Outline Specification

Landlords Shell Works for Units 17 to 26 Inclusive

Client: **Marrtree Developments Ltd**

Project Title: **Marrtree Business Park, Sowerby**

Phase 2

Project Number: **19800**

SCHEDULE OF AMENDMENTS

Issue 1:	**09.03.2021 First draft issued for comments**
Issue 2:	**24.09.2021 Clause numbers 2.8, 3.3, 3.4, 3.7, 3.8, 3.11, 6.1, 6.3, 7.3, and 8.0 amended**
Issue 3:	**29.09.2021 Clause number 7.2 amended**
Issue 4:	**22.10.2021 Clause numbers 1.1, 1.6, 1.7, 3.1, 3.4, 3.5, 3.8, 6.6, 7.2 and 7.3 amended – Contract Issue**

INTRODUCTION

1.1 **Project**

The site is located off Cedar Road, Sowerby, on land adjoining Cocked Hat Farm and Gravel Hole Lane. The site adjoins the previously developed Marrtree Business Park Phase 1 scheme. The proposed development consists of three detached terraces of industrial type buildings, subdivided into 10 individual units, totalling approximately 28,060sq.ft (2,606.8sq.m), with associated service yard, landscaping, and car parking. The terraces are to be distributed across two separately secured plots, and accessed from the newly constructed adoptable estate road. A total of 64 car parking spaces are to be provided, including 11 disabled. The allocation of car parking spaces for individual units will be as identified within the individual tenancy agreements. The gross internal floor areas of the individual units are as follows:

- Unit 17 465.7m^2 (5,013ft^2)
- Unit 18 469.3m^2 (5,052ft^2)
- Unit 19 296.4m^2 (3,191ft^2)
- Unit 20 148.3m^2 (1,596ft^2)
- Unit 21 148.4m^2 (1,597ft^2)
- Unit 22 196.3m^2 (2,113ft^2)
- Unit 23 331.6m^2 (3,569ft^2)
- Unit 24 165.5m^2 (1,781ft^2)
- Unit 25 165.4m^2 (1,780ft^2)
- Unit 26 219.9m^2 (2,367ft^2)

Total GIA – 2,606.8 (28,060ft^2)

The Service yard is to be surfaced with brush finished insitu reinforced concrete in accordance with the structural engineer's details and specification. Pedestrian paths to the building perimeters to be surfaced using bitumen macadam.

The plots will be enclosed using factory coated green steel paladin fencing at a height of 2.40m. Access to each plot will be secured by means of an electrically operated factory coated green steel horizontal sliding gate across the vehicle and pedestrian access from the main private road.

Recycling and waste storage facilities will be provided by means of treated timber enclosures as detailed on the architects drawings.

In the absence of a connection to a public sewer, all surface water drainage to buildings and external works will discharge into a SUDS below ground system, as detailed and specified by the structural engineer.

1.2 All materials and workmanship shall comply with the recommendations and requirements of all relevant British, and EU Standards, Codes of Practice, Building Regulations, and statutory legislation current at the time of specification. Where no relevant BS/EU Specifications exist for particular materials or components, the materials or components used shall be of the best quality obtainable. Where no BS/EU Code of Practice exists for particular operations, the workmanship shall conform to the highest standards laid down by the relevant trade federation, recognised good practice and appropriate BBA Agreement Certificates.

1.3 The landlord will obtain relevant statutory consents (Planning and Building Regulations) in relation to the shell works, and office fit-out, to the extent indicated on the architects drawings. The tenant will be responsible for the discharge of any tenant related planning conditions, including any specialist surveys or reports that may be necessary in connection with this. This may include, but is not restricted to, external plant and equipment, refuse disposal, waste recycling, Green Travel, etc. The tenant will obtain their own Advertisement consent in relation to external illuminated signage.

1.4 Building Regulations

The Principal Contractor shall be responsible for obtaining Building Regulations approval, and shall include for an EPC and SBEM for the completed landlords works. The contractor is also to include for an Air Leakage Test to demonstrate compliance with the Building Regulations.

1.5 This specification is to be read in conjunction with Corstorphine & Wright Architects, and Dudley's Structural Engineers information.

