CANMOOR

lowry park

GRIMSHAW LANE ■ MANCHESTER ■ M40 2BA

PHASE 1
TECHNICAL INFORMATION PACK

CONTENTS

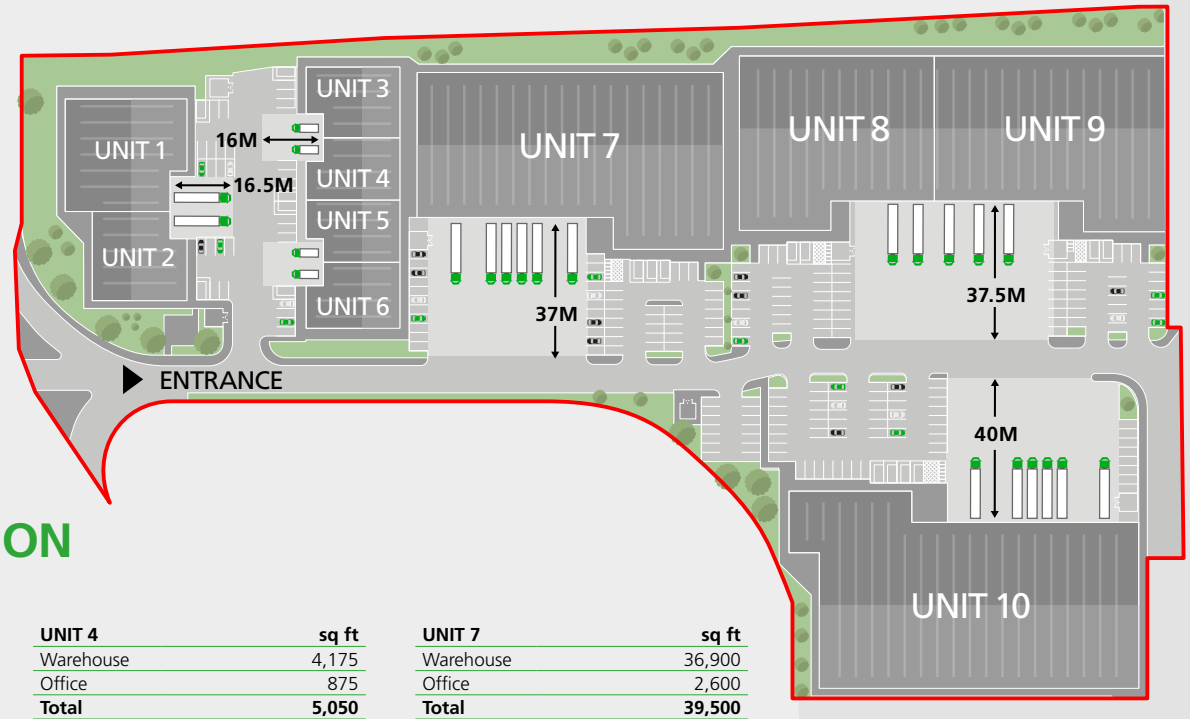
OVERVIEW

Lowry Park is a New Warehouse / Industrial Development on a 25 acre prime last mile delivery site. Phase I provides 10 high specification units ranging from 5,050 - 47,800 sq.ft. Strategically located just 3 miles from Junction 22 of the M60 and 2 miles from Manchester City Centre. Located in an established business location amongst major local occupiers such as Travis Perkins, Royal Mail and Fujitsu.

- 8-12m Clear Internal Height
- Dock Level Loading Doors
- Level Access Loading Doors
- 37.5 - 50kn/M2 Floor Loading
- Allocated Parking Spaces
- 150 - 250 kVA Power
- Up To 40m Deep Yards
- High Quality Offices
- 78 EV Charging Points
- Approved E(g), B2 and B8 uses

CONTENTS

SITEPLAN



ACCOMMODATION

UNIT 1	sq ft
Warehouse	9,900
Office	1,600
Total	**11,500**

UNIT 2	sq ft
Warehouse	5,950
Office	1,350
Total	**7,300**

UNIT 3	sq ft
Warehouse	4,750
Office	1,050
Total	**5,800**

UNIT 4	sq ft
Warehouse	4,175
Office	875
Total	**5,050**

UNIT 5	sq ft
Warehouse	4,175
Office	875
Total	**5,050**

UNIT 6	sq ft
Warehouse	4,450
Office	950
Total	**5,400**

UNIT 7	sq ft
Warehouse	36,900
Office	2,600
Total	**39,500**

UNIT 8	sq ft
Warehouse	23,750
Office	2,050
Total	**25,800**

UNIT 9	sq ft
Warehouse	28,000
Office	2,000
Total	**30,000**

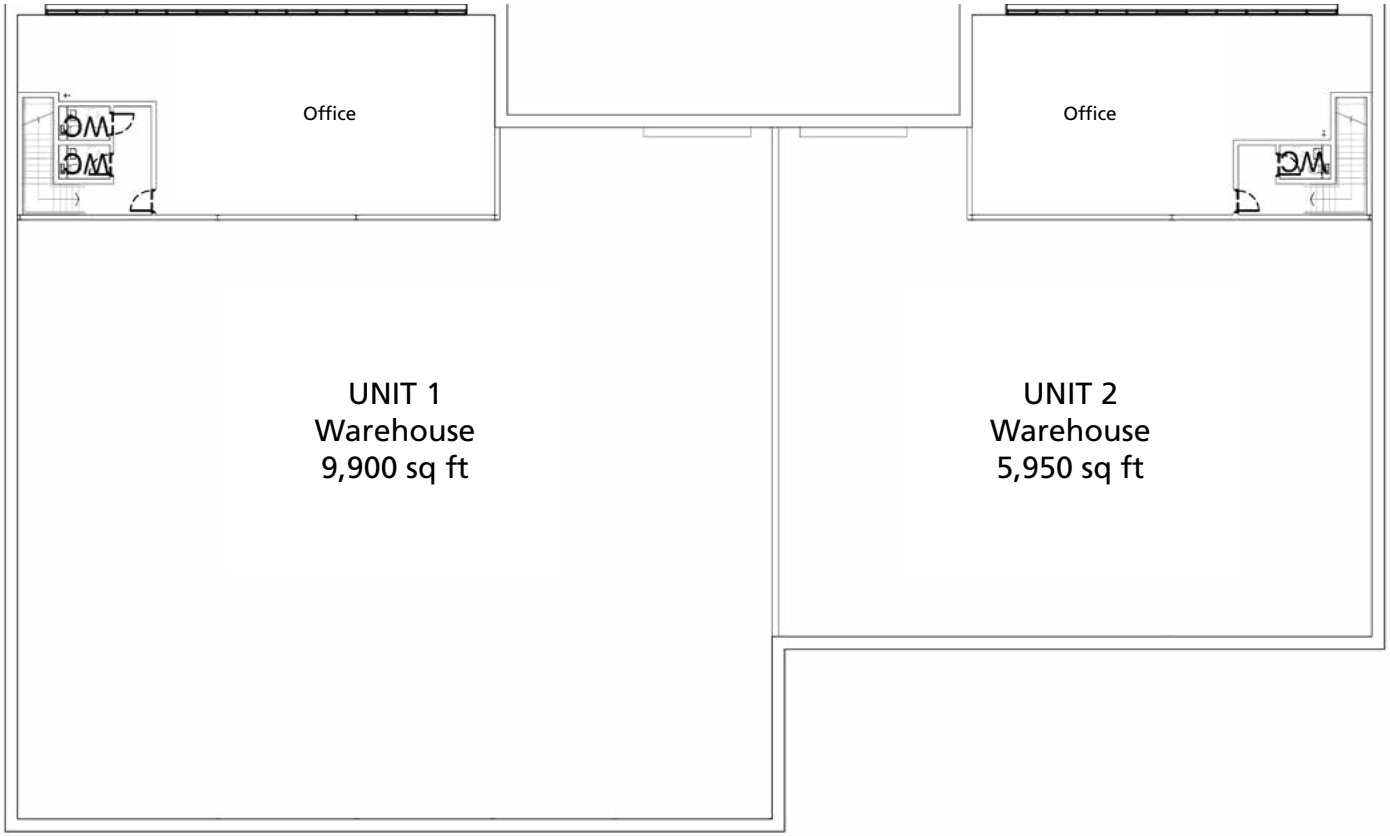
UNIT 10	sq ft
Warehouse	44,200
Office	3,600
Total	**47,800**

TOTAL – 460,500 SQ FT

TOTAL CAR PARKING SPACES – 453

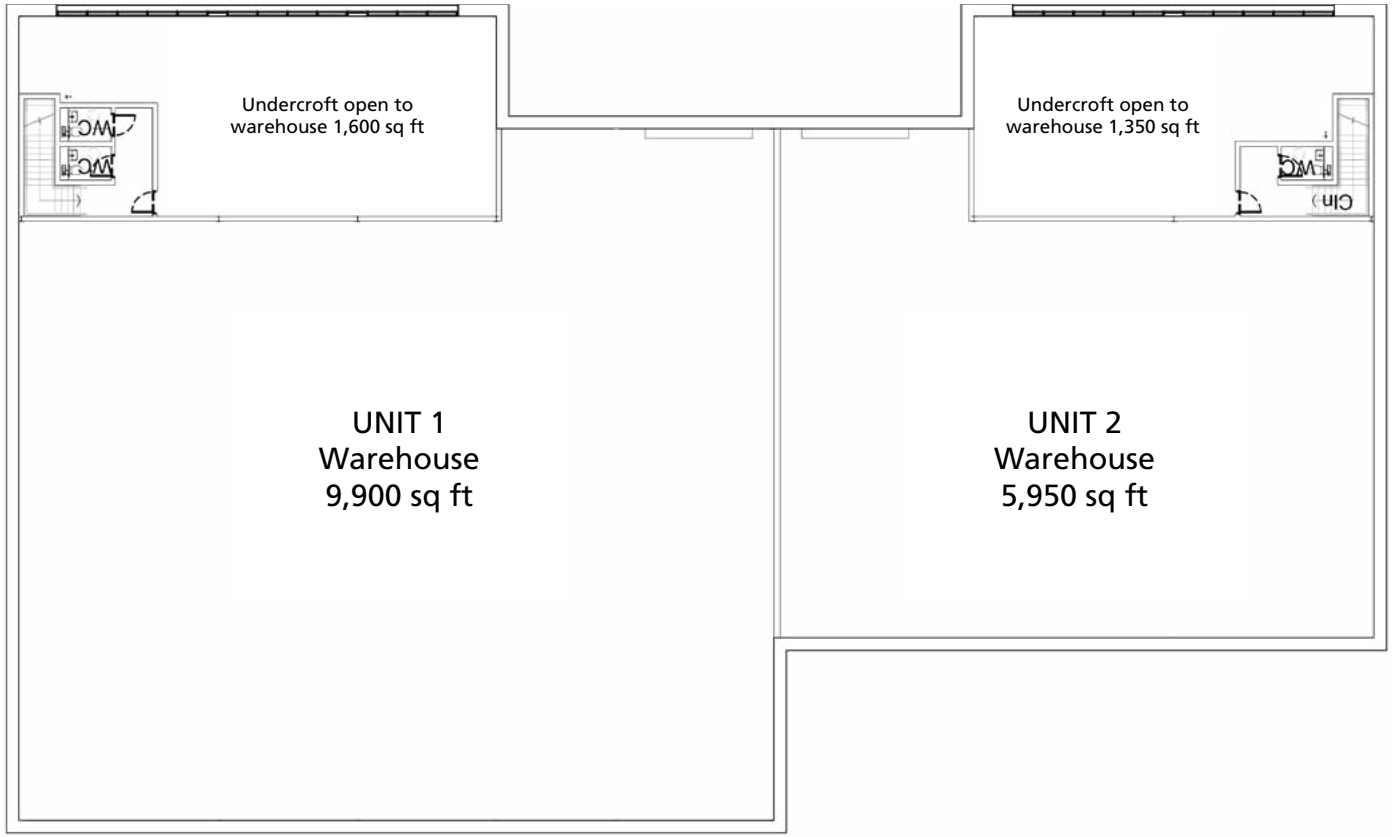
CONTENTS

FLOOR PLANS: UNITS 1 - 2 GROUND FLOOR



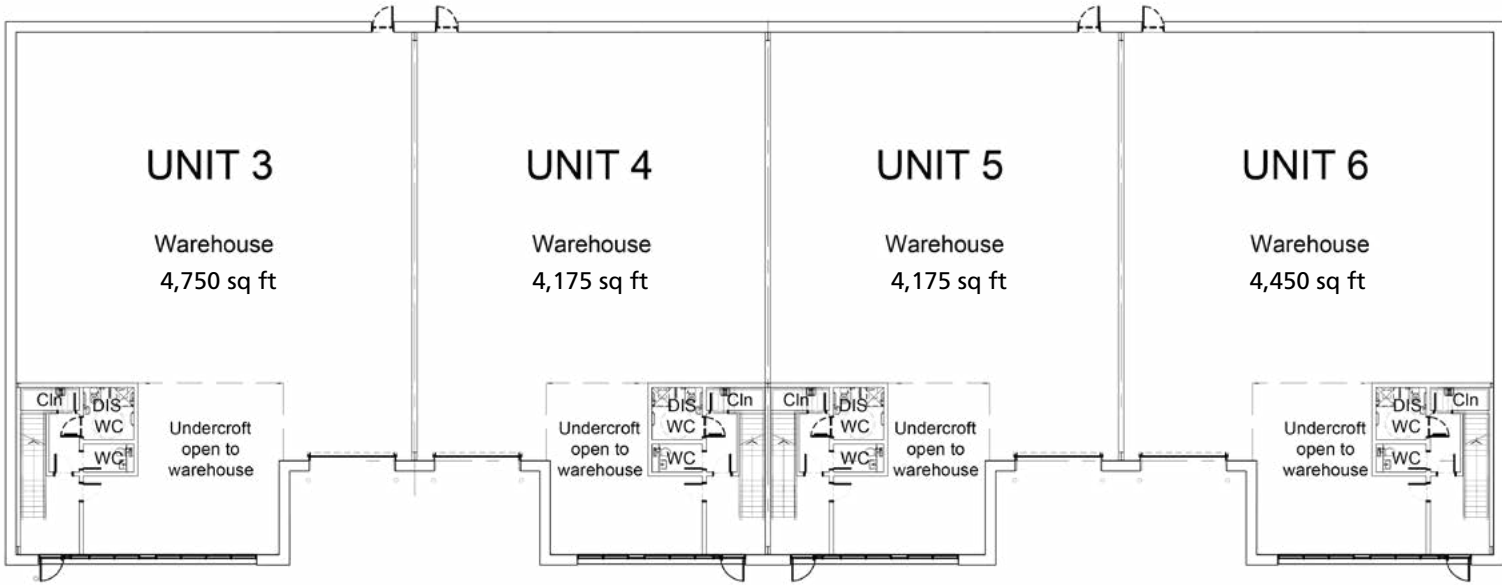
CONTENTS

FLOOR PLANS: UNITS 1 - 2 GROUND FLOOR



CONTENTS

FLOOR PLANS: UNITS 3 - 6, GROUND FLOOR



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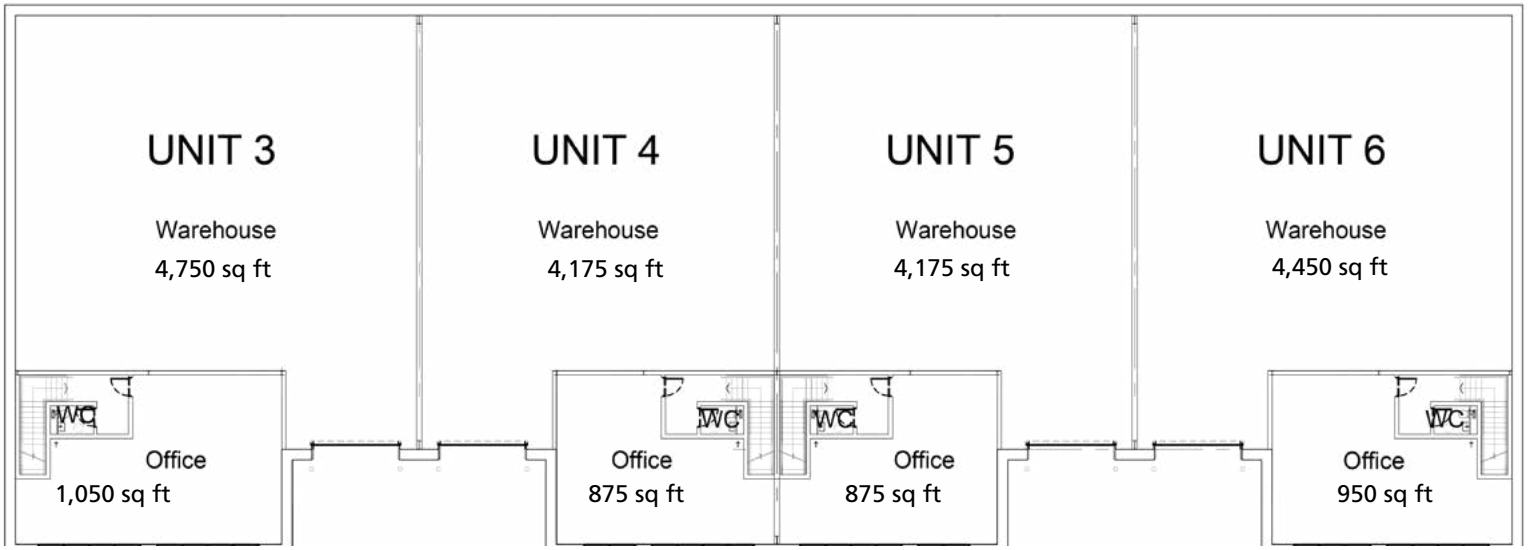
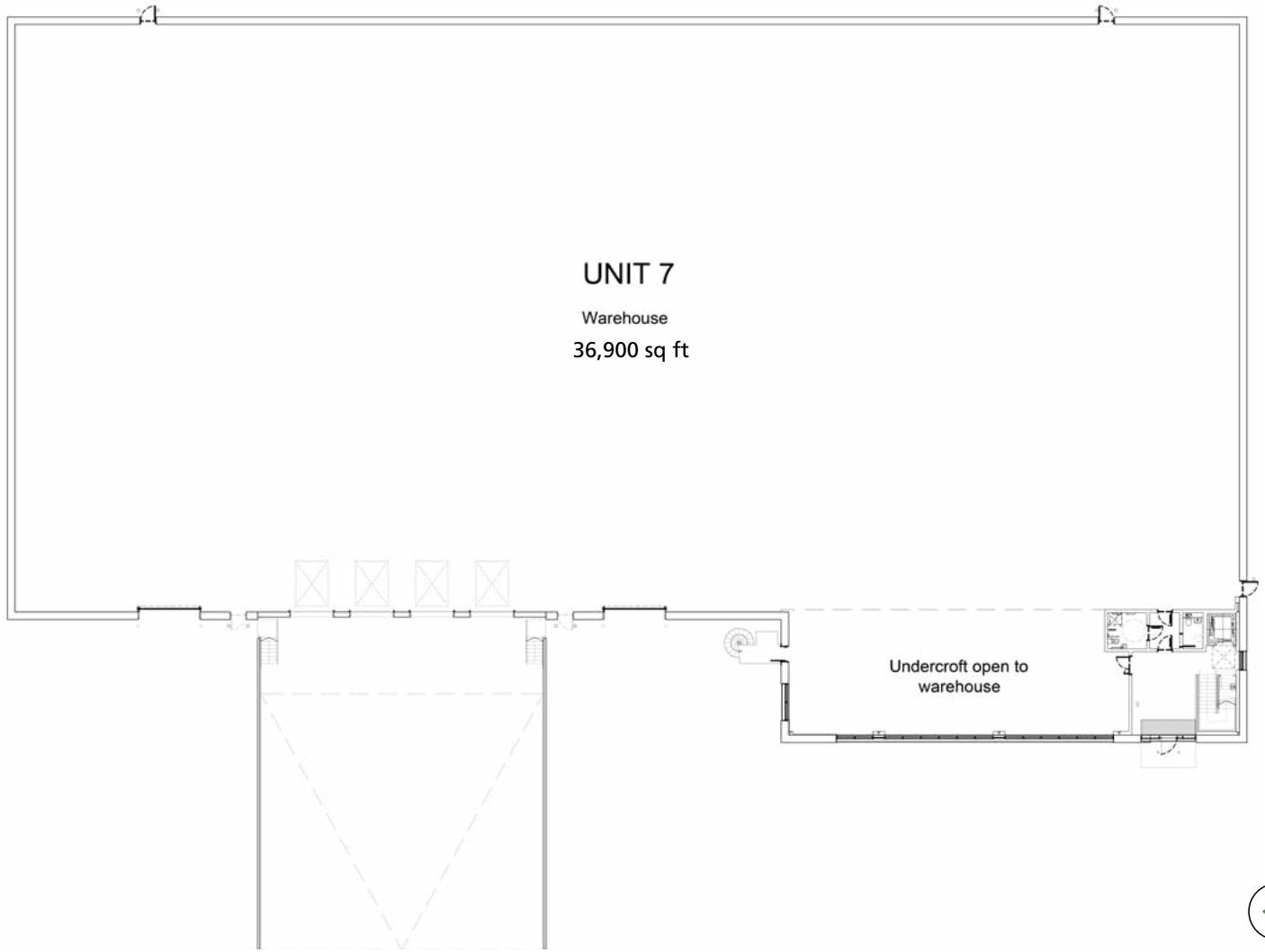
FLOOR PLANS: UNITS 3 - 6, FIRST FLOOR



