of Way

5.2.1 No Public Rights of Way (PRoW) cross the Application Site or are affected by the construction works. Thus, no management measures are required for PRoW in relation to the construction works.

5.3 Ongoing Review of Access Routes

5.3.1 As aforementioned, it is considered appropriate to avoid routes where scheduled road works and construction vehicles could conflict. Any major roadworks on the access routes that result in the deviation of the route will be agreed with officers at BFC in advance where feasible.

5.4 Transport Co-ordination

5.4.1 The Applicant will appoint a Site Manager for the construction of the proposed development and the details will be provided to BFC once confirmed. The Site Manager for the proposed development will undertake the transport co-ordination role for the site. In this respect, their main responsibilities will include:

- managing the implementation of the CTMP;
- vehicle scheduling (including potentially avoiding deliveries arriving or departing during peak school pick-up and drop-off hours);
- checking for scheduled road works on one.network;
- checking for scheduled refuse collections to avoid conflict with HGV deliveries within built up areas;
- handling any complaints; and
- acting as a point of contact for employees, contractors and the general public.

5.4.2 The Site Manager will ensure that there is adequate liaison between the following key stakeholders throughout the construction period:

- the contractor;
- the Applicant;
- site neighbours;
- other local stakeholders such as emergency services or local transport providers; and
- BFC.

5.4.3 Regular review meetings and telecommunication will be held between the Site Manager and BFC if requested. It is envisaged that update meetings / telecommunication will be held on an ad-hoc basis as required. Furthermore, the Site Manager will provide delivery schedules, complaints or breaches of agreements to BFC if requested.

5.5 Booking System

5.5.1 On a weekly basis, the Site Manager will evaluate details of the daily profile of deliveries proposed for the upcoming week. Through discussions with hauliers the Site Manager will, as far as practicable, ensure that the deliveries are spread out across the week and across the day to minimise potential disruption.

5.5.2 The proposed deliveries will be checked against the weekly delivery schedule. This will be overseen by the Site Manager to ensure that construction deliveries are managed in an efficient manner with minimal disruption and delays.

5.5.3 Hauliers will be required to contact the Site Manager to give an indicative delivery time to ensure that the delivery space and banksmen (if required) are ready for their arrival onsite.

5.5.4 Where possible, sufficient time will be given between deliveries to allow for any delays as a result of the delivery vehicle getting stuck in traffic or the loading / unloading taking longer than expected and to avoid any vehicles waiting.

5.5.5 The Site Manager will ensure banksmen are on hand to assist with the manoeuvring of delivery vehicles throughout the site. The construction compound will be located off the public highway within the Application Site, accessed via the internal access road.

5.5.6 Where possible, all deliveries by goods vehicles (>3.5 tonnes) will be undertaken outside of the highway peaks of 08:00 to 09:00 and 17:00 to 18:00. Where practicable, vehicles ready to depart the Application Site during these periods shall be held back within the compound area until the appropriate time has passed.

5.6 Route Compliance

5.6.1 Use of the agreed vehicle routes shall be included as a contractual requirement of the contractor and will be communicated to all drivers. This will include information on the times of operation, delivery routes and the vehicle booking system.

5.7 Construction Compound

5.7.1 The construction compound will provide an area for loading and unloading of vehicles and provide a turning area to allow vehicles to exit the site in forward gear. The vehicle compound will be capable of accommodating a turning vehicle whilst at least one vehicle is parked, to allow for vehicles to be held back during restricted periods and ensure no vehicles wait on the public highway.

5.8 Wheel Wash

5.8.1 A wheel washing facility will be provided for the duration of the construction works to ensure levels of dust and dirt on roadways surrounding the Application Site is minimised.

5.8.2 HGVs will be required to use the wheel washing facility before leaving the Application Site, and the Principal Contractor will ensure that the area around the site including the public highway is regularly and adequately swept to prevent any accumulation of dust and dirt.

6 CONSTRUCTION WORKER TRAVEL PLAN

6.1.1 A Travel Plan is a package of measures aimed at promoting greener, cleaner travel choices and reducing reliance on the private car. It enables employers to reduce the impact of travel on the environment, whilst also bringing a number of other benefits to the organisation as an employer and to staff.

6.1.2 This Construction Worker Travel Plan seeks to address activities related to the construction of the site which includes commuter journeys for construction workers, material supplies and deliveries. By successfully addressing these different types of travel by promoting travel via sustainable modes and sourcing labour and goods locally where feasible, the Travel Plan objectives can be achieved.

6.2 Trip Generation

6.2.1 From experience of constructing other data centres, the Applicant estimates that there may be up to 400 construction staff on site per day (equating to 200 vehicles), with an average of 275 construction staff on site per day (equating to 138 vehicles). This equates to 50% of staff arriving as car drivers, with the remainder as car passengers and using public transport.

6.2.2 Car sharing will be achieved through management of staff travel patterns and actively encouraging car sharing. As such the Site Manager will actively promote the use of car sharing as the primary method for construction workers to access the site.

6.3 Existing Conditions

6.3.1 The Application Site will connect to the local pedestrian and cycling networks through Cain Road which provides a footway / cycleway on both sides. The combined footway / cycleway connects to the wider pedestrian / cycle network of Bracknell via Beehive Road to the south and Western Road to the east.

6.3.2 The nearest bus stops to the Application Site are located on Cain Road approximately 60m from the north of the Application Site. These stops provide access to the X4 Lion service.

6.3.3 Where feasible, the Principal Contractor will seek to recruit construction workers from the local area. This will help maximise the potential for construction workers to walk and cycle to the Application Site.