1.6 Exclusions
Specifically excluded from contract works are the following:

a) Fitting out the industrial space
b) All fire fighting equipment, Alarms, hose reels, smoke detectors, smoke ventilators and extinguishers, and any other fire fighting equipment required by the Fire Officer.
c) Small power distribution to the industrial space
d) Security alarm system.
e) Furniture, furnishings, blind fittings, process machinery of any type, racking, skips or any other item which has not been expressly detailed in this document.
f) White goods.
g) Sprinkler tanks, fire hydrants, pumps and sprinkler range pipes in buildings.
h) Smoke ventilation.
i) VRF System and comfort.
j) Signage
k) IT cabling to the industrial space
m) Diesel storage tanks to external service yard
n) Charger equipment or provision for forklift charger area
o) Process water or process drainage
p) Decorative painting of steel frame
r) Telecoms supply
s) Data supply

1.7 Professional Team:

a)	Architect	Corstorphine & Wright Architects The Studio Candle House 1 Wharf Approach Leeds LS1 4GH Tel: 07583 789042 / 0113 213 5656
b)	Employers Agent	Kirby-Welch & Co West View Sickinghall Nr Wetherby LS22 4BB Tel: 01937 583 900
c)	Structural/Civil Engineer	Dudleys Consulting Engineers Ltd Tithe House 35 Town Street Leeds, LS18 5LJ Tel: 0113 258 3611
d)	Principal Designer	Ashes Associates LLP 5 Parsons Lane Howden Goole DN14 7DH Tel: 01430 436 558

2.00 SUBSTRUCTURE

2.1 Geotechnical Report

The results of the Site Investigations carried out are to be used in the subsequent foundation, ground slab and any other substructure design.

2.2 Site Clearance

The site is to be cleared of all loose materials and vegetation in accordance with landscape architects recommendations, strategies and planning condition requirements.

2.3 Earthworks

Excavation is to be carried out to formation level over the area of the building and all associated external works, as shown on the Engineers drawings and on such future drawings to be produced by the Engineer.

The contractor must ensure that all excavation works are monitored and recorded by a suitably qualified archaeologist, in accordance with the archaeological method statement and watching brief as approved within the planning consent.

2.4 Hardcore

Fill and compaction works across the proposed buildings and external works to be in accordance with the structural engineers details and specifications.

2.5 Concrete Foundations

Generally, the foundation design will comprise concrete stanchion bases to the sizes indicated on the structural engineer's Schedules, including all necessary reinforcement. Foundation design will be in accordance with BS 8004:1986: Code of Practice for Foundations. Subject to confirmation by the Structural Engineer, the foundations should be designed and constructed to accommodate relevant boundary conditions in respect of fire resistance.

2.6 Ground Floor Slab

A reinforced concrete ground slab with a power floated finish will be provided to the internal area. The slab will be designed in accordance with the recommendations of TR34, for a maximum loading of (35KN/m^2) and to support full height division walls constructed of 140mm thick blockwork, and no specific provision for rack loadings.

Where joints are provided in the construction of the floor, they should be generally detailed in accordance with TR34 and designed so that no vertical movement occurs across the joint.

The ground floor slab will be constructed so that the top surface is within the tolerances as defined in Concrete Society Technical Report No.34 (4^{th} Edition 2013) of FM3. The floor is to be surveyed to prove its acceptance within fourteen days of construction, and a copy of the survey report is to be issued to the Employers Agent.

After the final power floating operation, the floor slab is to be sealed with a curing agent approved by the Engineer.

The ground slab is to be constructed on a 2000 Grade visqueen damp proof membrane, with fully sealed joints, laid on a layer of hardcore with a minimum thickness as stipulated on the engineer's drawings. Under slab thermal insulation is to be incorporated to the required thickness for compliance with Part L2A of the Building Regulations.

All to achieve a U-value of 0.18W/m^2K or alternative lower value as may be necessary to comply with the requirements of the SBEM calculation.

A galvanised steel edge protection angle is to be cast into the floor slab across all service and personnel door thresholds, at their interface with the external surface finishes. The floor slab must be thermally broken across door thresholds at the interface with external surfacing.

The perimeter of all floor slabs to be sealed with an appropriate flexible mastic sealant to the structural engineers specification.

3.0 SUPERSTRUCTURE

3.1 Structural Frame

The structural steel frame is to be designed by the Principal Contractor in accordance with the Engineer's performance specification. The structure is to be designed to support all dead, imposed, wind and service loads in compliance with the Engineer's specification and the Building Regulations. The roof load is to allow for a composite or built up profiled metal cladding system. Imposed roof load is to be assessed in accordance with BS6399-3:1988 and wind loads in accordance with BS 6399-2:1997.

An allowance of 0.25 kN/m^2 is to be made for service loads applied uniformly to the whole of the roof area. Cold rolled purlins will comply with BS EN 10143:2006.