CONTENTS

FLOOR PLANS: UNIT 7, GROUND FLOOR



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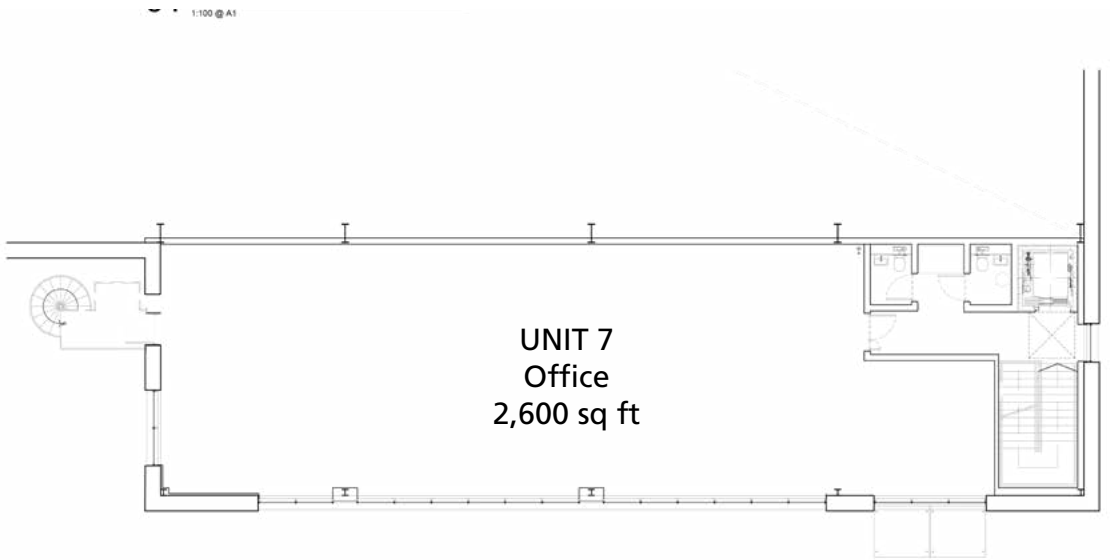
FLOOR PLANS: UNIT 7, FIRST FLOOR



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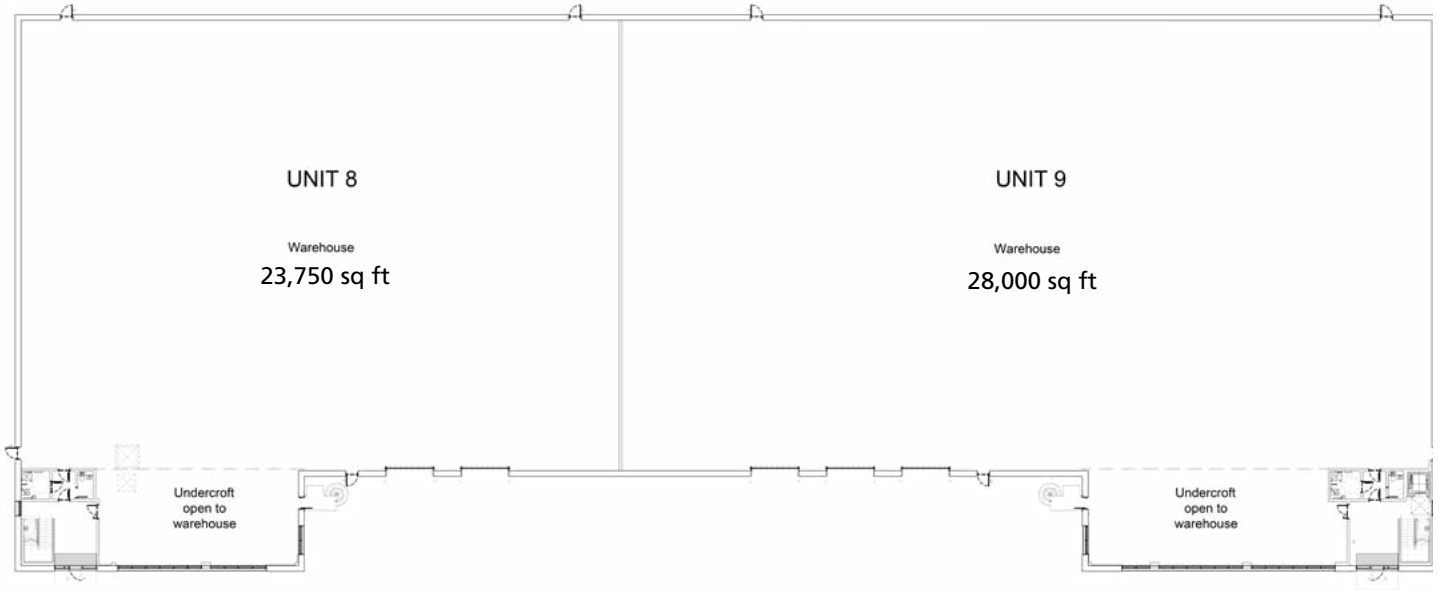
FLOOR PLANS: UNITS 8 - 9, GROUND FLOOR



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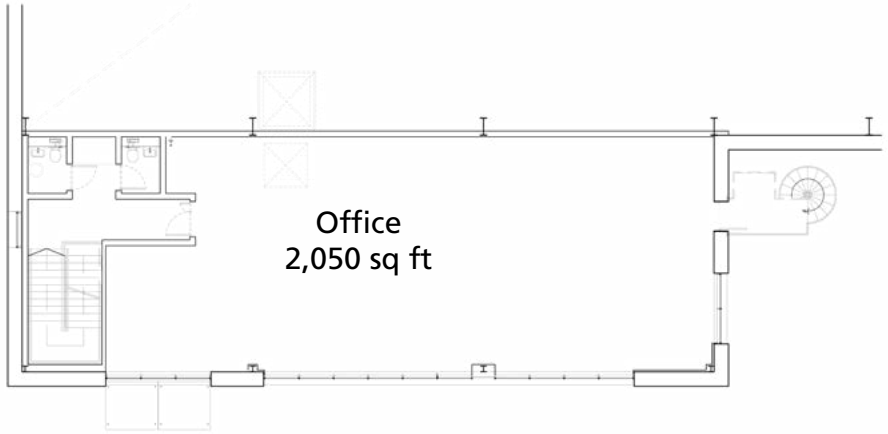
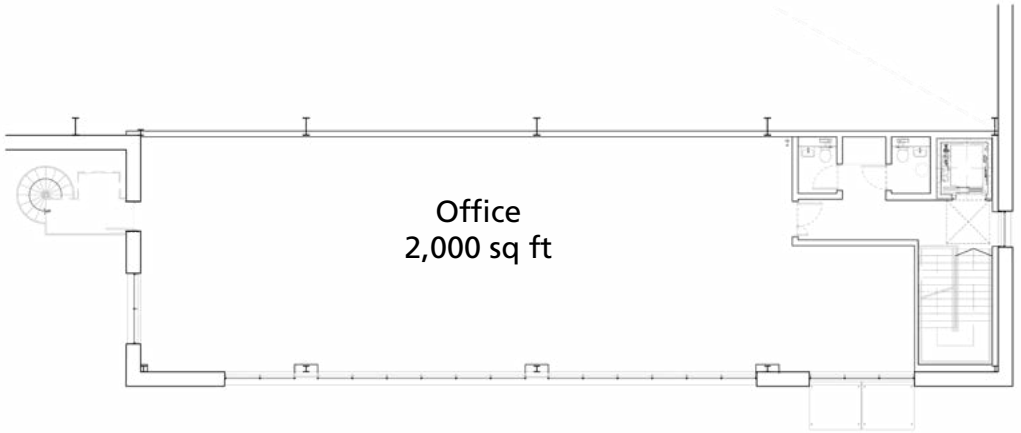
FLOOR PLANS: UNIT 8, FIRST FLOOR

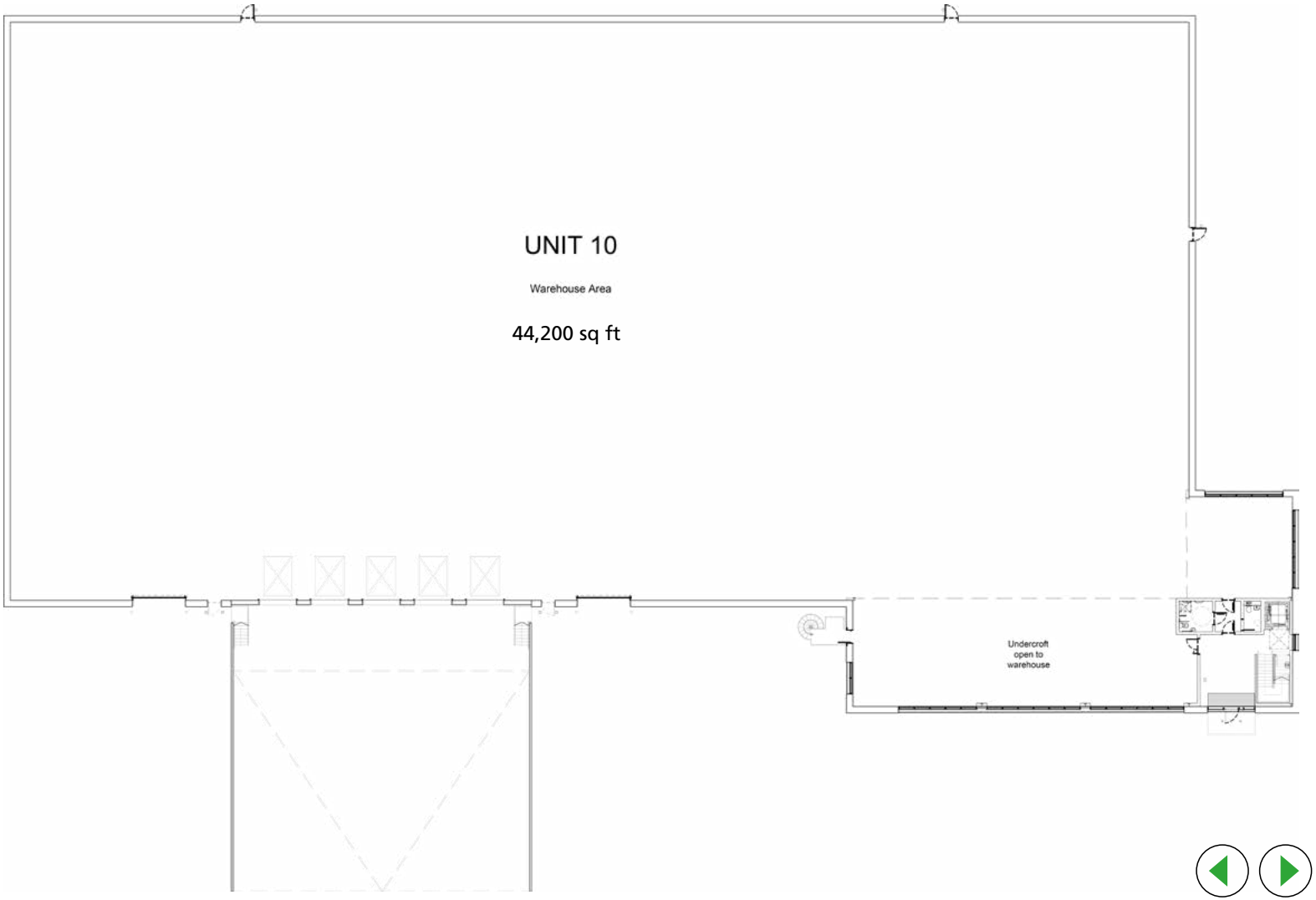


FLOOR PLANS: UNIT 9, FIRST FLOOR



CONTENTS

FLOOR PLANS: UNIT 10, GROUND FLOOR



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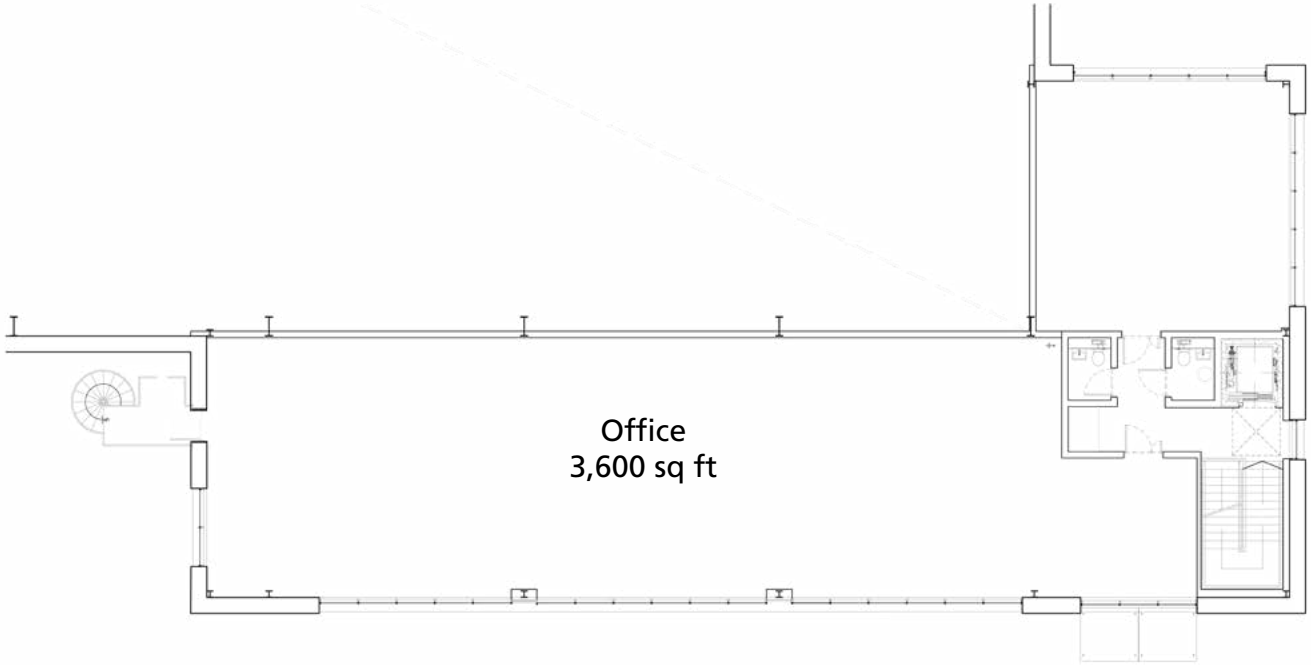
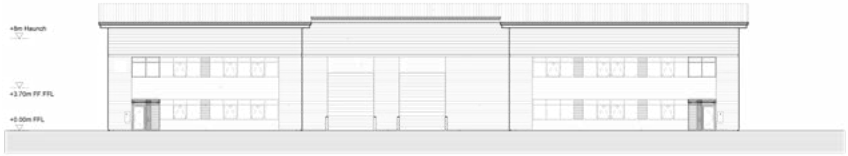
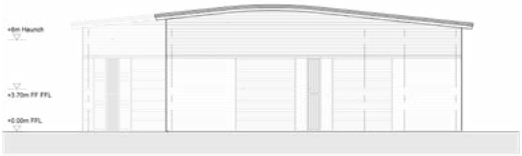


CONTENTS

ELEVATIONS: UNITS 1 - 2



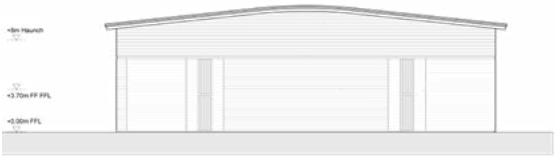
01 North East Elevation



02 South East Elevation

04 South East Elevation - Loading Return

05 South West Elevation



06 North West Elevation

06 North West Elevation - Loading Return

CONTENTS

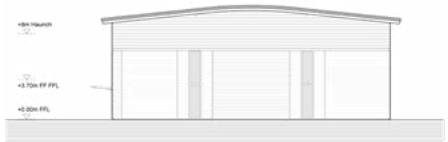
ELEVATIONS: UNITS 3 - 6

01 South West Elevation

02 North West Elevation

03 North West Elevation - Loading Return

04 North East Elevation



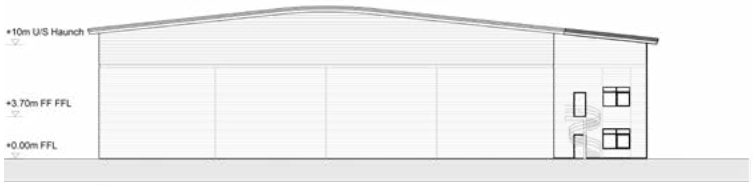
05 South East Elevation

06 South East Elevation - Loading Return

CONTENTS

ELEVATIONS: UNIT 7

01 South East Elevation



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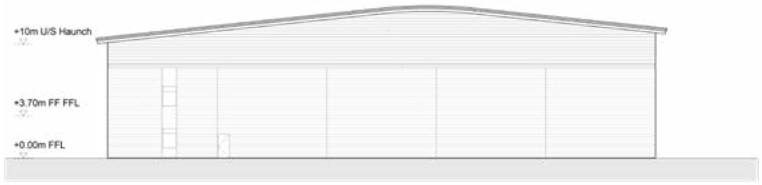
03 South West Elevation