6.3.4 There is potential for construction workers to car share to work, especially given the fact that some sub-contractors are likely to be travelling from the same origin (their local residence) to the same destination (the site).

6.3.5 Car sharing represents a relatively convenient form of travel offering a significant potential to reduce overall private mileage of construction workers. It is this mode of transport which often forms one of the most convenient methods of sustainable travel for construction workers.

6.3.6 The Site Manager would promote a car-sharing scheme throughout the construction programme. The Site Manager would also make construction workers aware of existing car sharing schemes such as liftshare.com/uk.

6.3.7 The willingness of construction staff to car share will be identified by the Site Manager. From looking at workers' home / local residence postal addresses it would become evident whether there are any area groupings of people that would make the principle of car sharing a reasonable prospect of being successful. The Site Manager will then investigate setting up a database of construction workers willing to share journeys, including information such as their home / local residence addresses and could try and match suitable car sharers. This process will be the responsibility of the Site Manager.

6.3.8 The Application Site will provide facilities in accordance with requirements set out in Health and Safety Executive guidelines. The facilities will include: a drying room, showers, storage facilities, toilets, offices and kitchen facilities within the welfare area. This will encourage people to travel to the Application Site by sustainable modes whilst having the added benefit of reducing the number of trips made off site during lunch breaks.

6.4 Aims and Targets

6.4.1 Construction worker parking at the site will be monitored, controlled and recorded by the Site Manager to ensure that single occupancy car use is minimised. The Site Manager will ensure there is space made available for any overspill parking during the early periods of construction.

6.4.2 This CTMP and Travel Plan will be communicated to all construction workers as part of their induction / training process. An up to date copy of this CTMP and Travel Plan will always be available for consultation.

6.5 Measures

6.5.1 As indicated above, there is potential for construction workers to car share or travel by bicycle to the site. It is therefore deemed appropriate to promote the following measures to promote sustainable travel by construction staff:

- include local public transport timetables and route maps within the on-site compound for construction staff to review;
- providing changing and storage facilities for construction staff;
- assist in matching car sharers; and
- minimise, where possible, the number of contractors on site at any one time to reduce trips generated and promote car sharing.

6.6 Review

6.6.1 The Site Manager will be responsible for reviewing all matters on a six-monthly basis to determine if alterations to the CTMP measures are required in terms of optimisation.

APPENDICES

Appendix A

Site Layout

Site Furniture

Entrance Canopy (Image shown for illustration)

Length: 4.9m
Width: 5.1m
Height: 3.0m
Finish: PPC powder coated steel
Colour: Anthracite (RAL 7016)

Smoking Shelter (Image shown for illustration)

Length: 3.135m
Width: 1.540m
Height: 2.25m
Finish: PPC powder coated steel
Colour: Anthracite (RAL 7016)

Security Kiosk (Image shown for illustration)

Length:1.9m
Width: 1.2m
Height:2.25m
Finish: Plastic coated steel
Colour: Grey

Cycle Shelter (Image shown for illustration)
Capacity: 10 cycles

Length:5m
Width: 2.75m
Height: 2.66m
Finish: PPC powder coated steel
Colour: Anthracite (RAL 7016)

Bin Store (Image shown for illustration)

Length: 3.5m
Width: 4.3m
Height: 2.4m
Finish: Treated softwood timber fence with double gate
Colour: Natural

Building Dimensions

	Length	Width	Height	Total Area (GEA)		Drawing references
Data Centre	139.2m	67.4m	12.2m	8,892m²	Breakdown	20305B-RPS-01-XX-DR-A-9515 20305B-RPS-01-XX-DR-A-9516 20305B-RPS-01-XX-DR-A-9515 20305B-RPS-01-XX-DR-A-9521 20305B-RPS-01-XX-DR-A-9522
					Office and Personnel Space: 1,425m²	
					Technical Space: 7,267m²	

Ancillary Structures

Water Tanks	6.1m Ø	n/a	10.9m	50m²	20305B-RPS-01-XX-DR-A-9515 20305B-RPS-01-XX-DR-A-9522
Sprinkler Tank	11.0m Ø	n/a	5.8m	95m²	20305B-RPS-02-XX-DR-A-9542
Pumphouse	9.7m	8.7m	4.8m	85m²	20305B-RPS-03-XX-DR-A-9542
Gatehouse	10.4m	8.2m	5.4m	85m²	20305B-RPS-03-XX-DR-A-9540 20305B-RPS-03-XX-DR-A-9546
MV Room	13.0m	16.6m	6.9m	216m²	20305B-RPS-04-XX-DR-A-9544
Fuel Tank	9.5m	7.5m	4.7m	72 m²	20305B-RPS-05-XX-DR-A-9543
Temporary MV Building	16.6m	12.1m	5.6m	199m²	20305B-RPS-40-XX-DR-A-9546
Permanent Utility MV Building	16.1m	9.6m	5.6m	165m²	20305B-RPS-50-XX-DR-A-9545
Permanent Occupier MV Building	17.1m	12.4m	5.6m	230m²	20305B-RPS-50-XX-DR-A-9545
Transformers	17.0m	6.9m	4.6m	124m²	20305B-RPS-50-XX-DR-A-9545

NOTES

1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
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3. This drawing should be read in conjunction with all other relevant drawings and specifications.
4. Aerial imagery (c) Google 2021

10m SCALE 1:1000

Key

- Development boundary
- Outer perimeter fence
- Inner perimeter fence
- Existing tree to be retained
- Additional trees to be planted

Rev	Description	By	Ckd	Date
P01	Planning Issue	LTS	KF	15.02.21

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