All steelwork is to be complete with all necessary plates, cleats, window posts, door posts, bracings, stays and the like, cold rolled proprietary purlins and side sheeting rails.

After fabrication all steelwork is to be shot blasted to BS 7079:2009 second quality and painted with a zinc phosphate primer; Colour grey to give a dry film thickness of 100 microns.

Primer coat to steel members requiring intumescent coating to be compatible with the intumescent paint system.

The minimum clear height to the underside of rafter haunch/lowest structure is to be 6.0m for all buildings

Where required for boundary conditions the steel frame and foundations will be designed in accordance with Constrado Report on fire collapse. Where Constrado foundations are not used, the relevant structural steel members providing support to external walls are required to be 60 minutes fire protected

All steelwork below ground level to be encased in 100mm concrete, base plates to be set at minimum 450mm below FFL in accordance with Structural Engineers information, specification and details.

3.3 Fire Protection

Where fire protection of steel stanchions and other steel members is necessary this will be carried out to the satisfaction of the Building Inspector and as required by the Building Regulations 2000 and any subsequent amendments and revisions. Where such fire protection is necessary, it will be provided to hot rolled steel members by the use of an intumescent paint coating in a colour to match the finish elsewhere. Intumescent coatings to be compatible with the steel fabricators shop applied primer coat. Intumescent paint specification to be prepared by the contractors chosen supplier, and must be appropriate to the exposure conditions of the site, and the contractors construction programme. Fire boundaries will be as identified on the architects drawings. Extent of intumescent coating to structural frame will be established on the basis of the contractor's steelwork design, and should be identified on the engineers drawings to ensure all relevant structure that provides support to boundary condition walls is protected. Any fire protection that may be required to cold rolled structural steel members will be provided by appropriate fire rated boarding.

3.4 Cladding to External Walls

Cladding will be provided to all elevations to be sealed at floor level to the slab edge beam to the full perimeter of the building to facilitate air tightness.

External walls to be clad using a mix of factory coated trapezoidal profiled metal composite insulated cladding system, and micro-rib profile composite insulated panels. The wall cladding systems are to span both vertically and horizontally, as indicated on the Architects drawings. The outer coating will require a minimum 25 years manufacturer's warranty. The inner face of cladding will be stove enamelled bright white.

The outer sheet colours are to be a mix of factory coated micro-rib profile colour reference RAL 9002 Hamlet, and trapezoidal profile colour reference BS 18 B 17 / RAL 240 80 05 Albatross. Pressed metal trims and flashings to be colour reference RAL 5003 Blue

Where indicated on the architects drawings, the external walls are to be over clad with treated timber planks, secured to horizontally spanning factory coated, insulated profiled steel carrier panels. Timber cladding must be treated to ensure Class 0 spread of flame, including to non-fire boundary walls. Timber cladding to be Norclad Western Red Cedar, profile reference NWC1, 150mm wide planks, or equal approved

Refer to the architect's elevation drawings for the location of cladding types and colours.

Cladding will comply with current 'Cold Bridge' Building Regulations. All composite cladding is to be LPCB approved, and certified to LPS 1181:EXT-B.

The cladding will be designed to comply with wind loads calculated in accordance with BS 6399/2 without delamination and to cater for thermal deflection and other movements. The cladding shall meet the thermal requirements of the Building Regulations.

Where required under the Building Regulations to provide fire protection to an external wall, the system must be certified to LPS 1181:EXT-B.

The internal lining to any cladding is to be Class O rating for surface spread of flame as tested to BS 476-10:2009.

The internal perimeter block leaf is to extend to a height of approximately 2250mm above finished floor level and must not adversely impact on the clear internal dimensions identified on the drawings. The internal block leaf is to be capped with a powder coated pressed metal trim, fully sealed against blockwork and cladding with sloping top face to reduce dust contamination.

All internal block walls to be constructed using close textured fairfaced paint grade blocks, with shallow bucket handle joints.

All to achieve a U-value of 0.16W/m^{2}K or alternative lower value as may be necessary to comply with the requirements of the SBEM calculation.

3.5 **Roofing**

The whole of the roof will be covered with a trapezoidal profile metal insulated composite panel system; the outer coating will require a minimum 25 years manufacturer's warranty. Factory coated finish, with outer face colour reference RAL 080 70 05 Goosewing Grey. The underside of the internal lining panel will be bright white. The roof cladding will be fixed in accordance with the manufacturer's recommendations and those of the installer and will comply with Cold Bridge Building Regulation Requirements – Building Regulations Approved Document L2A. The cladding proposed must be Loss Prevention Council approved where a composite is used, and be certified to LPS 1181:EXT-B.