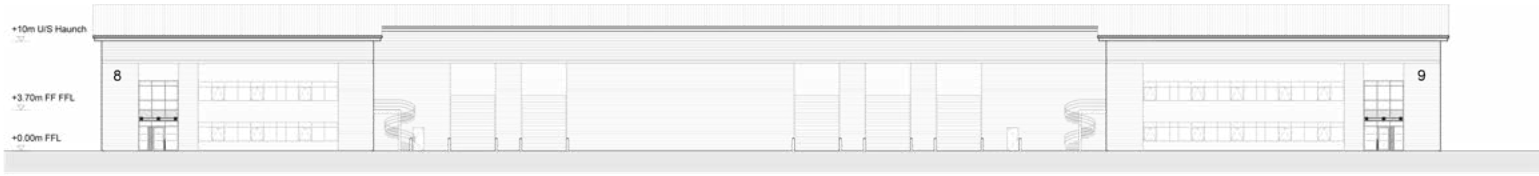
04 North West Elevation



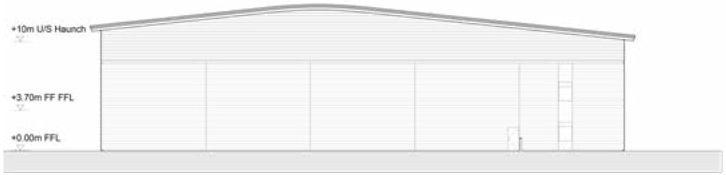
05 North East Elevation

CONTENTS

ELEVATIONS: UNITS 8 - 9



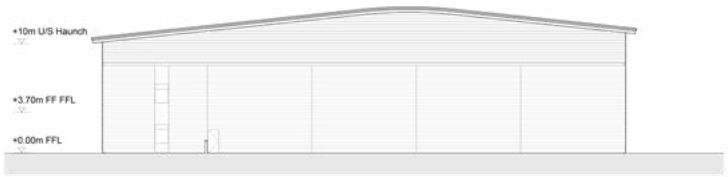
01 South East Elevation



02 South West Elevation

03 South West Elevation

04 North West Elevation



05 North East Elevation

06 North East Elevation

CONTENTS

ELEVATIONS: UNIT 10

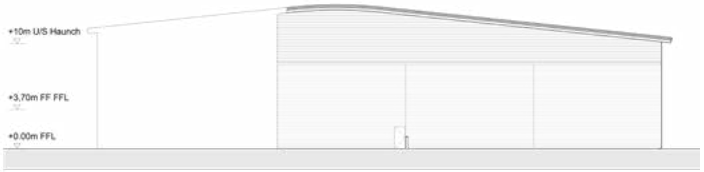
01 North West Elevation

02 North East Elevation

03 North East Elevation

04 South East Elevation

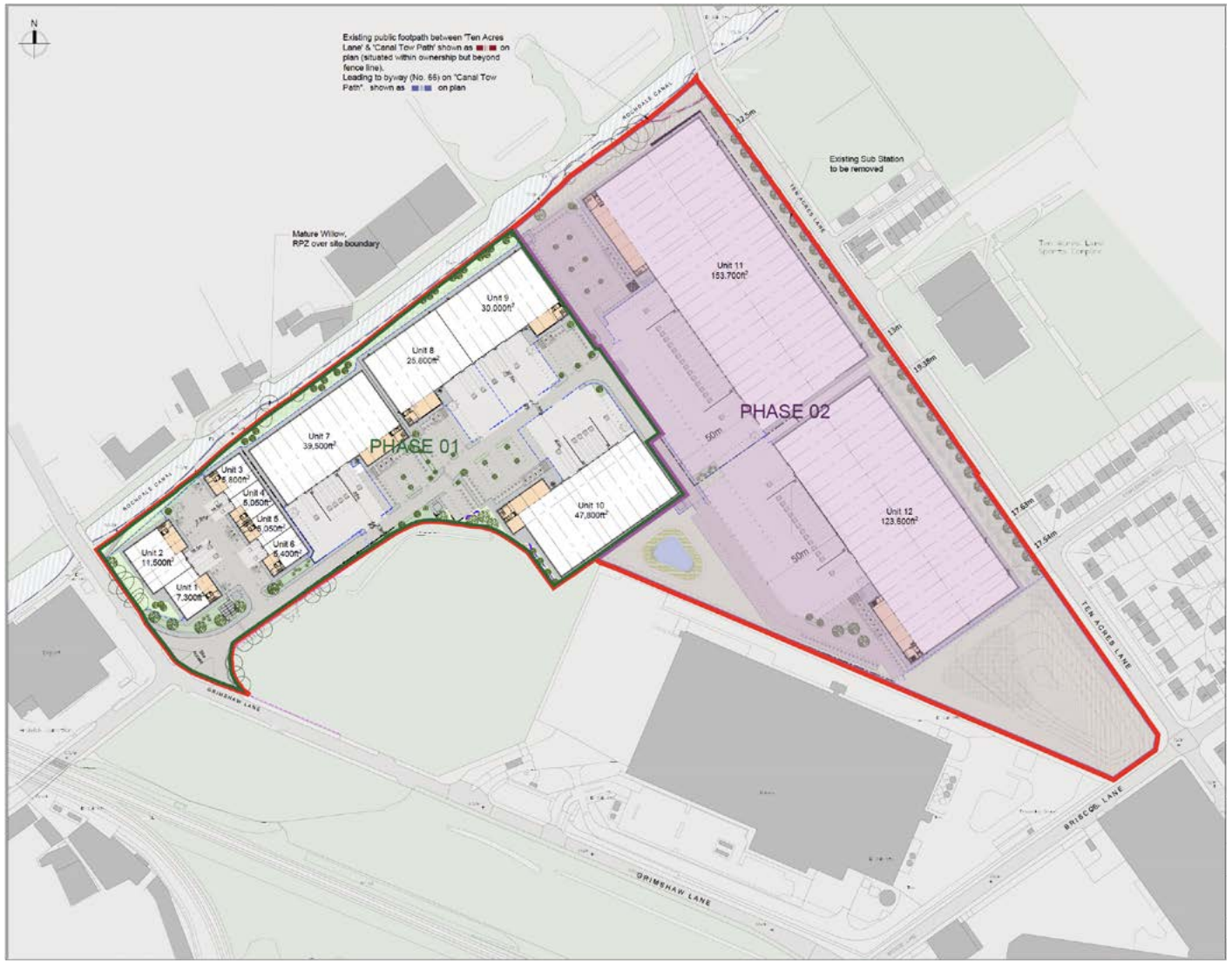
05 South West Elevation



06 South West Elevation

CONTENTS

DEMISE PLAN



CONTENTS

SERVICES

ELECTRIC

Unit 1 - 150 kVA
Unit 2 - 100 kVA
Unit 3 - 100 kVA
Unit 4 - 100 kVA
Unit 5 - 100 kVA
Unit 6 - 100 kVA
Unit 7 - 200 kVA
Unit 8 - 150 kVA
Unit 9 - 200 kVA
Unit 10 -250 kVA

GAS

Provision of gas to be capped at Meter.

WATER

32mm supply to each unit.

CONTENTS

PROJECT TEAM

LANDLORD
Canmoor

PROJECT MANAGER
Canmoor Projects

CONTRACTOR
A&H Construction

ARCHITECT
Hale Architecture Limited

LETTINGS TEAM
Lambert Smith Hampton, Colliers, DTRE

LEGAL TEAM
Forsters LLP

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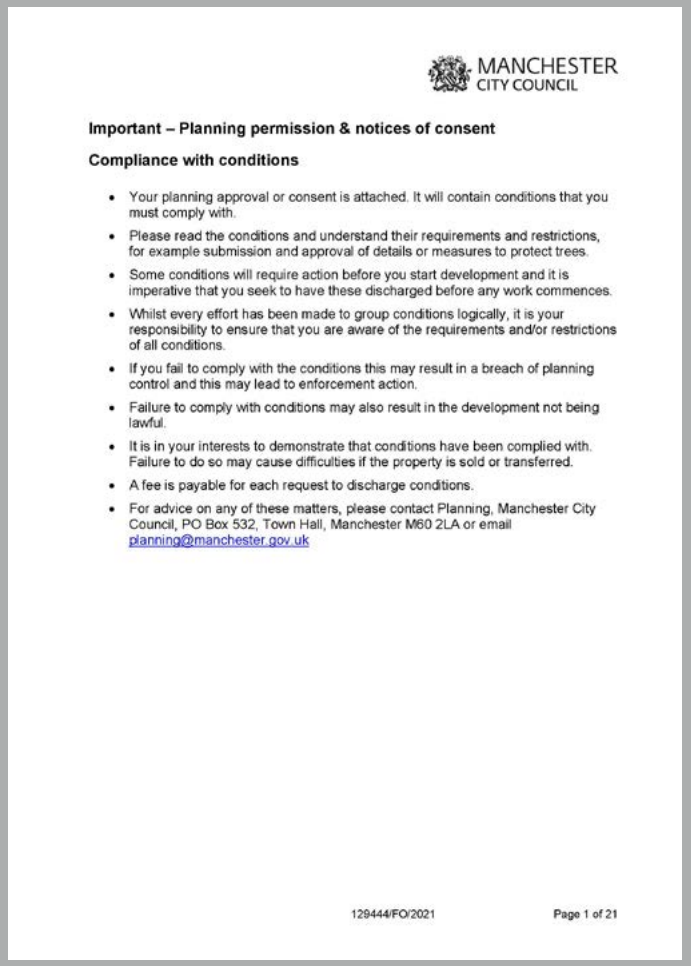
PLANNING CONSENT



MANCHESTER CITY COUNCIL

Important – Planning permission & notices of consent

Compliance with conditions

- Your planning approval or consent is attached. It will contain conditions that you must comply with.
- Please read the conditions and understand their requirements and restrictions, for example submission and approval of details or measures to protect trees.
- Some conditions will require action before you start development and it is imperative that you seek to have these discharged before any work commences.
- Whilst every effort has been made to group conditions logically, it is your responsibility to ensure that you are aware of the requirements and/or restrictions of all conditions.
- If you fail to comply with the conditions this may result in a breach of planning control and this may lead to enforcement action.
- Failure to comply with conditions may also result in the development not being lawful.
- It is in your interests to demonstrate that conditions have been complied with. Failure to do so may cause difficulties if the property is sold or transferred.
- A fee is payable for each request to discharge conditions.
- For advice on any of these matters, please contact Planning, Manchester City Council, PO Box 532, Town Hall, Manchester M60 2LA or email planning@manchester.gov.uk

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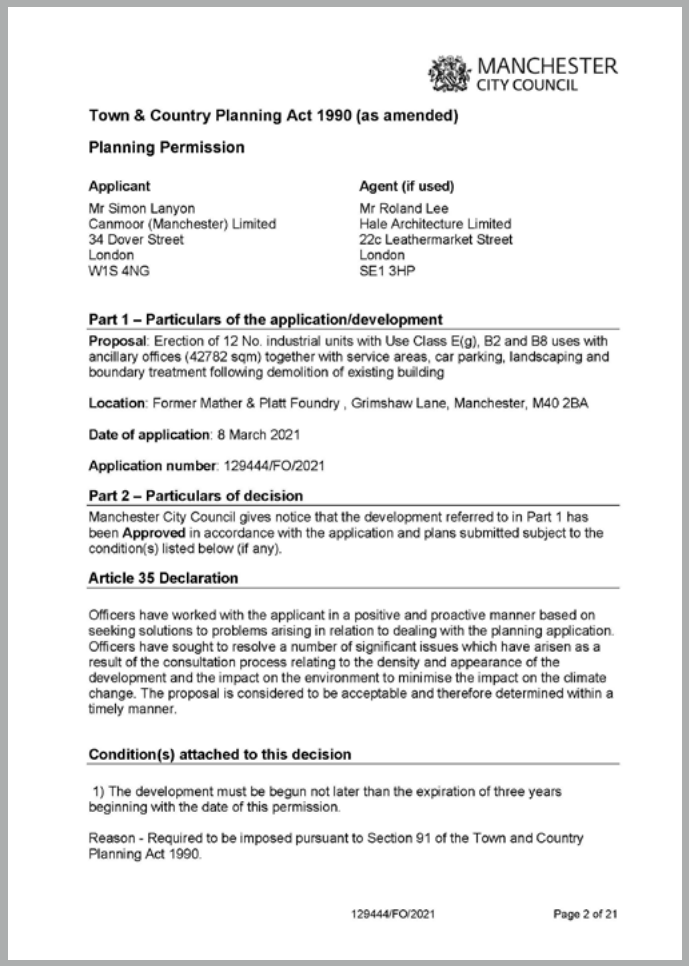

MANCHESTER CITY COUNCIL

Town & Country Planning Act 1990 (as amended)

Planning Permission

Applicant	Agent (if used)
Mr Simon Lanyon Canmoor (Manchester) Limited 34 Dover Street London W1S 4NG	Mr Roland Lee Hale Architecture Limited 22c Leathermarket Street London SE1 3HP

Part 1 – Particulars of the application/development

Proposal: Erection of 12 No. industrial units with Use Class E(g), B2 and B8 uses with ancillary offices (42782 sqm) together with service areas, car parking, landscaping and boundary treatment following demolition of existing building

Location: Former Mather & Platt Foundry , Grimshaw Lane, Manchester, M40 2BA

Date of application: 8 March 2021

Application number: 129444/FO/2021

Part 2 – Particulars of decision

Manchester City Council gives notice that the development referred to in Part 1 has been **Approved** in accordance with the application and plans submitted subject to the condition(s) listed below (if any).

Article 35 Declaration

Officers have worked with the applicant in a positive and proactive manner based on seeking solutions to problems arising in relation to dealing with the planning application. Officers have sought to resolve a number of significant issues which have arisen as a result of the consultation process relating to the density and appearance of the development and the impact on the environment to minimise the impact on the climate change. The proposal is considered to be acceptable and therefore determined within a timely manner.

Condition(s) attached to this decision

1) The development must be begun not later than the expiration of three years beginning with the date of this permission.

Reason - Required to be imposed pursuant to Section 91 of the Town and Country Planning Act 1990.

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PLANNING CONSENT

2) The development hereby approved shall be carried out in accordance with the following drawings and documents:

Drawings

PL-1005 Rev E, PL-1003 Rev J and PL-1004 Rev D stamped as received by the City Council, as Local Planning Authority, on the 20 September 2021

20-93-05H stamped as received by the City Council, as Local Planning Authority, on the 25 August 2021

PL1081C, PL1083A, PL1084B, PL1085B, PL1101C, PL1103A, PL1104B, PL1105B, PL1111C, PL1113A, PL1114A, PL1115B, PL1122C -A1, PL1123A, PL1124C and PL1125C D stamped as received by the City Council, as Local Planning Authority, on the 13 August 2021

PL1202, PL1203, PL1011B, PL1012A, PL1013, PL1051B, PL1052A, PL1071C, PL1073, PL1075A, PL1201, PL1205, PL1206, PL1207 and PL1053 stamped as received by the City Council, as Local Planning Authority, on the 17 February 2021

PL1014A, PL1054A and PL1074B stamped as received by the City Council, as Local Planning Authority, on the 7 June 2021

Supporting information

- Design and Access statement
- Geo Env Assessment by Curtins, ref 070588-CUR-00-XX-RP-GE-001, dated 03/02/20
- Plot 2 Ground Investigation Report by Wyg Environment, dated May 2014
- Plot 3 Ground Investigation Report by Wyg Environment, dated January 2014
- Demolition Method Statement by Kings Heath Demolition, dated 06/11/20
- Notice of Consent for Demolition by Manchester City Council, ref DM/20/00398 dated 19/11/20
- Flood Risk Assessment & Drainage Strategy by PTA ref. 9762-PTA-XX-XX-RP-C-9071 Rev03 dated 12/02/21
(Parts 1 to 4)
- Ecology Assessment by TEP, ref 8035.01.002 v2, dated 12/02/21
- BNG calculations by TEP, ref 8035_01_001 v2, dated 12/02/21
- Soft Landscape proposals by BEA Landscape drawing ref 20-93-05C
- Tree Survey Report By BEA Landscape RevA ref 2093/EH/TR001A dated 06/02/21
- Tree survey plan by BEA Landscape ref 20-93-01C
- Tree Constraints Plan 20-93-02B
- Tree retention plan by BEA Landscape ref 20-93-03C
- Tree protection plan by BEA Landscape ref 20-93-04A
- Arboricultural Impact Assessment by BEA Landscape RevA ref 2093/EH/AIA001A dated 11/02/21
- Arboricultural Method Statement by BEA Landscape RevA ref 2093/EH/1MS001A dated 11/02/21
- Acoustic Assessment by Hoare Lea, rev 02, dated 04/02/21
- Transport Statement by Vectos ref. R01-ES, dated 12.02.21
- Travel Plan by Vectos, ref R02-ES, dated 12.02.21
- - Passive Design Analysis by Hive, ref R.002 RevB
- Archaeology Statement By BSA Heritage, ref BSA 203-2a , dated 08/02/21
- BREEAM Pre-Assessment 2018 by ESC, RevD dated February 2021

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The above documents were stamped as received by the City Council, as Local Planning Authority, on the 17 February 2021

TEP's attached email of 20/08/21

Waste management collection, Waste management plan and waste management proforma stamped as received by the City Council, as Local Planning Authority, on the 8 March 2021

Junction modelling results stamped as received by the City Council, as Local Planning Authority, on the 13 July 2021

Response to TfGM comments stamped as received by the City Council, as Local Planning Authority, on the 13 August 2021

Phase 1 Geo-Environmental Site Assessment - Grimshaw Lane Plots 1&2, Manchester. Prepared by TRC Companies Ltd on the behalf of Canmoor (Manchester) Limited. Report Ref: 423207.0000.0000. Issue Dare; April 2021 and Phase II Geo-Environmental Site Assessment - Grimshaw Lane Plots 1&2, Manchester. Prepared by TRC Companies Ltd on the behalf of Canmoor (Manchester) Limited. Report Ref: 423207.0000.0001. Issue Date: April 2021 stamped as received by the City Council, as Local Planning Authority, on the 22 April 2021

Air Quality Assessment by Hoare Lea, ref. 10/11979 Rev02 stamped as received by the City Council, as Local Planning Authority, on the 27 July 2021

Energy Strategy by Hive, ref 20006.R.001 RevD stamped as received by the City Council, as Local Planning Authority, on the 28 June 2021

Crime Impact Statement prepared by The Greater Manchester Police stamped as received by the City Council, as Local Planning Authority, on the 5 May 2021

Note from Hoare Lea and Response to flood risk comments stamped as received by the City Council, as Local Planning Authority, on the 30 April 2021

Reason - To ensure that the development is carried out in accordance with the approved plans. Pursuant to policies SP1 and DM1 of the Core Strategy.

3) No development works shall take place until the applicant or their agents or their successors in title has secured the implementation of a programme of archaeological works in accordance with a Written Scheme of Investigation (WSI) which has been submitted for approval in writing by the City Council, as Local Planning Authority. The WSI shall cover the following:

1. A phased programme and methodology to include:

- further research to establish which elements of Park Works occupied the site;
- informed by the above, targeted archaeological evaluation through trial trenching;
- informed by the above, more detailed targeted excavation (subject of a new WSI).