Eaves/verge trims and eaves gutter/down pipes to be colour reference RAL 5003 Blue

Insulation will be provided as necessary to achieve the requirements of the Building Regulations/SBEM.

The roofing will be designed to suit wind loading without delamination and with due regard to thermal deflections and any other movements. All side and end laps, junctions with rooflights and rainwater goods etc are to be designed and installed for full water tightness and to prevent moisture entrapment.

The internal profiled steel lining to the roof will be Class O rating for surface spread of flame and tested to BS 476-10:2009. The internal lining will be enamel finished zinc coated profiled steel.

Triple skin glass reinforced polyester (GRP) CDM compliant non-fragile rooflights to Class B of document ACR(M)001:2014 (for 25 years) with colour coded caps and profile to match roofing will

be provided to approximately 10% of the net roof area and be fixed to the purlins in accordance with the manufacturer's instructions. Specific rooflight layout to be agreed with the Employers representative prior to implementation.

The client may permit the use by the contractor of a built-up roofing system as an alternative to composite, subject to agreement of cost and specification.

All to achieve a U-value of 0.16W/m^{2}K or alternative lower value as may be necessary to comply with the requirements of the SBEM calculation.

3.6 **Rainwater Goods**

Rainfall design criteria will be in accordance with BS EN 12056-3;2000 "Code of Practice for Building Drainage of Roofs and Paved Areas". The rainwater goods will be to the following specification:
Preformed factory coated pressed metal eaves gutter to the profile indicated on the drawings, with factory coated circular pressed metal outlets and rainwater pipes. Rainwater pipe locations to be determined by the roof cladding specialist to suit the rainfall design criteria and should include for appropriate rodding access points.

3.7 **Loading Doors**

Each unit will have one electrically operated, insulated, composite factory coated steel sectional overhead door, clear opening size for doors to all units to be 4.00m wide x 4.50m high

All to achieve a U-value of 1.45W/m^{2}K or alternative lower value as may be necessary to comply with the requirements of the SBEM calculation.

In addition to electrical operation, all loading doors will incorporate an internal chain operated manual override facility.

Each sectional overhead door shall incorporate 3no. polycarbonate 'porthole' type vision panels to the height shown on the drawings.

Suitable bollard protection to door jambs will be incorporated to protect from HGV impact.

3.8 **Fire Exit Doors**

The personnel doors to the building (excluding those within aluminium glazed screens) will be vandal-resistant heavy duty insulated steel door sets and frames in accordance with L2A of Building Regulations from proprietary manufacturers, with a pre-galvanised powder coated finish. No fixings for the steel door construction or steel frame shall be visible on the exterior. A fully welded frame construction is preferable

The door ironmongery and frame assembly shall be suitable for use by disabled persons in case of emergency and accessible by key from the outside. Fire Exit doors to be to the following specification:

- Galvanised steel primed & powder coated finish.
- Industry standard fitted heavy duty panic latch escape assembly
- Heavy duty stainless steel hinges
- Door sets to achieve a minimum security rating of LPS1175 – SR2
- Telescopic friction stay suits the weight of door leaf
- All to achieve a U-value of 2.20W/m^{2}K or alternative lower value as may be necessary to comply with the requirements of the SBEM calculation.

Steel door sets are to be set within reveals that are trimmed to the sides and head using hot rolled steel members to ensure they are securely restrained.

Steel door sets must achieve a minimum clear opening (including all door furniture) of 800mm to comply with Part M of the Building Regulations

3.9 **Front Entrance Glazed Screens**

The entrance doors and side lights with openable windows to each unit will be by Technal Viking or similar and manufactured in polyester powder coated aluminium sections. Clear, hermetically sealed

double glazed units thermally broken, extruded aluminium system, polyester powder coated; colour RAL 5003 (Blue). All glazing to be to the recommendation of BS 952 and BS 6262 in laminated or toughened safety glass. Ironmongery to include five-lever deadlocks, matching finish double-action floor springs/ concealed door closer and push/pull handles. A letter plate is to be provided in the bottom stile member of the door leaf.

The front entrance doors to be of a clear opening width of 1.0m, requiring an opening force, manifestation, etc to comply with Approved Documents K and M of the Building Regulations. All windows are to provide background ventilation, to comply with Part F of the Building Regulations. All to achieve a U-value of 1.70W/m^2K or alternative lower value as may be necessary to comply with the requirements of the SBEM calculation.