2. A programme for post-investigation assessment to include:
- analysis of the site investigation records and finds;
- production of a final report on the significance of the heritage interest recorded.

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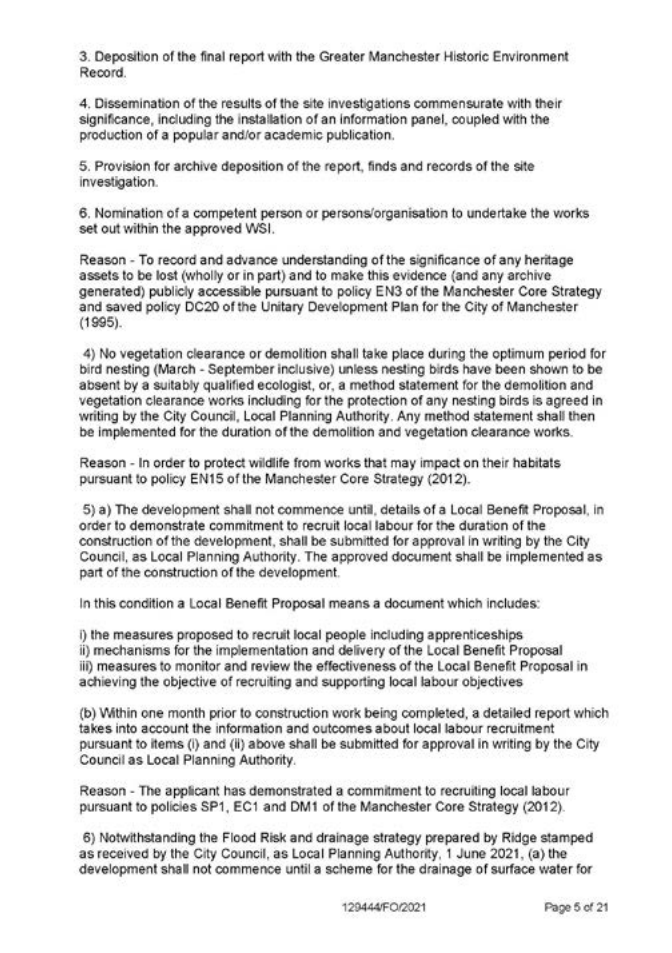
PLANNING CONSENT



3. Deposition of the final report with the Greater Manchester Historic Environment Record.

4. Dissemination of the results of the site investigations commensurate with their significance, including the installation of an information panel, coupled with the production of a popular and/or academic publication.

5. Provision for archive deposition of the report, finds and records of the site investigation.

6. Nomination of a competent person or persons/organisation to undertake the works set out within the approved WSI.

Reason - To record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) and to make this evidence (and any archive generated) publicly accessible pursuant to policy EN3 of the Manchester Core Strategy and saved policy DC20 of the Unitary Development Plan for the City of Manchester (1995).

4) No vegetation clearance or demolition shall take place during the optimum period for bird nesting (March - September inclusive) unless nesting birds have been shown to be absent by a suitably qualified ecologist, or, a method statement for the demolition and vegetation clearance works including for the protection of any nesting birds is agreed in writing by the City Council, Local Planning Authority. Any method statement shall then be implemented for the duration of the demolition and vegetation clearance works.

Reason - In order to protect wildlife from works that may impact on their habitats pursuant to policy EN15 of the Manchester Core Strategy (2012).

5) a) The development shall not commence until, details of a Local Benefit Proposal, in order to demonstrate commitment to recruit local labour for the duration of the construction of the development, shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved document shall be implemented as part of the construction of the development.

In this condition a Local Benefit Proposal means a document which includes:

i) the measures proposed to recruit local people including apprenticeships
ii) mechanisms for the implementation and delivery of the Local Benefit Proposal
iii) measures to monitor and review the effectiveness of the Local Benefit Proposal in achieving the objective of recruiting and supporting local labour objectives

(b) Within one month prior to construction work being completed, a detailed report which takes into account the information and outcomes about local labour recruitment pursuant to items (i) and (ii) above shall be submitted for approval in writing by the City Council as Local Planning Authority.

Reason - The applicant has demonstrated a commitment to recruiting local labour pursuant to policies SP1, EC1 and DM1 of the Manchester Core Strategy (2012).

6) Notwithstanding the Flood Risk and drainage strategy prepared by Ridge stamped as received by the City Council, as Local Planning Authority, 1 June 2021, (a) the development shall not commence until a scheme for the drainage of surface water for

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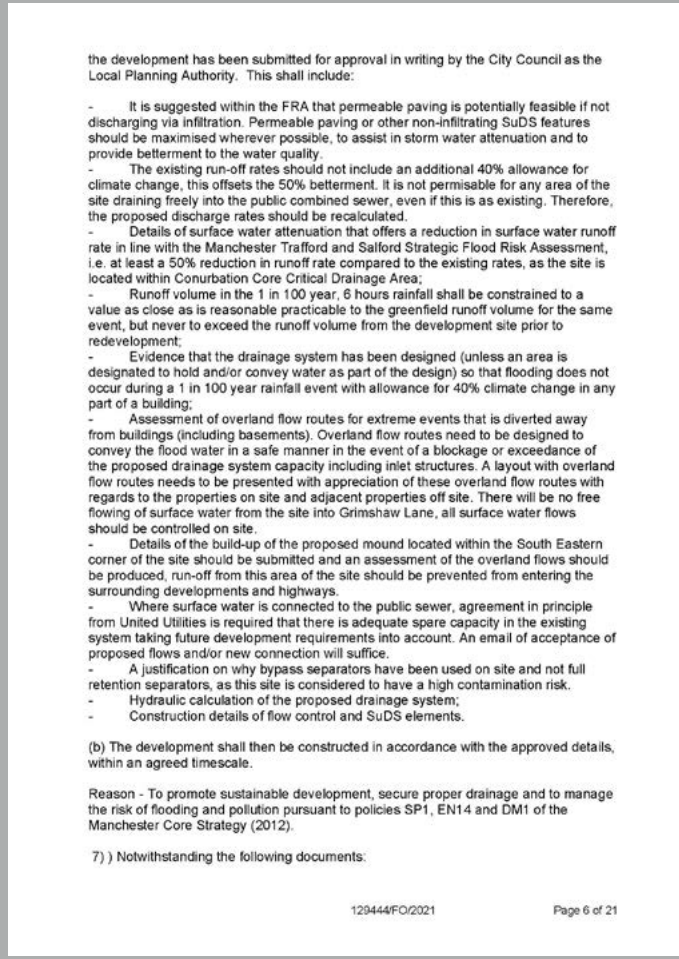

the development has been submitted for approval in writing by the City Council as the Local Planning Authority. This shall include:

- It is suggested within the FRA that permeable paving is potentially feasible if not discharging via infiltration. Permeable paving or other non-infiltrating SuDS features should be maximised wherever possible, to assist in storm water attenuation and to provide betterment to the water quality.
- The existing run-off rates should not include an additional 40% allowance for climate change, this offsets the 50% betterment. It is not permisable for any area of the site draining freely into the public combined sewer, even if this is as existing. Therefore, the proposed discharge rates should be recalculated.
- Details of surface water attenuation that offers a reduction in surface water runoff rate in line with the Manchester Trafford and Salford Strategic Flood Risk Assessment, i.e. at least a 50% reduction in runoff rate compared to the existing rates, as the site is located within Conurbation Core Critical Drainage Area;
- Runoff volume in the 1 in 100 year, 6 hours rainfall shall be constrained to a value as close as is reasonable practicable to the greenfield runoff volume for the same event, but never to exceed the runoff volume from the development site prior to redevelopment;
- Evidence that the drainage system has been designed (unless an area is designated to hold and/or convey water as part of the design) so that flooding does not occur during a 1 in 100 year rainfall event with allowance for 40% climate change in any part of a building;
- Assessment of overland flow routes for extreme events that is diverted away from buildings (including basements). Overland flow routes need to be designed to convey the flood water in a safe manner in the event of a blockage or exceedance of the proposed drainage system capacity including inlet structures. A layout with overland flow routes needs to be presented with appreciation of these overland flow routes with regards to the properties on site and adjacent properties off site. There will be no free flowing of surface water from the site into Grimshaw Lane, all surface water flows should be controlled on site.
- Details of the build-up of the proposed mound located within the South Eastern corner of the site should be submitted and an assessment of the overland flows should be produced, run-off from this area of the site should be prevented from entering the surrounding developments and highways.
- Where surface water is connected to the public sewer, agreement in principle from United Utilities is required that there is adequate spare capacity in the existing system taking future development requirements into account. An email of acceptance of proposed flows and/or new connection will suffice.
- A justification on why bypass separators have been used on site and not full retention separators, as this site is considered to have a high contamination risk.
- Hydraulic calculation of the proposed drainage system;
- Construction details of flow control and SuDS elements.

(b) The development shall then be constructed in accordance with the approved details, within an agreed timescale.

Reason - To promote sustainable development, secure proper drainage and to manage the risk of flooding and pollution pursuant to policies SP1, EN14 and DM1 of the Manchester Core Strategy (2012).

7)) Notwithstanding the following documents:

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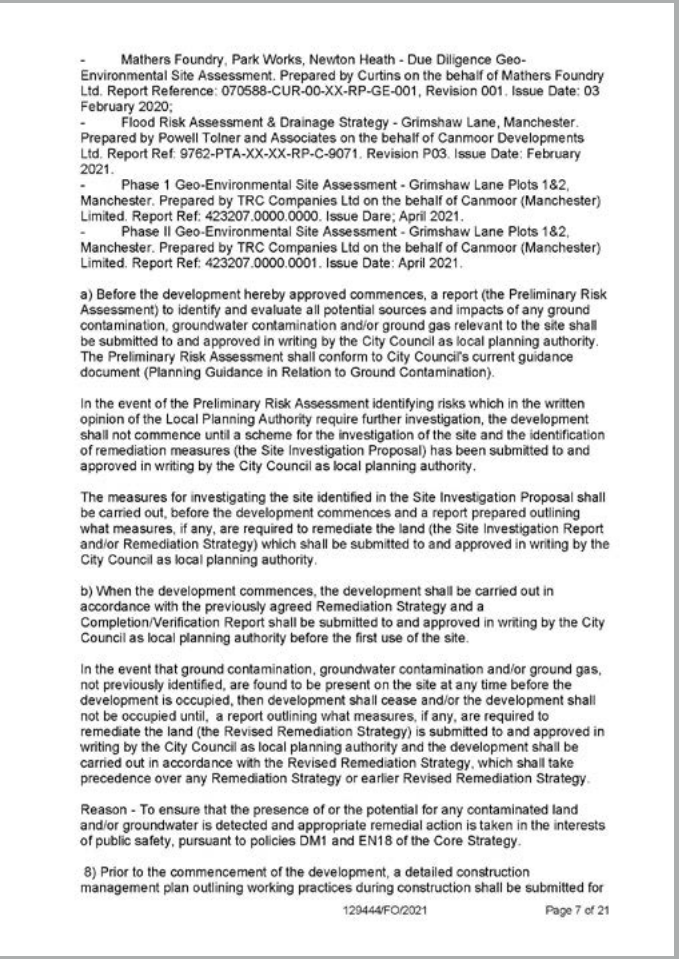

- Mathers Foundry, Park Works, Newton Heath - Due Diligence Geo-Environmental Site Assessment. Prepared by Curtins on the behalf of Mathers Foundry Ltd. Report Reference: 070588-CUR-00-XX-RP-GE-001, Revision 001. Issue Date: 03 February 2020;
- Flood Risk Assessment & Drainage Strategy - Grimshaw Lane, Manchester. Prepared by Powell Tolner and Associates on the behalf of Canmoor Developments Ltd. Report Ref: 9762-PTA-XX-XX-RP-C-9071. Revision P03. Issue Date: February 2021.
- Phase 1 Geo-Environmental Site Assessment - Grimshaw Lane Plots 1&2, Manchester. Prepared by TRC Companies Ltd on the behalf of Canmoor (Manchester) Limited. Report Ref: 423207.0000.0000. Issue Dare; April 2021.
- Phase II Geo-Environmental Site Assessment - Grimshaw Lane Plots 1&2, Manchester. Prepared by TRC Companies Ltd on the behalf of Canmoor (Manchester) Limited. Report Ref: 423207.0000.0001. Issue Date: April 2021.

a) Before the development hereby approved commences, a report (the Preliminary Risk Assessment) to identify and evaluate all potential sources and impacts of any ground contamination, groundwater contamination and/or ground gas relevant to the site shall be submitted to and approved in writing by the City Council as local planning authority. The Preliminary Risk Assessment shall conform to City Council's current guidance document (Planning Guidance in Relation to Ground Contamination).

In the event of the Preliminary Risk Assessment identifying risks which in the written opinion of the Local Planning Authority require further investigation, the development shall not commence until a scheme for the investigation of the site and the identification of remediation measures (the Site Investigation Proposal) has been submitted to and approved in writing by the City Council as local planning authority.

The measures for investigating the site identified in the Site Investigation Proposal shall be carried out, before the development commences and a report prepared outlining what measures, if any, are required to remediate the land (the Site Investigation Report and/or Remediation Strategy) which shall be submitted to and approved in writing by the City Council as local planning authority.

b) When the development commences, the development shall be carried out in accordance with the previously agreed Remediation Strategy and a Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority before the first use of the site.

In the event that ground contamination, groundwater contamination and/or ground gas, not previously identified, are found to be present on the site at any time before the development is occupied, then development shall cease and/or the development shall not be occupied until, a report outlining what measures, if any, are required to remediate the land (the Revised Remediation Strategy) is submitted to and approved in writing by the City Council as local planning authority and the development shall be carried out in accordance with the Revised Remediation Strategy, which shall take precedence over any Remediation Strategy or earlier Revised Remediation Strategy.

Reason - To ensure that the presence of or the potential for any contaminated land and/or groundwater is detected and appropriate remedial action is taken in the interests of public safety, pursuant to policies DM1 and EN18 of the Core Strategy.

8) Prior to the commencement of the development, a detailed construction management plan outlining working practices during construction shall be submitted for

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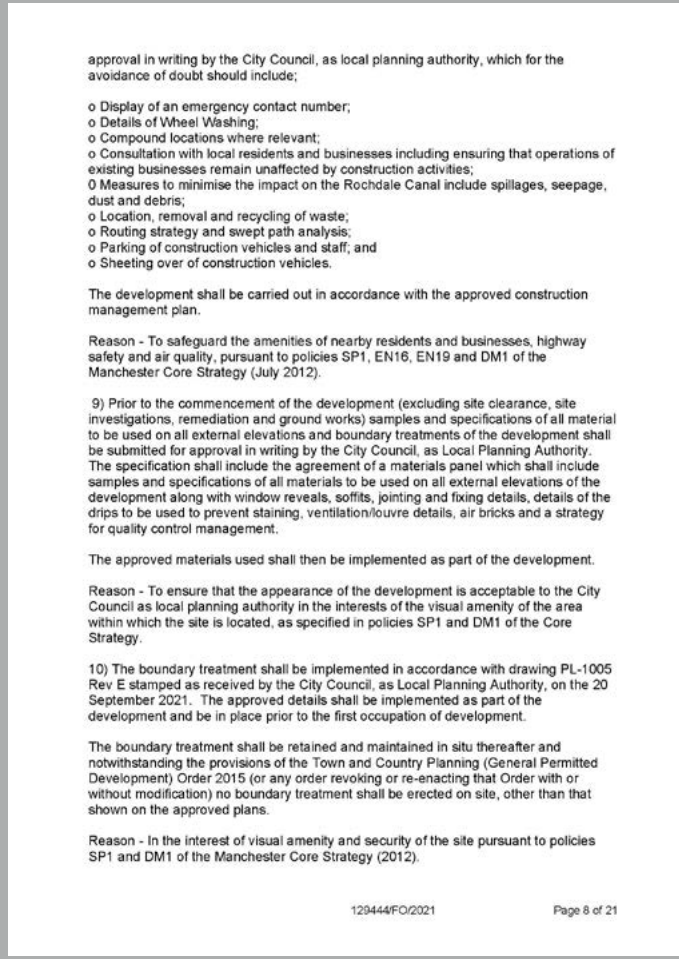

approval in writing by the City Council, as local planning authority, which for the avoidance of doubt should include;

o Display of an emergency contact number;
o Details of Wheel Washing;
o Compound locations where relevant;
o Consultation with local residents and businesses including ensuring that operations of existing businesses remain unaffected by construction activities;
0 Measures to minimise the impact on the Rochdale Canal include spillages, seepage, dust and debris;
o Location, removal and recycling of waste;
o Routing strategy and swept path analysis;
o Parking of construction vehicles and staff; and
o Sheeting over of construction vehicles.

The development shall be carried out in accordance with the approved construction management plan.

Reason - To safeguard the amenities of nearby residents and businesses, highway safety and air quality, pursuant to policies SP1, EN16, EN19 and DM1 of the Manchester Core Strategy (July 2012).

9) Prior to the commencement of the development (excluding site clearance, site investigations, remediation and ground works) samples and specifications of all material to be used on all external elevations and boundary treatments of the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The specification shall include the agreement of a materials panel which shall include samples and specifications of all materials to be used on all external elevations of the development along with window reveals, soffits, jointing and fixing details, details of the drips to be used to prevent staining, ventilation/louvre details, air bricks and a strategy for quality control management.

The approved materials used shall then be implemented as part of the development.

Reason - To ensure that the appearance of the development is acceptable to the City Council as local planning authority in the interests of the visual amenity of the area within which the site is located, as specified in policies SP1 and DM1 of the Core Strategy.

10) The boundary treatment shall be implemented in accordance with drawing PL-1005 Rev E stamped as received by the City Council, as Local Planning Authority, on the 20 September 2021. The approved details shall be implemented as part of the development and be in place prior to the first occupation of development.

The boundary treatment shall be retained and maintained in situ thereafter and notwithstanding the provisions of the Town and Country Planning (General Permitted Development) Order 2015 (or any order revoking or re-enacting that Order with or without modification) no boundary treatment shall be erected on site, other than that shown on the approved plans.

Reason - In the interest of visual amenity and security of the site pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012).

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11) The development hereby approved shall be carried out in accordance with the Energy Strategy by Hive, ref 20006.R.001 RevD stamped as received by the City Council, as Local Planning Authority, on the 28 June 2021 and Breeam pre-assessment 2018. The development shall achieve an overall a site wide reduction in CO2 equivalent to Part L (2010) of the Building Regulations of a minimum of 31.49% and a 'Very Good' BREEAM target.

A post construction review certificate/statement shall be submitted for approval, within a timescale that has been previously agreed in writing, to the City Council as Local Planning Authority.

Reason - In order to minimise the environmental impact of the development pursuant to policies SP1, T1-T3, EN4-EN7 and DM1 of the Core Strategy and the principles contained within The Guide to Development in Manchester SPD (2007) and the National Planning Policy Framework.

12) Prior to the first use of the development, details of the solar panels to units 4 and 5 as outlined in the Energy Strategy by Hive, ref 20006.R.001 RevD stamped as received by the City Council, as Local Planning Authority, on the 28 June 2021 shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include the siting and appearance of the panels including sections. The approved details shall be implemented prior to the first use of the development and thereafter retained and maintained in situ.

Reason - In order to minimise the environmental impact of the development pursuant to policies SP1, T1-T3, EN4-EN7 and DM1 of the Core Strategy and the principles contained within The Guide to Development in Manchester SPD (2007) and the National Planning Policy Framework.

13) Prior to the first occupation of the development, details of the implementation, maintenance and management of the sustainable drainage scheme shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt this shall include:

- Verification reporting providing photographic evidence of constriction;
- Management and maintenance plan for the lifetime of the development which shall include the arrangements adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.
- Timescale for implementation

The implementation of the management and maintenance plan shall be implemented in accordance with the timescales agreed and retained for as long as the development remains in use.

Reason - To manage flooding and pollution and to ensure that a managing body is in place for the sustainable drainage system and there is funding and maintenance mechanism for the lifetime of the development pursuant to policies SP1, EN14 and DM1 of the Manchester Core Strategy (2012).

14) (a) Notwithstanding drawing 20-93-05H stamped as received by the City Council, as Local Planning Authority, on the 25 August 2021, prior to the first use of this development, details of hard and soft landscaping treatments (including appropriate

samples of materials and specification and number and size of trees) shall be submitted to and approved in writing by the City Council as local planning authority.

(b) The approved scheme shall be implemented prior to the first use of the development. If within a period of 5 years from the date of the planting of any tree or shrub, that tree or shrub or any tree or shrub planted in replacement for it, is removed, uprooted or destroyed or dies, or becomes, in the opinion of the local planning authority, seriously damaged or defective, another tree or shrub of the same species and size as that originally planted shall be planted at the same place.

Reason - To ensure that a satisfactory landscaping scheme for the development is carried out that respects the character and visual amenities of the area, in accordance with policies SP1, EN9 and DM1 of the Core Strategy.

15) (a) Prior to the first use of the development, details of any externally mounted ancillary plant, equipment and servicing shall be submitted for approval in writing by the City Council, as Local Planning Authority. For the avoidance of doubt, externally mounted plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5 db (Laeq) below the typical background (La90) level at the nearest noise sensitive location.

(b) Prior to the first use of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. A verification report and measures shall be agreed until such a time as the development complies with part (a) of this planning condition.

Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority. Any measures shall thereafter retained and maintained in situ.

Reason - To minimise the impact of plant on the occupants of the development pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

16) (a) The buildings hereby approved, as indicated on drawings PL-1003 Rev J and PL-1004 Rev D stamped as received by the City Council, as Local Planning Authority, on the 20 September 2021 shall be acoustically insulated in accordance with the Noise Impact report prepared by Hoare Lea (Rev 2) stamped as received by the City Council, as Local Planning Authority 17 February 2021 and note from Hoare Lea stamped as received by the City Council, as Local Planning Authority, on 30 April 2021.

The approved scheme shall be implemented prior to the first use of the buildings hereby approved.

(b)Prior to the first use of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition. The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. A verification report and measures shall be

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agreed until such a time as the development complies with part (a) of this planning condition.

Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.

Reason: To ensure that there is no unacceptable noise outbreak from the development pursuant to policies SP1, H1 andDM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

17) Prior to any above ground works, a Noise Management Plan (NMP), to assess noise from all activities associated with the use of the loading bays, service yards and loading dock area, shall be submitted for approval in writing by the City Council as local planning authority. The approved plan, including any agreed mitigation measures, shall be implemented prior to the first use of the development and thereafter retained and maintained for as long as the development is in use.

Reason - To minimise the impact of the deliveries on nearby residential properties pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

18) Prior to the first use of the development hereby approved, details of the opening and delivery hours for each building hereby approved, as indicated on drawings PL-1003 Rev J and PL-1004 Rev D stamped as received by the City Council, as Local Planning Authority, on the 20 September 2021, shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved opening and delivery hours for each building shall thereafter be implemented and maintained for as long as the buildings remain in use.

Reason - In interests of residential amenity in order to reduce noise and general disturbance in accordance with saved policy DC26 of the Unitary Development Plan for the City of Manchester and policies SP1 and DM1 of the Core Strategy.

19) Prior to any above ground works, details the waste management arrangements for the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved details shall be implemented prior to the first use of the development and thereafter retained and maintained.

Reason - To ensure adequate refuse arrangement are put in place for the residential element of the development pursuant to policies EN19 and DM1 of the Manchester Core Strategy.

20) The development hereby approved shall include a building and site lighting scheme and a scheme for the illumination of external areas during the period between dusk and dawn. Full details of such a scheme shall be submitted for approval in writing by the City Council, as Local Planning Authority before the first occupation of the development hereby approved. The approved details shall be implemented in full prior to the first occupation of the development and shall remain in operation for so long as the development is occupied.

Reason - In the interests of amenity, crime reduction and the personal safety and to minimise the impact on the Rochdale Canal of those using the proposed development in order to comply with the requirements of policies SP1 and DM1 of the Core Strategy.

21) If any lighting at the development hereby approved, when illuminated, causes glare or light spillage which in the opinion of the Council as local planning authority causes detriment to adjoining and nearby existing residential properties, within 14 days of a written request, a scheme for the elimination of such glare or light spillage shall be submitted to the Council as local planning authority and once approved shall thereafter be retained in accordance with details which have received prior written approval of the City Council as Local Planning Authority.

Reason - In order to minimise the impact of the illumination of the lights on the occupiers of nearby residential accommodation, pursuant to policies SP1 and DM1 of the Core Strategy.

22) The development hereby approved shall be carried out in accordance with the Crime Impact Statement (version A) prepared by Design for Security at Greater Manchester Police stamped as received by the City Council, as Local Planning Authority, on the 5 May 2021. The development shall only be carried out in accordance with these approved details. The development hereby approved shall not be occupied or used until the Council as local planning authority has acknowledged in writing that it has received written confirmation of a Secured by Design accreditation.

Reason - To reduce the risk of crime pursuant to policies SP1 and DM1 of the Core Strategy and to reflect the guidance contained in the National Planning Policy Framework.

23) The development hereby approved shall be carried out in accordance with the Travel Plan prepared by Vectos stamped as received by the City Council, as Local Planning Authority, on the 17 February 2021.

In this condition a Travel Plan means a document which includes:

i) the measures proposed to be taken to reduce dependency on the private car by those working and visiting the development;
ii) a commitment to surveying the travel patterns of staff during the first three months of the first use of the building and thereafter from time to time
iii) mechanisms for the implementation of the measures to reduce dependency on the private car
iv) measures for the delivery of specified travel plan services
v) measures to monitor and review the effectiveness of the Travel Plan in achieving the objective of reducing dependency on the private car

Within six months of the first occupation of the development, a Travel Plan which takes into account the information about travel patterns gathered pursuant to item (ii) above shall be submitted for approval in writing by the City Council as Local Planning Authority. Any Travel Plan which has been approved by the City Council as Local Planning Authority shall be implemented in full at all times when the development hereby approved is in use.

Reason - To assist promoting the use of sustainable forms of travel for staff and visitors, pursuant to policies T1, T2 and DM1 of the Manchester Core Strategy (2012).

24) Prior to the first occupation of the development hereby approved the car parking layout as indicated on drawings PL-1003 Rev J and PL-1004 Rev D stamped as received by the City Council, as Local Planning Authority, on the 20 September 2021,

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shall be surfaced, demarcated and made available. The approved car parking layout shall be implemented and thereafter retained and maintained.

Reason - To ensure sufficient car parking is available for the development pursuant to policies SP1, T1, and DM1 of the Manchester Core Strategy (2012).

25) Prior to the first occupation of the development hereby approved, details of 86 cycle spaces for the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include details of the location and specification of stands including provision of locker and wash facilities.

Prior to the first use of the development, the cycle spaces shall be implemented and made available for as long as the development remains in use.

Reason - To ensure there is sufficient cycles provision at the development and the residents in order to support modal shift measures pursuant to policies SP1,T1, T2 and DM1 of the Manchester Core Strategy (2012).

26) Prior to the first use of the development hereby approved, a scheme of highway works shall be submitted for approval in writing by the City Council, as Local Planning Authority.

This shall include the following:

- Tactile paving and junction road markings to be installed;
- The Grimshaw Lane footway adjacent to the development is re-kerbed and re-paved;
- Re-validation of the SCTOO at the junctions of Monsall Road/Oldham Road and The Gateway/Oldham Road; and
- Improvements to street lighting along Grimshaw Lane.

The approved scheme shall be implemented and be in place prior to the first use of the development hereby approved and thereafter retained and maintained in situ for as long as the development remains in use.

Reason - To ensure safe access to the development site in the interest of pedestrian and highway safety pursuant to policies SP1, EN1 and DM1 of the Manchester Core Strategy (2012).

27) The development hereby approved shall can be occupied as Use Class E (g), B2 and B8 uses with ancillary offices (42782 sqm) only and for no other purpose of The Town and Country Planning (Use Classes) Order 1987 (or any order revoking and re-enacting that Order with or without modification). The first use of each building to be implemented shall thereafter be the permitted use of that unit

Reason - For the avoidance of doubt and in order to secure a satisfactory form of development due to the particular circumstance of the application site, ensuring the vitality of the units and in the interest of residential amenity, pursuant policy DM1 of the Core Strategy for Manchester.

28) Prior to the first occupation of the development a signage strategy development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The signage strategy will include timescales for implementation. The

approved strategy shall then be implemented for the development and used to inform any future advertisement applications for the building.

Reason - In the interest of visual amenity pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012).

29) Prior to the first occupation of the development hereby approved, details of the number, siting and appearance bird and bat boxes at the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved details shall be implemented and be in place prior to the first occupation of the development hereby approved and shall thereafter be retained and maintained in situ.

Reason - In the interest of providing habitats for birds to improve the ecological value of the application site pursuant to policies SP1 and EN15 of the Manchester Core Strategy (2012).

30) (a) Prior to the first use of the development, details, location and specification of 7 kw electric car charging points for 32% of the car parking spaces at the development shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved details shall then be implemented and be in place prior to the first use of the development and thereafter retained and maintained in situ.

(b) The number of fast charging electric car charging points for the development shall be reviewed annually as part of the travel plan requirements of condition 23 of this planning permission (commencing from the date of this permission). The survey shall be completed within 7 days of each annual review date and the results of the survey provided to the City Council within 7 days thereafter. Any additional charging points identified as part of this review shall be implemented within two months of approval of the annual agreement.

Reason - In the interest of air quality pursuant to policies SP1 and EN16 of the Manchester Core Strategy (2012).

31) (a) The development hereby approved shall be carried out in accordance with the Air Quality report Rev 2 prepared by Hoare Lea stamped as received by the City Council, as Local Planning Authority, on the 27 July 2021. Prior to the first use of the development hereby approved, details of measure to ensure that vehicle fleet associated with the development is compliant with the latest emissions standards together with details of the proportion of the vehicle fleet which are electric vehicle vehicles shall be submitted for approval in writing by the City Council, as Local Planning Authority.

The approved details shall be implemented as part of the development and thereafter retained and maintained as part of the development.

(b) The measures agreed in part (a) of this planning condition shall be reviewed annually as part of the travel plan requirements of condition 23 of this planning permission (commencing from the date of this permission). The survey shall be completed within 7 days of each annual review date and the results of the survey provided to the City Council within 7 days thereafter. Any additional measures identified as part of this review shall be implemented within two months of approval of the annual agreement.

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Reason - In the interest of air quality pursuant to policies SP1 and EN16 of the Manchester Core Strategy (2012).

32) All tree work should be carried out by a competent contractor in accordance with British Standard BS 3998 "Recommendations for Tree Work".

Reason - In order avoid damage to trees/shrubs adjacent to and within the site which are of important amenity value to the area and in order to protect the character of the area, in accordance with policies EN9 and EN15 of the Core Strategy.

33) In this condition "retained tree" means an existing tree, shrub or hedge which is to be retained within the Tree Survey Report By BEA Landscape RevA ref 2093/EH/TR001A dated 06/02/21, Tree survey plan by BEA Landscape ref 20-93-01C, Tree Constraints Plan 20-93-02B, Tree retention plan by BEA Landscape ref 20-93-03C, Tree protection plan by BEA Landscape ref 20-93-04A, Arboricultural Impact Assessment by BEA Landscape RevA ref 2093/EH/AIA001A dated 11/02/21, Arboricultural Method Statement by BEA Landscape RevA ref 2093/EH/1MS001A dated 11/02/21 stamped as received by the City Council, as Local Planning Authority, on the 17 February 2021; and paragraphs (a) and (b) below shall have effect until the expiration of 5 years from the date of the occupation of the building for its permitted use.

(a) No retained tree shall be cut down, uprooted or destroyed, nor shall any retained tree be topped or lopped other than in accordance with the approved plans and particulars, without the written approval of the local planning authority. Any topping or lopping approved shall be carried out in accordance with British Standard 5387 (Trees in relation to construction)
(b) If any retained tree is removed, uprooted or destroyed or dies, another tree shall be planted at the same place and that tree shall be of such size and species, and shall be planted at such time, as may be specified in writing by the local planning authority.
(c) The erection of fencing for the protection of any retained tree shall be undertaken in accordance with the approved plans and particulars before any equipment, machinery or materials are brought on to the site for the purposes of the development, and shall be maintained until all equipment, machinery and surplus materials have been removed from the site. Nothing shall be stored or placed in any area fenced in accordance with this condition and the ground levels within those areas shall not be altered, nor shall any excavation be made, without the written consent of the local planning authority.

Reason - In order avoid damage to trees/shrubs adjacent to and within the site which are of important amenity value to the area and in order to protect the character of the area, in accordance with policies EN9 and EN15 of the Core Strategy.

34) The buildings unit as shown on drawings PL-1003 Rev J and PL-1004 Rev D stamped as received by the City Council, as Local Planning Authority, on the 20 September 2021, shall remain as one unit and shall not be sub divided or amalgamated without the benefit of planning permission being secured.

Reason- In the interests of residential amenity and air quality pursuant to saved policy DC26 of the Unitary Development Plan for the City of Manchester and policies DM1, EN14 and SP1 of the Manchester Core Strategy.

35)) (a) Three months prior to the first occupation of the development, a Local Benefit Proposal Framework that outlines the approach to local recruitment for the end use(s), shall be submitted for approval in writing by the City Council, as Local Planning

Authority. The approved document shall be implemented as part of the occupation of the development.

In this condition a Local Benefit Proposal means a document which includes:

i) the measures proposed to recruit local people including apprenticeships
ii) mechanisms for the implementation and delivery of the Local Benefit Proposal
iii) measures to monitor and review the effectiveness of the Local Benefit Proposal in achieving the objective of recruiting and supporting local labour objectives

(b) Within 6 months of the first occupation of the development, a Local Benefit Proposal which takes into account the information and outcomes about local labour recruitment pursuant to items (i) and (ii) above shall be submitted for approval in writing by the City Council, as Local Planning Authority. Any Local Benefit Proposal approved by the City Council, as Local Planning Authority, shall be implemented in full at all times whilst the use is operation.

Reason - The applicant has demonstrated a commitment to recruiting local labour pursuant to policies SP1, EC1 and DM1 of the Manchester Core Strategy (2012).

36) Prior to the commencement of development (including demolition, ground works, vegetation clearance), an invasive non-native species protocol shall be submitted for approval by the City Council, as Local Planning Authority. This shall detail the containment, control and removal of Japanese Knotweed and Montbretia at the site. The development shall be carried out in accordance with the approved protocol.

Reason - In order to deal with the invasive non-native species at the application site pursuant to policy EN15 of the Manchester Core Strategy (2012).

37) Prior to any above ground works, details of an interpretation board to be installed adjacent to the Rochdale Canal shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include the siting, scale and appearance of the board together with details to be shown on the board to setting out the history of the canal and Park Engineering Works. The approved board shall be implemented prior to the first use of the development and thereafter retained and maintained in situ.

Reason - In the interest of providing a information about the historical use of the site and the connecting to the canal network pursuant to policies SP1, EN3 and DM1 of the Manchester Core Strategy (2012) and saved policy DC20 of the Unitary Development Plan for the City of Manchester (1995).

38) Prior to the commencement of the development, full details of earthworks, the construction of foundations and any new retaining structures on site shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include details and cross sections showing the relationship of such works to the Rochdale Canal. The development shall thereafter be carried out in accordance with the approved details.

Reason: In the interests of minimising the risk of creating land instability pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and the NPPF.

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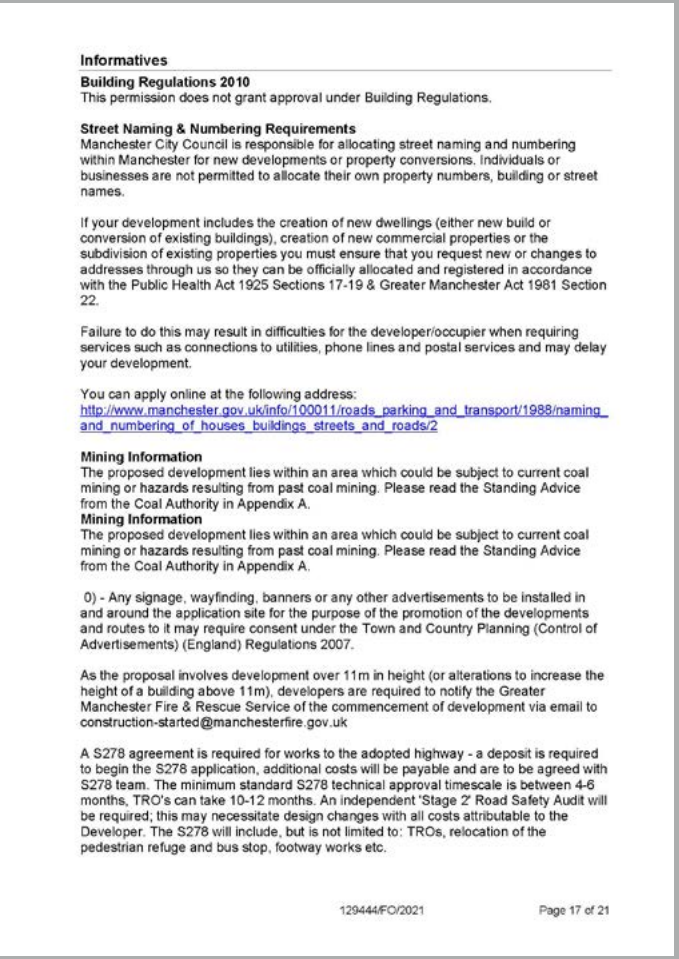

Informatives

Building Regulations 2010
This permission does not grant approval under Building Regulations.

Street Naming & Numbering Requirements
Manchester City Council is responsible for allocating street naming and numbering within Manchester for new developments or property conversions. Individuals or businesses are not permitted to allocate their own property numbers, building or street names.

If your development includes the creation of new dwellings (either new build or conversion of existing buildings), creation of new commercial properties or the subdivision of existing properties you must ensure that you request new or changes to addresses through us so they can be officially allocated and registered in accordance with the Public Health Act 1925 Sections 17-19 & Greater Manchester Act 1981 Section 22.

Failure to do this may result in difficulties for the developer/occupier when requiring services such as connections to utilities, phone lines and postal services and may delay your development.