An external canopy to be provided above each glazed entrance door to comply with the requirements of Approved Document M of the Building Regulations. This to consist of painted tubular steel stubs cantilevered off the main structural steel frame, through the wall cladding, with a clear safety glass panel secured over using appropriate stainless steel fixing bolts.

3.10 **Fire Precautions**

The requirements of the Local Fire Prevention Officer will be incorporated as indicated on the drawings, in respect of means of escape, partitions, and fire exit doors.

Any other requirements or recommendations of the Fire Prevention Officer or Approved Inspector with regard to provision of hose reels, fire hydrants, sprinklers, heat sensors, smoke ventilators, extinguishers, and other fire detection and fighting equipment are specifically excluded from the contract works.

Emergency lighting, fire alarms and warning/directional signage will be provided to the landlords constructed amenity accommodation only.

3.11 **Internal Walls**

Fairfaced blockwork wall to be constructed to the full perimeter of the building to approximately 2.250m above finished floor level.

Division walls between individual units to be formed using 140mm thick fairfaced blockwork up to the underside of roof covering. Unit division walls to be constructed to ensure minimum 60 minutes fire separation both sides.

All internal block walls to be constructed using close textured fairfaced paint grade blocks, with shallow bucket handle joints.

Cycle racks to be provided as detailed inside each unit where indicated.

The structural steel frame and concrete floor slab shall be designed in a manner that permits the internal division walls between individual units to be constructed directly off the floor slab, and for the steel restraint posts to be suspended from the rafters with fixings to the floor slab to preclude lateral movement. This is to allow for future removal of individual walls to maximise flexibility for subdivision of the units.

3.12 **Floor Finishes**

Power floated finish slab throughout at consistent level, to tolerances specified by the Engineer Armorex “Proseal” or similar floor sealant applied to concrete slab in accordance with manufacturer’s recommendations.

All other floor finishes to the warehouse/industrial space to be by the tenant. Refer to Section 4 for finishes to the amenity accommodation.

Movement joints to the floor slab to be sealed in accordance with the Engineers specification.

Perimeter of floor slab at its junction with the external wall to be sealed using appropriate flexible joint filler and mastic sealant.

3.13 **Wall Finishes**
Surface finishes to the warehouse/industrial space are to be the responsibility of the tenant. Refer to Section 4 below for details of the amenity accommodation.

3.14 **Ceiling Finishes**
All ceilings to the warehouse/industrial space are the responsibility of the tenant. Refer to Section 4 below for details of the amenity accommodation.

3.15 **Joinery**
Paint finished MDF linings to the personnel door reveal to the warehouse area. Refer to Section 4 below for details of the amenity accommodation.

3.16 **Plumbing and Sanitary ware**
Refer to Section 4 for details of sanitary ware/plumbing. No internal plumbing and sanitaryware to be provided to the warehouse area.

4.0 **Amenity Block**
Fairfaced 140mm blockwork walls to be constructed to the warehouse side with bucket handle mortar joints to be 60mins FR, lined with Gyproc 52mm Triline insulated plasterboard, fixed using Gyproc Dryliner TL adhesive dab system with a plaster skim finish to all surfaces.

Fairfaced 100mm blockwork internal walls to office/toilet suite to be lined with Wallboard on adhesive Dryliner system inline with manufacturers recommendations, plaster skim finish and painted; Colour TBC by client.

All to be approximately 2.70m above finished floor level.

Doors: 30min FR solid core paint grade doors in softwood paint finished frame. Smoke seals, intumescent strips, self-closing device, Vision panel FR and ironmongery to by specialist and forwarded to client/Architect for approval. Works to include painted 70x21mm SW splayed architraves to both sides of door, 170 x 32mm fin. SW frame with 13mm planted stop and lintels over doors to be sized by contractor.

Timber decking Roof: designed for maintenance access only to be 60mins. FR. Build up as 9mm Supalux board on top of 25mm thick plywood, fixed to top of treated SW timber joists (200x50 at max 500mm C/C. Structural Engineer to confirm). Joists supported from blockwork using joist hangers fixed in accordance with manufacturer's instructions. 2 no. layers of 12.5mm Knauf Fireshield board fixed to the underside of the joists, with staggered joints.

Intumescent seal to perimeter of Fireshield board. Mineral wool 30mm x 60kg/m³ to be laid between joists for acoustic purposes. All pipework & cable penetrations to be sleeved & fully fire sealed to 60min. fire resistance.