You can apply online at the following address:
http://www.manchester.gov.uk/info/100011/roads_parking_and_transport/1988/naming_and_numbering_of_houses_buildings_streets_and_roads/2

Mining Information
The proposed development lies within an area which could be subject to current coal mining or hazards resulting from past coal mining. Please read the Standing Advice from the Coal Authority in Appendix A.
Mining Information
The proposed development lies within an area which could be subject to current coal mining or hazards resulting from past coal mining. Please read the Standing Advice from the Coal Authority in Appendix A.

0) - Any signage, wayfinding, banners or any other advertisements to be installed in and around the application site for the purpose of the promotion of the developments and routes to it may require consent under the Town and Country Planning (Control of Advertisements) (England) Regulations 2007.

As the proposal involves development over 11m in height (or alterations to increase the height of a building above 11m), developers are required to notify the Greater Manchester Fire & Rescue Service of the commencement of development via email to construction-started@manchesterfire.gov.uk

A S278 agreement is required for works to the adopted highway - a deposit is required to begin the S278 application, additional costs will be payable and are to be agreed with S278 team. The minimum standard S278 technical approval timescale is between 4-6 months, TRO's can take 10-12 months. An independent 'Stage 2' Road Safety Audit will be required; this may necessitate design changes with all costs attributable to the Developer. The S278 will include, but is not limited to: TROs, relocation of the pedestrian refuge and bus stop, footway works etc.

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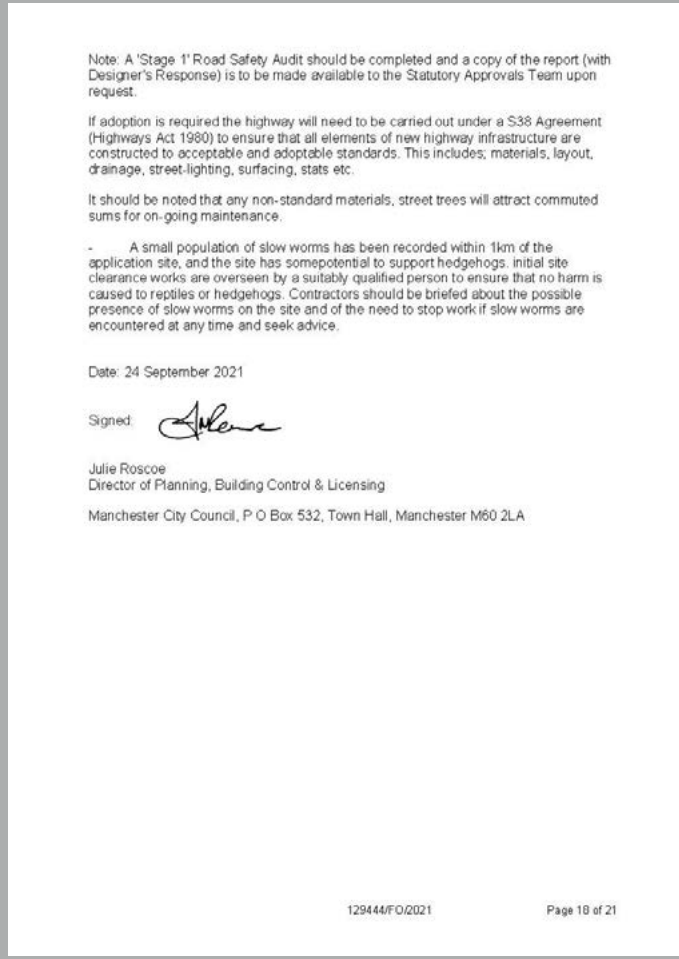

Note: A 'Stage 1' Road Safety Audit should be completed and a copy of the report (with Designer's Response) is to be made available to the Statutory Approvals Team upon request.

If adoption is required the highway will need to be carried out under a S38 Agreement (Highways Act 1980) to ensure that all elements of new highway infrastructure are constructed to acceptable and adoptable standards. This includes; materials, layout, drainage, street-lighting, surfacing, stats etc.

It should be noted that any non-standard materials, street trees will attract commuted sums for on-going maintenance.

- A small population of slow worms has been recorded within 1km of the application site, and the site has somepotential to support hedgehogs. initial site clearance works are overseen by a suitably qualified person to ensure that no harm is caused to reptiles or hedgehogs. Contractors should be briefed about the possible presence of slow worms on the site and of the need to stop work if slow worms are encountered at any time and seek advice.

Date: 24 September 2021

Signed:

Julie Roscoe
Director of Planning, Building Control & Licensing

Manchester City Council, P O Box 532, Town Hall, Manchester M60 2LA

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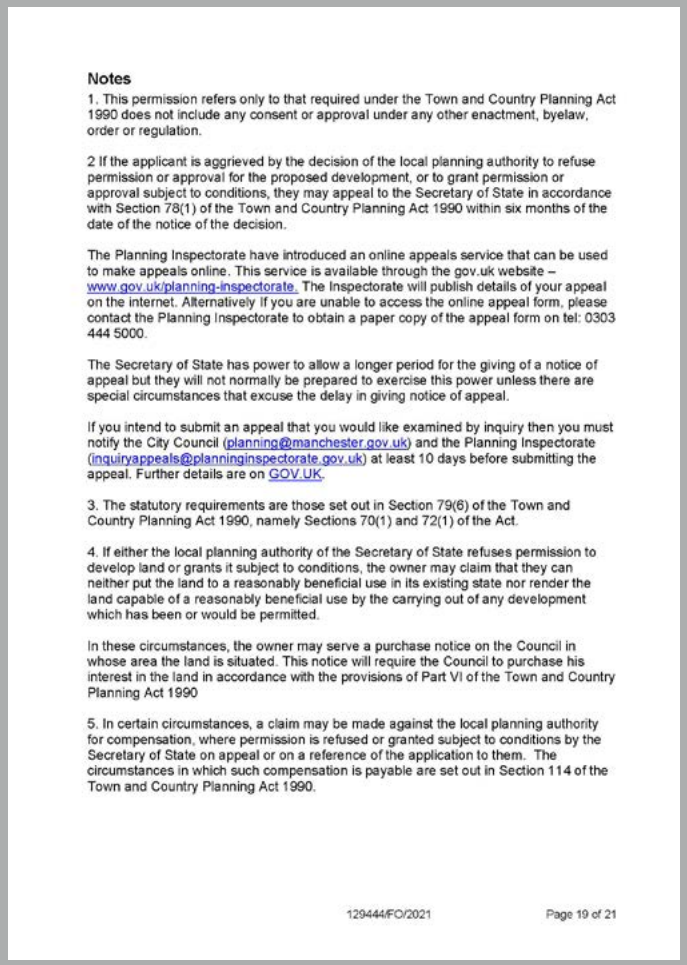

Notes

1. This permission refers only to that required under the Town and Country Planning Act 1990 does not include any consent or approval under any other enactment, byelaw, order or regulation.

2 If the applicant is aggrieved by the decision of the local planning authority to refuse permission or approval for the proposed development, or to grant permission or approval subject to conditions, they may appeal to the Secretary of State in accordance with Section 78(1) of the Town and Country Planning Act 1990 within six months of the date of the notice of the decision.

The Planning Inspectorate have introduced an online appeals service that can be used to make appeals online. This service is available through the gov.uk website – www.gov.uk/planning-inspectorate. The Inspectorate will publish details of your appeal on the internet. Alternatively if you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

The Secretary of State has power to allow a longer period for the giving of a notice of appeal but they will not normally be prepared to exercise this power unless there are special circumstances that excuse the delay in giving notice of appeal.

If you intend to submit an appeal that you would like examined by inquiry then you must notify the City Council (planning@manchester.gov.uk) and the Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) at least 10 days before submitting the appeal. Further details are on GOV.UK.

3. The statutory requirements are those set out in Section 79(6) of the Town and Country Planning Act 1990, namely Sections 70(1) and 72(1) of the Act.

4. If either the local planning authority of the Secretary of State refuses permission to develop land or grants it subject to conditions, the owner may claim that they can neither put the land to a reasonably beneficial use in its existing state nor render the land capable of a reasonably beneficial use by the carrying out of any development which has been or would be permitted.

In these circumstances, the owner may serve a purchase notice on the Council in whose area the land is situated. This notice will require the Council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990

5. In certain circumstances, a claim may be made against the local planning authority for compensation, where permission is refused or granted subject to conditions by the Secretary of State on appeal or on a reference of the application to them. The circumstances in which such compensation is payable are set out in Section 114 of the Town and Country Planning Act 1990.

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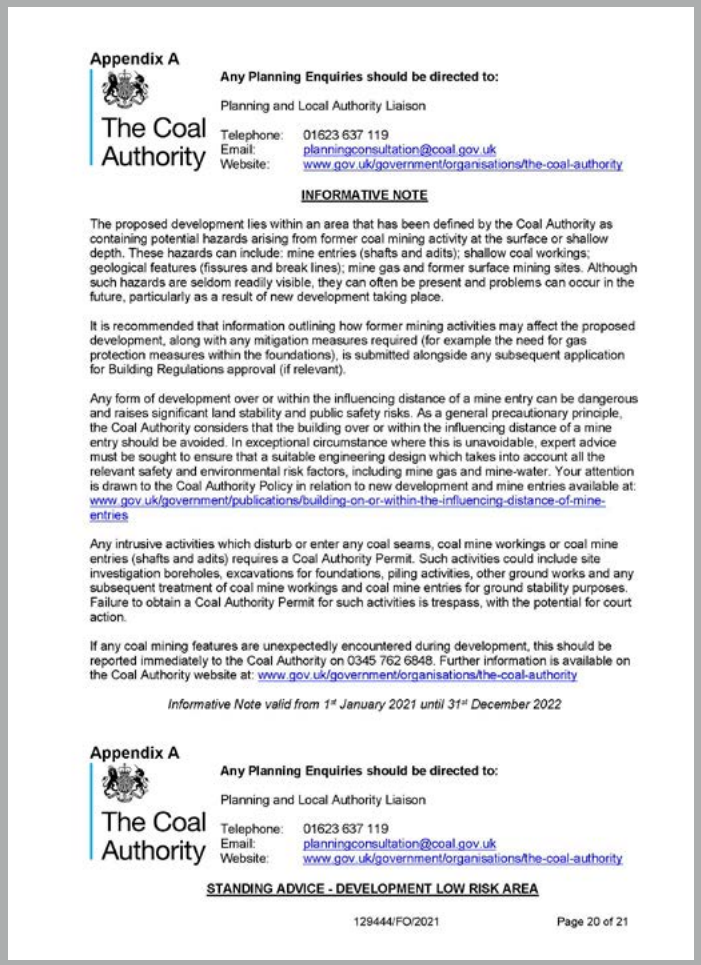

Appendix A

The Coal Authority

Any Planning Enquiries should be directed to:

Planning and Local Authority Liaison

Telephone: 01623 637 119
Email: planningconsultation@coal.gov.uk
Website: www.gov.uk/government/organisations/the-coal-authority

INFORMATIVE NOTE

The proposed development lies within an area that has been defined by the Coal Authority as containing potential hazards arising from former coal mining activity at the surface or shallow depth. These hazards can include: mine entries (shafts and adits); shallow coal workings; geological features (fissures and break lines); mine gas and former surface mining sites. Although such hazards are seldom readily visible, they can often be present and problems can occur in the future, particularly as a result of new development taking place.

It is recommended that information outlining how former mining activities may affect the proposed development, along with any mitigation measures required (for example the need for gas protection measures within the foundations), is submitted alongside any subsequent application for Building Regulations approval (if relevant).

Any form of development over or within the influencing distance of a mine entry can be dangerous and raises significant land stability and public safety risks. As a general precautionary principle, the Coal Authority considers that the building over or within the influencing distance of a mine entry should be avoided. In exceptional circumstance where this is unavoidable, expert advice must be sought to ensure that a suitable engineering design which takes into account all the relevant safety and environmental risk factors, including mine gas and mine-water. Your attention is drawn to the Coal Authority Policy in relation to new development and mine entries available at: www.gov.uk/government/publications/building-on-or-within-the-influencing-distance-of-mine-entries

Any intrusive activities which disturb or enter any coal seams, coal mine workings or coal mine entries (shafts and adits) requires a Coal Authority Permit. Such activities could include site investigation boreholes, excavations for foundations, piling activities, other ground works and any subsequent treatment of coal mine workings and coal mine entries for ground stability purposes. Failure to obtain a Coal Authority Permit for such activities is trespass, with the potential for court action.

If any coal mining features are unexpectedly encountered during development, this should be reported immediately to the Coal Authority on 0345 762 6848. Further information is available on the Coal Authority website at: www.gov.uk/government/organisations/the-coal-authority

Informative Note valid from 1st January 2021 until 31st December 2022

Appendix A

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The proposed development lies within a coal mining area which may contain unrecorded coal mining related hazards. If any coal mining feature is encountered during development, this should be reported immediately to the Coal Authority on 0345 762 6848.

Further information is also available on the Coal Authority website at:
www.gov.uk/government/organisations/the-coal-authority

This Standing Advice is valid from 1st January 2021 until 31st December 2022

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SPECIFICATION

hale

22c Leathermarket Street
London, SE1 3HP

T : +44 (0)20 7740 0950
E : rlee@hale-adm.com
W : www.hale-adm.com

PROJECT: **Phase 1 - Units 1-10**
Lowry Park, Grimshaw Lane
Manchester

PROJECT No: **20066/2.1**

DATE: **22/09/2023**

Revision	Notes	Date	Auth	App
01	Marketing Issue	17/08/2023	BG	HA
02	Units 1 & 2 Update	20/09/2023	BG	HA
03	Power Updated	22/09/2023	HA	HA

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Specification – Grimshaw Lane Manchester

Specification – Grimshaw Lane Manchester

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SPECIFICATION

1.0 INTRODUCTION

1.1 Project Description
Ten new light industrial/warehouse units with ancillary offices, car parking and service yard areas at Grimshaw Lane, Manchester.

1.2 Base Performance Specification
This performance specification is a description of the scope and quality of the work to be carried out. The quality of the work will be supported by identifiable samples where necessary during the construction of the works.

The work will be designed and constructed in accordance with the latest edition of relevant Acts of Parliament and Regulations made under current British BS or BS EN Codes of Practice and Standards, Fire Regulations, Health and Safety legislation, the regulations and standards of local Service Authorities and other enforceable regulations applicable to the design and construction of the development. Current shall mean current at the time of tender submission of the works.

Where any work cannot be benchmarked or assessed against current legislation, statutory provisions, local by-laws, or British Standards, Codes of Practice, or where the interpretation of same leads to ambiguity, then the work will comply with any appropriate manufacturers Trade Association, Federation Guidelines and, or practice notes, applicable to the work in question.

The new services installation will be designed, installed, controlled and commissioned in accordance with the current recommendations of the Chartered Institute of Building Services Engineers and the 17th Edition of the IEE Wiring Regulations.

The design and construction of any temporary works required will comply with BS 5975: 2019, and will be subject to the approval of the Structural Engineer and Building Control Officer / Approved Inspector.

1.3 Drawings

The following form part of and are to be read in conjunction with this specification.
(PL) Planning drawings – See drawing issue register attached as Appendix 01
(ER) Employer requirement drawings – See drawing issue register attached as Appendix 01

1.4 Building Regulations / Approved Inspector

1.4.1 **The Main Contractor shall:**

- Obtain approvals under the Building Regulations for any elements of work within this Building Contract requiring compliance. Submit to the Local Authority/Approved Inspector all relevant information on materials, fixings and the like together with calculations and other information necessary to confirm structural integrity and other compliance with Building Regulations.
- Employ a project Approved Inspector / Building Control Officer.
- Carry out any and all terms required by the Approved Inspector / Building Control Officer.
- Confirm resistance to the spread of flame, integrity of any compartmental walls or floors and protected areas and the fire-stopping of concealed spaces and joints between elements of structure conform to the Building Regulations.
- Carry out tests if required by the Local Authority or Approved Inspector.
- Produce and manage a Building Regulation tracker recording the iterative reviews and comments raised by the Approved Inspector and present this to the EA at each Project Team Meeting.
- Obtain the Building Regulations completion certificate on completion of the works.

2.0 SUMMARY OF CRITICAL DESIGN DATA

2.1 Floor Areas (Gross Internal Area)

Unit 1				
Warehouse Area (incl. office undercroft)	920	m^2	9,900	ft^2
Office Area (first floor only)	148.5	m^2	1,600	ft^2
Total GIA:	**1,068.5**	**m^2**	**11,500**	**ft^2**
Car Parking	11			
Level Loading	1			
Unit 2				
Warehouse Area (incl. office undercroft)	553	m^2	5,950	ft^2
Office Area (first floor only)	125	m^2	1,350	ft^2
Total GIA:	**678**	**m^2**	**7,300**	**ft^2**
Car Parking	7			
Level Loading	1			
Unit 3				
Warehouse Area (incl. office undercroft)	441	m^2	4,750	ft^2
Office Area (first floor only)	98	m^2	1,050	ft^2
Total GIA:	**539**	**m^2**	**5,800**	**ft^2**
Car Parking	5			
Level Loading	1			
Unit 4				
Warehouse Area (incl. office undercroft)	388	m^2	4,175	ft^2
Office Area (first floor only)	81	m^2	875	ft^2
Total GIA:	**469**	**m^2**	**5,050**	**ft^2**
Car Parking	4			
Level Loading	1			
Unit 5				
Warehouse Area (incl. office undercroft)	388	m^2	4,175	ft^2
Office Area (first floor only)	81	m^2	875	ft^2
Total GIA:	**469**	**m^2**	**5,050**	**ft^2**
Car Parking	4			
Level Loading	1			
Unit 6				
Warehouse Area (incl. office undercroft)	414	m^2	4,450	ft^2
Office Area (first floor only)	88	m^2	950	ft^2
Total GIA:	**502**	**m^2**	**5,400**	**ft^2**
Car Parking	5			
Level Loading	1			
Unit 7				
Warehouse Area (incl. office undercroft)	3,428	m^2	36,900	ft^2
Office Area (first floor only)	242	m^2	2,600	ft^2
Total GIA:	**3,670**	**m^2**	**39,500**	**ft^2**
Car Parking	53			

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Level Loading	2			
Dock Levellers	4			
Unit 8				
Warehouse Area (incl. office undercroft)	2,206.5	m^2	23,750	ft^2
Office Area (first floor only)	190.5	m^2	2,050	ft^2
Total GIA:	**2,397**	**m^2**	**25,800**	**ft^2**
Car Parking	**35**			
Level Loading	2			
Unit 9				
Warehouse Area (incl. office undercroft)	2,601	m^2	28,000	ft^2
Office Area (first floor only)	186	m^2	2,000	ft^2
Total GIA:	**2,787**	**m^2**	**30,000**	**ft^2**
Car Parking	**32**			
Level Loading	3			
Unit 10				
Warehouse Area (incl. office undercroft)	4,106.5	m^2	44,200	ft^2
Office Area (first floor only)	334	m^2	3,600	ft^2
Total GIA:	**4,440.5**	**m^2**	**47,800**	**ft^2**
Car Parking	75			
Level Loading	2			
Dock Levellers	4			
Total Development Area	**17,020**	**m^2**	**183,200**	**ft^2**

Areas are given in square metres and approximate square feet. 1m^2 = approximately 10.764 square feet. These areas have been calculated in accordance with the RICS Code of Measuring Practice, 6th Edition, RICS 2007 using the stated options NIA, GEA, and GIA.

Areas are measured from the inside of cladding rail to inside of cladding rail (finished decoration).