Toilet Facility; Armitage Shanks Contour 21 Standard Doc M Pack ref. S6984 disabled WC suite or equal approved. To include WC with spacer box, low level cistern, wash handbasin with lever operated mixer tap, grab rails, hinged support rail, seat no cover, toilet roll holder, and retaining buffers. Grab rails and seat to be coloured blue for colour contrast purposes. All exposed pipework to be paint finished white. Separate Armitage Shanks Portman 50 wash handbasin with 2 tap holes, and overflow. Reference S2220, or equal approved to be installed with 2No course of 150mm square ceramic glazed tiles above sinks as splashback, and mirror to be installed on opposite wall as Building Regs Doc M.

Workstation within Warehouse: Worktop 38mm thick by 600mm Charcoal worktop Howdens joinery & 600mm Base unit with Lamona compact single square bowl sink SNK1441 and chrome lever deck mixer tap TAP9023 or similar. Hot water unit to be installed over sink area, capacity and specification to be in accordance with M&E information.

Ceiling: Armstrong Prima Dune Supreme, 600x600mm tegular edged suspended ceiling tiles, laid in factory coated white Trulok Prelude grid. 38x25mm painted s/w shadow batten. Recessed lay in modular lighting, occupancy detectors, disabled alarm pull cords etc to be installed and provided in accordance with manufactures information and the contractors services designers details.

Office facility including fittings & fixtures to be provided in accordance with the layouts indicated on the architects drawings.

Floor finishes within the amenity accommodation to be as follows:

- Minimum 2mm thick anti-slip vinyl sheet to sanitary accommodation, to be lapped up the enclosing walls to form continuous skirting, and sealed to the walls using proprietary sealing strip
- 600mm square commercial quality carpet tiles to office areas, entrance foyers, meeting rooms, etc., with integral barrier matting at each glazed entrance door location.
- Minimum 2mm thick anti-slip vinyl sheet to store rooms, to be sealed at perimeter to timber skirtings

5.00 EXTERNAL WORKS

5.1 Service Yard Area

The yard area to the buildings, including parking bays, will be surfaced using insitu reinforced concrete with brush finish to the surface, to be in accordance with the engineers details and specification. Some of the parking area within the units 19 – 26 plot to be surfaced using bitumen macadam to the extent indicated on the architects drawings, and be laid in accordance with the engineers details and specification. To be finished flush with internal finished floor level across all door openings; refer clause 2.6 with regards service doors, with falls to be generally away from the building for drainage purposes. All materials to be supplied and installed in accordance with the engineers specification.

External bollard protection to vulnerable areas of the building adjacent each loading, and personnel door. Bollard protection to be provided to glazed elements.

Precast concrete kerbs to full perimeter for edge restraint.

The transition between the public highway and the new service yard is to be in accordance with the requirements of the engineer and to the satisfaction of the local highway authority.

5.2 Car Parking

64 number total car parking spaces are to be provided as indicated on the drawings.. Standard bays to be 2.400 x 4.800 metres, and accessible spaces 3.600 x 6.000 metres. All bays to be demarked using thermoplastic paint lining, to the layout indicated on the plans.

5.3 Kerbs

Where indicated, 255mm x 125mm half battered pre-cast concrete kerbs to BS 7533 bedded onto a concrete base and haunching, with drop kerbs and channel blocks positioned as indicated on the drawings.

5.4 Footpaths

The footpaths to be laid to falls away from the building, and are to be formed to provide level access to the buildings at door locations.

A 1200mm wide (clear of outside edge of wall cladding) macadam surfaced footpath is to be formed along the gable and rear elevation of the buildings, suitable for pedestrian use in the event of emergency escape and for maintenance access. This to be edged with a precast pin/edging kerb.

5.5 Landscaping

For landscaped areas indicated on the site plan, all rubbish will be removed, and the areas will be filled with re-used sub-soil in accordance with the Geotechnical Report requirements and graded in contours shown, 150mm topsoil spread and rotovated, stones removed, seed beds raked, prepared and seeded.

The landscape and planting works to be carried out in accordance with the landscape designers plans and specification. Trees, plants, shrubs, etc to be planted, watered, staked, and supported as

necessary, and will be maintained by the contractor for one year from practical completion, or completion of the planting, whichever is the latter.

5.6 **Drainage**

i) **General**
Connections from the site boundary to main foul sewer will be made in accordance with the requirements of the Local Authority.

The drainage system generally will be in accordance with:
BS EN 295 Vitrified clay pipes and fittings and pipe joints for drains and sewers;
BS EN 12056-3:2000 Gravity drainage systems inside buildings. Roof drainage, layout and calculation; BS EN 752; 2008 Drain and sewer systems outside buildings "Code of Practice for Building Drainage and Sewers for Adoption Manual" 3rd Edition 1989, where required by the Local Authority.

The contractor to undertake the following in respect of all below ground drainage systems, with reports issued to the Employers Agent for review prior to practical completion:
-An air and ball test of all pipe runs.
-CCTV survey of the completed below ground drainage systems for both foul & surface water.

ii) **Pipework**
Foul and surface water drainage will be constructed to the details shown on the engineers drainage drawings, using Hepseal and Supersleeve Pipes to BS65:1991, and UPVC underground drain pipes and fittings to BS EN 13598/BS EN 1401 or similar approved on Class B granular bed.

All necessary bends, junctions and other fittings required to complete the work will be provided.

Each individual unit will be provided with a 100mm diameter foul untrapped drainage pop-up for connection to the amenity accommodation sanitary ware/appliances.

iii) **Manholes**
Manholes will be constructed to the depths required using either pre-cast concrete rings and heavy duty cover slabs or in engineering brickwork. The bases of manholes will incorporate all necessary clayware channels and junction fittings and will be benched in fine granolithic concrete.

Galvanised step irons will be included in the walls of manholes and the manhole covers will be of cast or ductile iron of an appropriate load bearing capacity.

iv) **Channels**
Service areas to have drainage channels set in at appropriate positions, as indicated on the engineers drainage layout drawings.

v) **Petrol Interceptors**
By-pass separators are to be incorporated into the development as indicated on the engineers drainage drawings.

vi) **Storm Water Retention**
The surface water drainage to both the development plots, and the adoptable road, are to be constructed using SUDS principles, all as detailed and specified on the engineers drainage drawings

5.7 **Bollard Protection**
Paint finished tubular steel bollards (concrete filled) or Rhino RB111 by Marshalls are to be provided to service door jambs of all units, and to protect vulnerable elements of the building, ie, glazing to personnel doors and screens. Colour to be gloss yellow

5.8 **Security Gates and Fencing**

Steel paladin fencing, 2.40m high, is to be installed to enclose each development plot, the extent of which is identified on the site layout plan. New fencing to be factory coated dark green.

New electrically operated polyester powder coated green steel horizontal sliding gates are to be installed across each service yard entrance at the junction with the new estate road, key fob operated with time control. The sliding gate manufacturer and product selection/specification requires prior approval by the client before an order is placed.

In addition to the powered sliding gate, a manually, key pad operated secure personnel gate is to be incorporated into the perimeter fencing of each of the development plots, in the locations indicated on the site layout plans.

6.0 EXTERNAL SERVICES

6.1 **Electric**

Each unit will be provided with a three-phase electricity supply terminating at the main fused switch. Electrical meters and isolator apparatus are to be housed within the individual units, position & number to be agreed by client (approx. 17 – pending tenant numbers).

The supply capacities are as follows:

Unit 17 / 18 – 80kVA
Unit 19 – 25kVA
Unit 20 – 20kVA
Unit 21 – 20kVA
Unit 22 – 25kVA
Unit 23 – 30kVA
Unit 24 – 20kVA
Unit 25 – 20kVA
Unit 26 – 25kVA

Landlord Supply – 2 x 10kVA

Contractor to make allowance for all costs associated with supplying and installation, including builders work and making good following installation.

6.2 **Water**

A 25mm diameter MDPE metered water supply will be installed to each unit. Service pipework within the units to be installed to serve the amenity accommodation only.

6.3 **Gas**

A capped off mains gas supply is to be provided to each unit, based on the capacities noted below. Meter and internal distribution pipework by tenant:

Unit 17 / 18 - 80kW
Unit 19 – 25kW
Unit 20 – 20kW
Unit 21 – 20kW
Unit 22 – 20kW
Unit 23 – 25kW
Unit 24 – 20kW
Unit 25 – 20kW
Unit 26 – 25kW

6.4 **Communications**

A telecom duct and separate spare data duct will be installed to each unit for future telephone and data connections by the tenant.

6.5 **Service Entry and Termination**
All services will enter and terminate at locations within the building as agreed with client.

6.6 **CCTV**
Containment ducting and draw pits for a CCTV installation for the site is to be installed in accordance with the layout to be provided by Network CCTV Systems (NCS). A CCTV system is to be installed in accordance with NCS quotations dated 14th October 2021.