Areas are approximate and relate to the likely areas of the building at the current stage of the design. Any decisions to be made on the basis of these predictions, whether as to project viability, pre-letting, lease agreements and the like, should make due allowance for the following:
i) Design development
ii) Accurate site survey, site levels and dimensions
iii)Construction methods and building tolerances
iv) Local Authority consents.

2.2 Structural and Planning Grid

Structural grid to be designed and detailed to Engineer's design.
Roof pitch 6°

2.3 Haunch Heights

Units 1 to 6 clear height to underside of haunch: 8m
Units 7 to 10 clear height to underside of haunch: 10m

2.4 Offices and Cores

Ceiling heights (min clear)
Office / Ancillary Areas 2.7m
Toilets / Shower 2.40m

Reception 2.7m as indicated on drawings

2.5 Floor Loading

Warehouse/ Production:
Units 1 to 6 37.5 kN/m^2 (Power floated FM2 finish)
Units 7 to 10 50 kN/m^2 (power floated FM2 finish)
First Floor Offices (to all units): 4.0 kN/m^2 (plus 1.0kN/m^2)

2.6 Services

Electrical:
Units 1-10 1.5MVA total
Allocation of above power to each unit to be confirmed by the EA
Gas: Capped off supply to warehouse to Units 1 to 10.
Water: 32mm supply, to be confirmed by the EA.
Telecom: Ducts only

2.7 Exclusions (unless expressly specified elsewhere)

(a) Burglar alarm, telephone and data systems
(b) Estate Directory or general Signage (non-statutory). Unit numbers only provided.
(c) Statutory Services application for the meter only and supply agreements for permanent supplies. Payments by developer.
(d) Canteen/kitchen catering equipment, server and fittings
(e) Blinds
(f) Furniture, furnishings, blind fittings, shelving, process machinery of any type, racking, skips, vehicle wash equipment, fuel installation or any other item which has not been expressly detailed in this document.

3.0 SITE WORKS

3.1 Any existing services at the access points to the site shall be diverted or lowered as appropriate in conjunction with the statutory Authorities requirements.

3.2 The site to be covered by the new buildings and hard standings will be cleared of all undergrowth, buildings, hard standings and the like, and the site reduced or increased in level to ground floor formation level. Any works required to conform with Environmental Agency recommendations are to be carried out as part of this development including drainage and agreed slab levels.

3.3 Site clearance, where necessary, will be carried out including removing to Contractor's regulated tip off site. The formation level will be graded, trimmed and compacted prior to laying the appropriate sub-base.

3.4 The contractor will propose levels to which the formation will be taken over the area of the building, as shown on the drawings.

3.5 The whole of the substructure work will be carried out to the Structural Engineer's design and approved by the Local Authority. Concrete work will comply with BS EN 1992-1-1:2004 'The Structural Use of Concrete'.

3.6 All site works are to be undertaken in compliance with, and to ensure full regard for, the recommendations and requirements contained within PTA's Enabling Works Specification (current revision), along with the project Geo-technical and Environmental reports.

3.7 The design, construction, maintenance and dismantling of all temporary works will comply with BS 5975: 1996, and will be subject to the approval of the Structural Engineer and Building Control Officer.

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4.0 FIRE SAFETY

All systems, components and products where fire performance is relied upon shall be inspected on site in the specific conditions and environment within which they are used and independently verified. Suppliers site specific statements are to be provided confirming compliance with test data, relevant BRE agreement certification and the manufacturers technical guidance without qualification.

- Comply with all relevant Codes of Practice, Standards, Fire Regulations, Building Regulations and local Building Codes, Safety Regulations and any other regulations applicable to the installation, together with all relevant Statutory Rules, Regulations, Byelaws and other enforceable instruments applicable to both the design and execution of the works.
- Detail and coordinate all necessary fire/ smoke stops required by the Building Regulations where applicable, and the Relevant Authority.
- Where the Statutory Authorities and/ or Local/ National Fire Regulations require a specific fire resistance to elements of structure which form a junction with adjacent components, ensure that the junction is fire stopped to the same degree as the elements.
- Fire performance in terms of fire resistance of elements and structure shall be determined in accordance with BS EN 13501: Part 1:2018, as described in Appendix A of Approved Document B of the Building Regulations.
- Internal surfaces and linings requiring to be rated in terms of 'reaction to fire' shall be rated for performance by the method specified in BS EN 13501: Part 1:2018. Refer to Appendix B of the Approved Document B of the Building Regulations generally.
- Composite products and synthetic materials requiring to be fire rated shall be subject to the limitations specified in Approved Document B of the Building Regulations.
- Supply test certificates to demonstrate that all materials meet the above requirements.
- Ensure compliance with all Statutory Authorities' and Fire Services' requests/ recommendations and ensure discharge of relevant conditions in their respect.
- Insulation materials generally shall comply with all the recommendations of the LPC Design Guide for the Fire Protection of Buildings.
- In addition to the requirements of the Building Regulations and Approved Documents, insulation, binders or other materials used as the core in cladding assemblies and composite cladding panels or as insulation behind sealed or rainscreen cladding assemblies, to any building shall be non-combustible in accordance with BS EN ISO 1182. If materials are proposed for use in these applications that are unable to achieve this classification, fire risk assessments shall be submitted for review by an independent Fire consultant or other independent suitably qualified Competent Person. These materials shall not be used unless an independent Fire Consultant or independent Competent Person confirms acceptance of their use in writing.

5.0 SUBSTRUCTURE

5.1 Foundations

5.1.1 The foundations shall be designed having regard to the site ground conditions and in accordance with the recommendations of BS EN 1997 :2004. The structural concrete for foundations will be designed in accordance with BS EN 1992-2:2005:2007or BS EN 1992-1-1:2004.

5.1.2 Wherever possible, recycled materials will be used.

5.2 Perimeter Detail

5.2.1 Perimeter cladding running to ground level and fixed back to galvanised PFC or cladding rail with staking at 2m centres or pre-cast concrete ground beam to contractor's design.

5.3 Service Ducts

5.3.1 Ducts for all incoming and outgoing services, are to be properly built into the substructure and oversite slab with correct radius bends and puddle flanges to statutory approval. Entries to be made without adversely affecting the structural and water resistant qualities of the structure or any gas protection issues.

5.3.2 All ducts to be complete with pull cords for future installation. All ducts to be provided with the appropriate cover in accordance with the relevant British Standards and the Local Authority requirements.

5.3.3 Six (min 80mm dia) ducts to be provided to Unit 10, four ducts to each of Units 7, 8 & 9 and two ducts to each of Units 1 to 6. Two ducts suitable for access control system / CCTV wiring shall be provided to the service yard gates of all units linked back into the main office areas together with concrete bases for access control posts (exact access control system / CCTV requirements for units 1 to 6 to be agreed with EA). Positions are also to be agreed with the EA in connection with 1No. BT duct and 1No.spare data duct to be brought from the perimeter of each plot into the entrance lobby of the each Unit.

5.3.4 Install electric vehicle charging points in line with approved planning drawings. Future car charging ducts to be allowed. Ducting is to run from the car charging control centre. The location of the distribution board for the EVC system is to be agreed with the EA. Refer to the site plan for location of EVC pedestals. Refer to section 11.15

5.3.5 Future ducts to be supplied to allow for future car charging double charging.

6.0 SUPERSTRUCTURE

Note: To be read in conjunction with Structural Engineer design and specification.

6.1 Structural Frame

6.1.1 The structural frames to be constructed of steel framing, designed by the contractor. Pitch of roof shall not be less than 6°. The frames shall be constructed in single-span structural bays. The roofs are to have gable ends.

6.1.2 The structural frame will be designed in accordance with, and to ensure full regard for the recommendations and requirements contained within the structural engineer's Civil & Structural Performance Specification.

6.1.3 The structural steel frame will be a portal frame with a minimum clear height to underside of haunch as indicated on the design drawings, designed in accordance with BS EN 1993-1-3:2006 Eurocode 3 "Structural use of Steelwork in Building". Loading shall be in accordance with BS EN 1991-1-1:2002 Eurocode 1 "Loading for buildings" Steel sections to BS EN 10025-1:2004, BS EN 10025-2:2004 and BS EN 10210-1:2006. All work will be carried out in compliance with the National Structural Steelwork Specification 5th Edition.

6.1.4 Bracing locations shall be agreed with the Employers Agent and are to be kept free from open areas/internal stanchions, door, window openings and the like.

6.1.5 The frames and purlins will be capable of supporting a service loading arising from mechanical, sprinkler and electrical services/installation plant, equipment and fittings of 0.25kN/m² over the whole area of the roofs. The frames must also allow for the loading of the PV array. The office areas at first floor will be designed for a superimposed loading of 2.5kN/m² and an additional loading of 1.0kN/m² for partitions .

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6.1.6 Perimeter columns will be designed with pinned bases, except where required for Fire Collapse by Technical Standards, where the bolts and baseplates will be partially fixed in accordance with the "Steel Construction Institute" guidance SC1-P-087.

6.1.7 The steelwork will be designed and constructed to allow the building envelope to achieve compliance to specification item 7.1. All purlins and rails will be fixed in accordance with manufacturer's recommendations and will have a minimum thickness of 1.4mm to assist a positive cladding fixing. All sheeting rails within 2.0m of FFL to be installed 'toes down' to prevent build-up of debris.

6.1.8 All steelwork will shot blasted to BS 7079:2009, second quality, before painting with one coat of epoxy 2 pack high build zinc phosphate primer to a nominal dry film thickness of 75 microns to give 10 years life to first maintenance, finished colour to be light grey (or agreed with EA). Cold formed sections will be manufactured from hot dipped galvanised coil to BS EN 10346:2015 and BS EN 10143: 2006. Where steelwork is to be encased in masonry, it will receive two coats of bituminous paint. Where remedial works are required to webs, flanges, beams, columns or other steelwork that is visible in the completed building the whole area of the affected steelwork will be coated to provide a uniform appearance.

6.1.9 The steel frame shall be designed to meet the following standards: -

a) All cold rolled steel work shall have the standard Manufacturers galvanised finish to BS EN 10143:2006 or better;
b) All frame bolts are to be zinc plated or galvanised finish;
c) The roof and wind loads shall comply with BS EN 1991-1-7:2006 Eurocode 1 including allowance for drifting show
d) All doors shall be fully framed in steelwork, including all frame extensions necessary to support sectional door fittings and canopies;
e) Sags rods and tension wires shall be free from distortion, properly adjusted;
f) The structure must be capable of carrying signage and door frames in the positions shown on the drawings;
g) Columns and beams to be protected by Tacfire board fire protection / intumescent paint or equal where required by the Building Regulations. NB: Top coat paint to be coloured to match adjacent steel, fire stopping boards to be nominal white to match internal liner finish. If and where fire protection boarding is used, no diminution of critical site dimensions shall be allowed.
h) Intumescent Paint System to provide fire resistance to the satisfaction of the Building Control Officer / Approved Inspector with acrylic finish top-sealer coats. Top coat finish to be Normal (to match steelwork finish as per item 6.1.8). The definitions contained in BS EN ISO 4618 shall be used. Visual requirements shall be based upon samples submitted and agreed. Life expectancy to first maintenance for paint finishes shall be a minimum of 10-12 years. The paint manufacturer shall provide a written specification at the time of tender for recoating (by others) at the end of the life expectancy period.

6.2 Structural Floors

6.2.1 The construction shall incorporate a structural floor slab that will be inherently watertight.

6.2.2 The structural floors will be designed in accordance with, and to ensure full regard for the recommendations and requirements contained within the structural engineer's Civil & Structural Performance Specification.

6.2.3 The ground floor slab will be constructed of reinforced concrete / or fibre reinforced slab C32/40 ground slab with a power floated finish will be provided to the warehouse and undercroft area.

6.2.4 The ground floor slab will be designed in accordance with the recommendations of the Concrete Society Technical report 34 (TR34) 'Concrete Industrial Ground Floors' for two loading conditions, namely a minimum loading of 37.5KN/m2 for units 1 to 6 and 50KN/m2 for units 7 to 10 to all areas unless agreed otherwise and a leg rack loading of 70KN for all Unit, placed in a lift situation (with the centre line base plates placed minimum distance of 200mm away from floor joints) anywhere on the floor.

6.2.5 Joints will be kept to a minimum, but where necessary, they will be detailed in accordance with TR34 and

designed so that no vertical movement occurs across the joint. Day joints should be tied or reinforced with 10mm minimum thickness arris protection

6.2.6 The ground floor slab will be constructed so that the top surface tolerances comply with FM2 to all twelve Units as defined in Concrete Society Technical Report 34 Fourth Edition 2013, for free movement areas of the slab. A surface regularity survey is to be undertaken by an approved and agreed survey company to demonstrate compliance with this specification prior to completion.

6.2.7 The surface of the slab will be power floated, cured and sealed with proprietary acrylic based hardener Sika Proseal or similar approved and will be dust free. The floor shall not be trafficked for a minimum of four days following the sealing operation and in line with the specialist flooring contractor's recommendations. Wearing surface shall have a minimum abrasion resistance of AR2 in accordance with BS 8204-2:2003 + A2:2011 and confirmed by independent testing. If required shrinkage cracking shall be induced joints at no less than 6 metre centres cut to an agreed regular pattern.

6.2.8 The ground floor slab is to be insulated where required by Part L of the current Building Regulations.

6.2.9 The first floor office slabs will be constructed of an in-situ concrete floor slab with a power floated finish or precast concrete planks with a screed finish to achieve a floor loading of 4.0KN/m2 plus 1KN/m2.

6.2.10 Floor Screeds
Location: staircases, toilet cores and lobbies (to relevant units)
Screed, all preparatory work and application shall be in accordance with the manufacturers' instructions.
Floating 85mm reinforced screed to BS 4483:2005 laid on and including 65mm insulation board. Works to include all required expansion and contraction joints.
Accessories: include steel angle edges to all unsupported perimeters/ interfaces with raised flooring.
Planted stainless steel flats shall be fixed to screed angles to allow finishing to tiling/carpets above where visible in the finished works.

7.0 EXTERNAL FABRIC

U-Values to achieve minimum as below and in line with the energy strategy report (Hive Consultants - Development Energy Statement - latest revision D) for this project:
Fabric Values (W/m2.K) U-Value
Roof 0.15W/m$_2$K
External wall 0.20W/m$_2$K
Ground floor 0.18W/m$_2$K
Windows 1.50W/m$_2$K
Roof lights 1.50W/m$_2$K
Personnel doors 1.5W/m$_2$K
Vehicle doors 1.3W/m$_2$K
Air permeability 3 m$_3$/hm$_2$@50Pa

7.1 Wall Cladding

7.1.1 Generally
Profiled steel cladding to elevations to be designed, detailed and installed to accord with the requirements of the stated performance specification to meet the requirements of the Building Regulations and to the satisfaction of The Building Control Officer.
Should a factory built sandwich construction be used then a Loss Prevention Council/Loss Prevention Standard (LPC/LPS) approved core material will be used.

7.1.2 Wall cladding

Type:	Euroclad or similar approved.
Product ref:	MW5CS Wall Profile (laid horizontally)
Material:	Colorcoat Prisma® with Confidex® Guarantee including cover for cut

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edges for the entire guarantee period. Substrate to be Galvalloy® 95% zinc / 5% aluminum eutectic alloy, hot-dip metallic coated steel substrate grade S220GD+ZA, and coating weight ZA255 to BS EN 10326: 2015

Finish Side 1: Colorcoat Prisma® high performance pre-finished steel with nominal organic coating thickness 200µm with Scintilla® emboss with a nominal depth of 40µm and maintenance and inspection free Confidex® Guarantee.
Colour Side 1: Sirius (RAL 9006), metallic finish
Thickness: Nominal 0.7mm
Finish Side 2: High Performance Polyester Standard Backing Coat
Colour Side 2: Light Grey

7.1.3 Wall cladding at high level

Type: Euroclad or similar approved.
Product ref: 32/1000 reversed wall cladding (laid horizontally)
Material: Colorcoat Prisma® with Confidex® Guarantee including cover for cut edges for the entire guarantee period. Substrate to be Galvalloy® 95% zinc / 5% aluminum eutectic alloy, hot-dip metallic coated steel substrate grade S220GD+ZA, and coating weight ZA255 to BS EN 10326: 2015
Finish Side 1: Colorcoat Prisma® high performance pre-finished steel with nominal organic coating thickness 200µm with Scintilla® emboss with a nominal depth of 40µm and maintenance and inspection free Confidex® Guarantee.
Colour Side 1: Orion (RAL 9007), metallic finish
Thickness: Nominal 0.7mm
Finish Side 2: High Performance Polyester Standard Backing Coat
Colour Side 2: Light Grey

7.1.4 Wall cladding to above loading doors and office windows

Type: Euroclad or similar approved.
Product ref: 13.5/3 Sinusiodal Steel profile (laid horizontally)
Material: Colorcoat Prisma® with Confidex® Guarantee including cover for cut edges for the entire guarantee period. Substrate to be Galvalloy® 95% zinc / 5% aluminum eutectic alloy, hot-dip metallic coated steel substrate grade S220GD+ZA, and coating weight ZA255 to BS EN 10346: 2015
Finish Side 1: Colorcoat Prisma® high performance pre-finished steel with nominal organic coating thickness 200µm with Scintilla® emboss with a nominal depth of 40µm and maintenance and inspection free Confidex® Guarantee.
Colour Side 1: Zeus, metallic finish
Thickness: Nominal 0.7mm
Finish Side 2: High Performance Polyester Standard Backing Coat
Colour Side 2: Light Grey

7.1.6 Steel Lining Sheets (internal - all cases)

Type: Euroclad or similar approved.
Product reference: 19/1000 Liner
Finish Side 1: Colorcoat High Reflect. Substrate must be Z275 Galvatite hot-dip zinc coated steel to BS EN 10346:2015
Colour Side 1: Bright White.
Thickness: Metal thickness to be a nominal 0.4mm (including zinc) and of a Fe E220 G quality.

7.1.7 External flashing and trims

Type: Euroclad or similar approved
Material: Colorcoat Prisma® with Confidex® guarantee including cover for cut edges for the entire guarantee period. Substrate to be Galvalloy® hot-dip

metallic coated steel substrate grade S220GD+ZA, and coating weight ZA255 to BS EN 10326: 2015

Finish Side 1: Colorcoat Prisma® high performance pre-finished steel with nominal organic coating thickness 200 µm with Scintilla® emboss with a nominal depth of 40µm and maintenance free Confidex guarantee..
Colour Side 1: Zeus (RAL7022 - tbc), to match colour side 1 finish of item 7.1.4
Thickness: 0.7mm

7.2 Roof Cladding

7.2.6 Roof cladding profiled sheeting

Type: Euroclad or similar approved.
Product Ref: 32/1000 Forward Profile.
Material: Colorcoat HSP200® Ultra Confidex® Guarantee including cover for cut edges for the entire guarantee period. Substrate to be Galvalloy® 95% zinc / 5% aluminum eutectic alloy, hot-dip metallic coated steel substrate grade S220GD+ZA, and coating weight ZA255 to BS EN 10346: 2015
Finish Side 1: Colorcoat HSP200® Ultra high performance pre-finished steel with nominal organic coating thickness 200µm with Scintilla® emboss with a nominal depth of 40µm and maintenance and inspection free Confidex® Guarantee.
Colour Side 1: Goosewing Grey BS10A05
Thickness: Nominal 0.7mm
Finish Side 2: High Performance Polyester Standard Backing Coat
Colour Side 2: Light Grey

To comply with BS EN 1991-1-4:2005

The whole roof construction is to achieve required U-value as per item 7.0 (External Fabric) within this document with an integral, continuous and completely sealed vapour barrier, fixed strictly in accordance with the manufacturer's recommendations.