7.0 MECHANICAL & ELECTRICAL SERVICES

7.1 **General:**
The mechanical and electrical systems will be designed where appropriate in accordance with:
i) CIBSE Guides and technical memoranda.
ii) BCO Guide for Urban Offices 2009.
iii) BS 7671.
iv) BS 5839.
v) BS 5266.
vi) IEE Regulations 18th Edition (June 2019)
vii) Building Regulations.
viii) Other relevant British Standards.

7.2 **Mechanical Services:**

i) All mechanical services internal to the warehouse/industrial space are the responsibility of the tenant.
ii) Mains cold water supplies to the sanitary accommodation and tea point.
iii) Instantaneous water heater to provide hot water supplies to wash hand basins and tea point.

7.3 **Electrical Services**:

i) The lighting installation is to be designed to provide the following minimum illumination levels:
   a. Office areas 500 lux
   b. Sanitary accommodation 200 lux
ii) Lighting to office areas to be square modular recessed LED fittings complete with LG7 compliant louvers/reflectors and high frequency control gear.
iii) Sanitary accommodation be lit using recessed LED downlighters.
iv) Heating to the amenity to be provided by wall mounted 2kW radiant panel heaters, complete with timer and thermostatic controls. Number and layout of heaters to be agreed with the client, but must achieve an ambient temperature of 24ºC +/- 2ºC
v) A distribution board to be provided to each amenity block, and will incorporate MCB's for final sub-circuit protection, and have 25% spare capacity.
vi) The office areas shall be provided with 13A twin socket outlets to a layout to be agreed with the client team.
vii) Socket outlets and power supplies will be provided to the tea point areas.
viii) All small power provision to the warehouse areas to be by the tenant.
ix) A supply and isolator to be provided adjacent to each electrically operated sectional overhead door, to a specification to be provided by the door manufacturer.
x) A supply and isolator is to be provided to each powered sliding external service yard gate, connected back to the landlord's metered supply.
xi) A power supply is to be provided to serve each oil separator alarm to the external yard area below ground drainage systems. This to be in accordance with the specification to be provided by the interceptor manufacturer, and is to be connected back to the landlord's metered supply.
xii) A help alarm system will be provided in each disabled toilet, comprising:
   • Pull cord.
   • Reset button.
   • Power supply unit.

• Over door lamp/buzzer unit.

xiii) Each WC is to be provided with a wall mounted electrically operated hot air hand dryer, including power supply and isolator switch

xiv) External Lighting - generally service yard and parking area lighting will be by LED floodlights, building mounted, controlled by photocell with time clock override to provide an average illumination level of 15 lux.

- There is a minimum requirement of 1 no. external light fitting above each service door to all units, connected to the tenants supply
- Wall mounted bulkhead type fittings are to be installed externally over fire exit doors to the rear and end elevations to provide illumination to exit routes.

xv) An emergency lighting installation, in accordance with the Fire Officer and Building Control requirements, and compliant with BS 5266 will be provided.
Generally, emergency lighting will comprise designated luminaires with self contained battery and inverter packs. Batteries will be sealed for life and will not require topping up or maintenance other than routine testing in accordance with BS 5266.
Self contained illuminated exit signs will also be provided above personnel doors.
All emergency luminaires will have standby battery capacity for a minimum duration of three hours.

xvi) Lightning protection - Development to be assessed by a specialist consultant in respect of lightning risk, and if required, a suitable lightning conductor system is to be incorporated into the works, in accordance with the consultants specification and where possible positioned behind RWP's.

xvii) Ventilation to be provided to the WC, using individual fan unit, with termination grille in the external walls, to provide extract rate of 10 air changes per hour.

xviii) Ventilation to office areas to Units 17 / 18 to be provided using individual fan unit, with termination grille in the external walls, to provide extract rate of 10 air changes per hour.

8.0 SIGNAGE

8.1 All signage is to be the responsibility of the occupier, and no allowance is required in the shell works scope for this.

9.0 GENERAL

9.1 The tenant will be responsible for any external HVAC plant builders work, and protective barriers, plinths, etc. The tenant will also be responsible for obtaining any statutory consents that may apply in respect of external plant installations, including any noise studies that may be necessary in support of this.

9.2 The tenant will be given access to the shared waste storage, and recycling facilities provided on the park, location as indicated on the AFL plans

9.3 Tenant to be provided with a copy of the Planning and Building Control Consents for the landlords shell works. For avoidance of doubt the Building Regulations consent and EPC to be obtained by the landlord relates only to the landlords shell works. It is the tenant's responsibility to obtain Building Regulations consent for any subsequent additional fitting out works.

9.4 Tenant to be provided with a copy of the Health & Safety File at or near to practical completion of the landlord's shell works in both hard copy and electronic copy.