A white polyester coated liner panel to form the internal surface of the roof construction.

All gutters to be insulated, thermally broken and plastisol coated (internally and externally). 0.7mm thick galvanised steel with matching brackets and outlets. Gutter size and capacity is to be designed by the cladding sub-contractor.

Units 1 to 10 are to use gravity drainage to contractors design.

All gutters to be laid flat, not to falls.

A design method statement and risk assessment will be provided at the start of the construction phase of the project for the maintenance of the roof and gutters. This will be incorporated into the Health and Safety File.

7.3 Rooflights

Part of Roof Cladding shall be site assembled in plane triple skin translucent roof lights of a pattern to match the cladding profile.

Rooflight type: Euroclad or similar approved profiled in plane triple skin GRP lights. Required minimum U-value as per item 7.0 (External Fabric) within this document and rooflights not susceptible to UV degradation.
Liner: MW5 profile, Class 1/SAA, 3kg/m2
Area: To be equal to 10% of production floor area
Note: 32/1000 forward special metal sheets should be used upslope of Forward Special rooflights.
The rooflight assembly described fitted correctly is expected to achieve a Class B fragility rating for 25

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years.

Rooflights are to be designed, or provided with, protection to prevent collapse under the weight of a person or falling body. All rooflights are to be tested as part of roof assembly and to be a minimum Class B non-fragile ACR[M] 001:2005.

All rooflights are to be provided with internal trim flashings. No insulation is to be visible from inside the warehouse/ unit. NB: Rooflights to be designed to align centrally between portal frames where possible.

During construction phase Class B fragility is to be achieved at liner level once fixed.

7.4 PV provision on roof

PVs to be provided on roofs of all Units if required in line with the energy strategy report, ideally positioned above office area footprint - for detail refer to clause 11.16.

7.5 Mansafe System

Mansafe fall restraint system. Stainless steel cable system on stainless steel pedestal support brackets with structural fixings to specialist sub-contractor design.
Location (roof), layout and configuration as indicated on the sub-contractors design drawings.
Include for testing by an accredited testing specialist or provide independent certified test data to demonstrate compliance with the Specification. On completion of the installation, the installer shall carry out all tests to confirm the system's competence in accordance with BS EN 795:2012 anchorage system and issue a test certificate and two copies of user instructions and maintenance manuals for the overall installation. The system shall include roof level signage, restraint test certificates, harness & lanyards as required for safe use by trained personnel only. The design proposals shall be to the satisfaction of the Principal Designer and the Health & Safety Executive. ***CURRENTLY UNDER REVIEW.***

7.6 Cladding Generally

7.6.1 Fixings / Fasteners

Fasteners (Supplied by Euro Clad Ltd or similar approved): Fixing to Cold Rolled purlin from 1.5 - 3.5mm thick:
Spacer to sheeting rail: Standard method: Stainless steel self-driller Hex head min 5.5mm dia x min 25mm long and washer 2 x per bracket diagonally opposite (4 x per bracket for bracket heights =/> 260mm).

7.6.2 Design

Cladding/ covering system: Complete detailed design and submit before commencement of fabrication.
Standard: To BS 5427:2016
Related works: Coordinate in detailed design.

7.6.3 Thermal Insulation

Complete thermal design of the cladding / covering system to avoid excessive thermal bridging

7.6.4 Thermal Performance / Bridging

Standard: To BS EN 13162:2012
Glass Fibre Quilt insulation (thermal transmittance value Lambda 90/90 0.040 W/mK)
Thickness (minimum): to achieve required minimum U-values as per item 7.0 (External Fabric) within this document - roof and external wall (3 dimensionally Modelled on software fully compatible with BS EN ISO 10211:2017. The calculations have been carried out in accordance with EN ISO 6946:2017).
Placement: Continuous and lightly compressed between outer and lining sheets. Secure to prevent

future movement or dislodgement.

*For fire rated system use Knauf ECOSE insulation in single roll thicknesses (max 220mm thick), ensure roll edges are lapped to ensure no gaps.

7.6.5 Vapour Control Layers

Building Humidity Classes to BS EN ISO 13788:2012
Class 1 & 2: Sealed Lining as per Clause 241.

Class 3 or 4: Sealing to liners may be omitted and a separate VCL included as below:
Material: Euroclad Elite VCL
Vapour resistance (minimum): 500 MNs/g.
Tape: Euroclad Elite VCL Sealing Tape
Size (width and thickness): Min: 12mm x 1.5mm
Position: To warm side of thermal insulation

Class 5: Material: Euroclad Elite HH VCL
Vapour resistance (minimum): 30,000 MNs/g.
Tape: Euroclad Elite HH VCL Sealing Tape
Size (width and thickness): Min: 15mm x 2mm
Position: To warm side of thermal insulation

All VCLs –
Laps: Not less than 150 mm, seal with tape. Use 2 rows for Class 5 applications. Achieve full bond.
Continuity: No breaks and with the minimum of joints.
Penetrations and abutments: Seal to vapour control membrane with tape. Achieve full bond.
Repairs and punctures: Seal with lapped patch of vapour control membrane and continuous band of sealant tape along edges.

7.7 Walls to the Loading Dock Areas

The walls to the loading dock areas are to be constructed of pre-formed pre-cast concrete. Prowall or Dockwall with 100mm (tbc) insulation core to achieve required minimum U-values as per item 7.0 (External Fabric) within this document - external wall. Refer to drawings for details.

7.8 Loads

The cladding will be designed to comply with wind loads calculated in accordance BS EN 1991-1-1:2015 Eurocode 1.

7.9 Warranty / Guarantee

Tata Steel Confidex Sustain® offers the first Carbon Neutral building envelope in the world measuring and offsetting its impact cradle to cradle. i.e. manufacture through to installation, use and end of life. Confidex Sustain® is available with Colorcoat HPS200® Ultra and Prisma® when specified as part of a Colorcoat® assessed cladding or roofing system.

A Tata Steel Confidex 'Sustain' guarantee is to be provided upon completion of the works. Should the roof require a PV array the applicable Colorcoat HPS200 Ultra warranty provided by Tata Steel UK Limited will be required.

7.10 Certificates

Apply at the outset of the project for registration with Tata Steel Confidex 'Sustain' and upon completion provide the Employers Agent with Tata Steel Confidex 'Sustain' certificates detailing how the carbon omissions have been offset.

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7.11 Approved Document Part B Boundary Condition

Where required by the Building Regulations to provide fire protection to any external wall, then the construction will be upgraded to a firewall status in accordance with the structural engineers and cladding manufacturer's recommendations.

7.12 Surface Spread of Flame

The internal lining to any cladding is to be Class O rating for surface spread of flame as tested to BS 476- 7:1997.

7.13 Blockwork

Internal blockwork walls where required, are to be locally constructed of standard 7N/mm^2 100mm, 140mm or 200 mm dense paint grade concrete blockwork to BS EN 772-2:1998, with adequate head restraint.

Adequate raised blockwork wall shall be locally constructed to provide a suitable substrate to all incoming service panels, distribution boards etc in the area indicated for the switch gear on the design drawings, the raised blockwork shall be a minimum of one structural bay. The Contractor shall provide a fully co-ordinated elevation for agreement with the EA of all service fittings to ensure a neat and serviceable finish is achieved in this location. Mortar to BS EN 1996-1-1:2005 Eurocode 6 Group 3.

Cavity Barriers are to be provided as required by Building Control.
Blockwork is to be neatly pointed and is to have a uniform appearance in a/w the benchmark sample.
Movement joints to be allowed in accordance with manufacturer's recommendations and to be included with a polyethylene strip at the top junction with slabs and beams.
Corofil C144 to be used at this joint for fire compartment wall.
All movement joints to have sealant finish where exposed.

Top of the blockwork wall is to be restrained where required with steel channels or special fixings/dowel to the contractor's design. All door opening lintels to be precast concrete to the contractor's design.

7.14 Office and Entrance Glazing

7.14.1 Glazing systems are to comply with the latest edition of the Centre for Window and Cladding Technology (CWCT) standard for systemised building envelopes, test methods for curtain walling.

Senior Architectural Systems curtain wall system with polyester powder coated capping to address the requirements of Part L and the Energy Report by Hive.

Location:	Offices and main entrance
Type:	Double glazed, pressure equalized, mullion drained and thermally broken aluminium.
Manufacturer:	Senior Architectural Systems, sections to BS 4873: 2009 and designed to meet the requirements of BS EN 1027:2016.
Finish:	Powder Coated Anthracite (RAL: 7016).
Accessories:	Note requirement for intermediate steel support sections within the double height entrance spaces using an RHS paint finished to match the curtain wall framing.

Insulation spandrels to the entrance shall be glazed into the system and fully coordinate and make provision for the entrance canopy supporting arms including addressing any cold bridging. Apertures in the spandrel panels shall be site measured, factory cut and sealed prior to delivery. Satin stainless steel letter plate (300x75mm) within entrance double glazed unit.

Glass to new curtain walling to be Pilkington Suncool 66/33 clear,16mm Argon filled cavity and 6mm

clear toughened inner with Ritec self-clean coating on the external surface of the front pane (centre pane value = 1.0W/m K or in line with item 7.0 (External Fabric) within this document.

Look-a-like glazing to be Pilkington Suncool 66/33 toughened outer pane with Ritec self-clean coating, 16mm air-filled cavity and 6mm toughened inner pane with graphite BS18B29 ceramic enamel coating to inner face, backed with foil-backed insulation.

(centre pane value = 0.35W/Mk or in line with item 7.0 (External Fabric) within this document.

Glass to BS 952-1 1995 and the relevant parts of and the relevant parts of BS EN 572-1 2012

All glass to be laminated or heat soaked toughened to suit location, hermetically sealed double glazed and fixed in accordance with BS 6262-4: 2018. Unit to be 6:12:6 minimum or to suit pane size, with toughened/laminated glass to BS 6206 for situations required for safety and security.
All glass is to be heat soaked toughened and tested to reduce possibility of spontaneous breakage. The glazing shall be hose tested on site in a/w CWCT Technical Note TN41.
The system is to be designed to a wind pressure of 600pa or greater. On site dynamic water test to be allowed for, refer Section 14.

7.14.2 General
Provide test reports from an independent testing Agency verifying the performance criteria of the various systems used.

7.14.3 Air Permeability Tests
Testing shall be in accordance with CWCT Test Methods for Curtain walling and windows and windows and BS EN 1027:2016 and BS EN 1026:2016 to a test pressure class of 600 Pa as defined in BS 6375-1:2015.

7.14.4 CWCT 'Standard for Systemised Building Envelopes'
General: unless specified or agreed otherwise comply with:
Part 2 – Loads, Fixings and Movement
Part 3 – Air, Water & Wind Resistance
Part 4 – Operable components, additional elements & means of access.
Part 5 – Thermal, moisture & acoustic performance
Part 6 – Fire performance
Part 7 – Robustness, durability, tolerances & workmanship.
Project performance requirements specified in this subsection: Read in conjunction with CWCT performance criteria.

7.14.5 Integrity
Requirement: The curtain walling and windows must resist wind loads, dead loads and design live loads, and accommodate deflections and movements without damage.
Design wind pressure: Calculate in accordance with BS EN 1991-1-4/2005 Eurocode 1,
Standard Method:
Refer to the project structural engineer'
Basic wind speed (Vb):
Altitude factor (Sa):
Direction factor (Sd):
Seasonal factor (Ss): 1.
Probability factor (Sp): 1.
Terrain and building factor (Sb):
Size effect factor (Ca): 1.
External pressure coefficients (Cpe):
Internal pressure coefficients (Cpi):
Dominant Opening:
Hard Body Impact Loads
Location & Category – Curtain walling and windows to BS EN 14019:2016
Soft Body Impact Loads – Curtain walling and windows to BS EN 14019:2016
Location & Classification:

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Soft Body Impact Loads – Glass to BS EN 12600:2002

7.14.6 Structural Performance Requirements
Comply with BS 8200 and the recommendations of the Centre for Window Cladding (CWCT) Standard for Curtain walling and windows.

7.14.7 Structural Deflection
The allowable deflection of any element, when carrying full design loads, not to exceed 15mm or 1/125 for single glazing and 15mm or 1/175 for double glazing of its clear span in a direction normal to the plane of that element, whichever is the lesser value.
No element to deflect under loading in any way that is detrimental to any other element of the works or adjacent structure.
All components, couplings and fixings to be capable of accommodating all of the above deflection without permanent distortion, deformation or failure.
Accommodate defined differential structural movements arising from any loads imposed by adjacent structures.
Calculations of deflections for structural aluminium to recognise criteria contained in BS 8118:1991-1-1:2007 limiting deflections.

7.14.8 Design Loads
Withstand loads specified without affecting the system's ability to comply with performance requirements and/or the exceptional loads. Unless otherwise stated, the system to comply with all prevailing relevant British Standards as appropriate, including BS EN 6180:2011 and BS EN 6399:1991-1-7:2006+A1:2014. Consider the worst combinations when calculating design loads.
Accommodate the self-weight of the system including all of its framing and supporting systems.

7.14.9 Imposed Gravity Loads
Accommodate loads imposed by adjacent and/or attached elements suspended from or fixed to the system.

7.14.10 Live Loads
Accommodate the following live loads without any reduction in performance:
Movement of the building structure and cladding support structure.
Horizontally applied loads acting on the surface of framing members and glazing arising from maintenance and cleaning operations.
A horizontal live load of 0.74 kN/m, due to the occupants, acting at a height of 1100mm above the finished internal floor level.
Known impact loads, or transferred impact loads, that occur during service life.
Loads imposed during replacement.

7.14.11 Wind loads
Horizontal and vertical loads of similar magnitude to those which are imposed upon adjacent or attached elements.

7.14.12 Imposed Movements
Accommodate imposed loads by defined movements of its supporting structure and/or other adjacent elements.

7.14.13 Wind/Air Pressure Loads
Calculate pressure loads to include the effect of internal air pressures within the building, taking into account the presence of significant openings.

7.14.14 Thermal Loads
Accommodate thermal movement resulting from the maximum and minimum surface temperatures defined by clause 2.7.2 of the CWCT system for Curtain walling and windows and windows. Cater for all temporary and permanent conditions.

7.14.15 Inertial Loads
Accommodate inertial loads arising from acceleration/deceleration of moving sections including opening

lights, doors and vents of the building or enclosure.

7.14.16 Environmental Performance Requirements
Moisture Movement -resist movement without permanent deformation or any reduction in the specified performance:
Due to changes in the moisture content of works' components, resulting from variations in the moisture content of the air. Refer also to BS 8297:2017, BS 8298-2:2020 and BS EN 1992-1-1:2004.
Due to the expansion of absorbed or retained moisture caused by freezing.
Control the flow of any water within the system and direct such water to the outside.

7.14.17 Thermal Performance
Minimise cold bridging. Maximum thermal permitted transmittance (U-value) are:
Double glazed area for external façades: required U-value as per item 7.0 (External Fabric) within this document.
Frames and extrusions: required U-value as per item 7.0 (External Fabric) within this document.
The average U-value through the works to comply with the above requirements and meet all statutory requirements as well as the specified requirements.
Submit thermal calculations for the various components and the average thermal performance of the proposed works to comply with the specified requirements.

7.14.18 Solar Performance Requirements
Submit data sheets in respect of solar and visible light performance for project specific glass build-ups in accordance with BS EN 410:2011 (light transmittance, radiant transmittance of glazing) with tolerances of ±3% for flat glazing. No cracking or distortion of glass is acceptable.
Confirm the total solar transmission (G-value) for each glass type specified for review by the Employer's Agent. Glass manufacturers and types are acceptable only if they meet the performance and visual requirements.

7.14.19 Air Permeability/Infiltration
Minimise airflow from the outside to the inside of the building through joints/junctions to control concentrated airflow.
Maximum air infiltration rates to be achieved are:
1.5 $m^3/hr/m^2$ for fixed lights.
2.0 m^3/hr/per metre length for opening lights/smoke vents.
3.0m^3/hr/per metre length of opening for framed and rebated doors.
Any air leakage to be distributed and not concentrated at a single location.
Provide actual air leakage test results.

7.14.20 Façade Floor Air Leakage
Joints between cladding and structural slabs at each floor to be sealed such that air shall leak through the joint at no more than 0.1 litres/sec per linear metre of façade at 50N/m^2.
Floor joint air leakage test to be carried out on Site by a specialist laboratory such as CERAM, Taywood or BSRIA. Allow for testing at 10 No. locations, each comprising a tenth of 6000mm.

7.14.21 Condensation
Except under extreme conditions where the internal relative humidity is in excess of 70%, condensation is not to form, either on internal or external surfaces of framing members, glazing, solid panels or louvres, or internally within the construction of infill panels forming a part of the works, such that is may lead to damage or staining under the psychrometric conditions.
Condensation will be permitted only in non-visible drained and ventilated rebates subject to it not having a deleterious effect on performance or durability.
Provide a condensation risk assessment, taking into account the specified psychrometric condition. Refer to project outline specification and the Building Services Environmental Model.

7.14.22 Capillarity
Eliminate water migration, due to capillarity, to the inside of the building.

7.14.23 Weather and Water Penetration Resistance
The works to be weatherproof and watertight ensuring the prevention of water leakage onto the

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internal face of the works.
The works to remain weatherproof and watertight under all conditions with due allowance made for deflections and movements.
Cavities to be drained and ventilated to the exterior. Wet applied seals for the purpose of preventing the ingress of water is not acceptable. All seals and gaskets shall be "dry".
Fixed joints to remain rigid and accommodate all thermal, building structure or other movements and any applicable loads without compromising water-tightness.

7.14.24 Acoustic Requirements
The works shall effectively insulate the internal areas of the building from high levels of noise.
The works shall provide internal sound reduction between floors.
The works shall provide internal sound reduction between adjoining areas on the same floor.
Evidence shall be provided that the acoustic performance requirements given herein can be achieved.
The measured noise exposure of each façade shall have been used in conjunction with the internal noise criteria of 45dBL Aeq to derive the façade sound insulation requirements of this development.
Each façade shall achieve the minimum sound reduction indices (R) when tested in accordance with BS EN ISO 10140:-3:2021, as specified by the Acoustic Engineer.

7.14.25 Demountability
Elements of the works to be individually and independently removable ensuring access for maintenance and/or replacement of glazed units in the event of breakage.
The removal of glazed units is not to affect the performance or safety of any part of the works and a method statement is to be provided for acceptance.

7.14.26 Fire Performance Requirements
All elements to be non-combustible or not easily ignitable with low flame spread characteristics, and not produce excessive quantities of smoke or toxic gases.
The external wall, where necessary to meet unprotected limitations under requirement B4 "External Fire Spread" of the Building Regulations.
All materials used internally and externally (excluding sealants and gaskets) to have a Class 0 surface spread of flame classification when tested in accordance with BS 476: Parts 6 and 7, unless otherwise specified.
Provide cavity barriers as necessary and comply with Building Regulations Approved Document B. Fire and smoke stops to be positively fixed in position so as not to become dislodged in the event of a fire.
The fixing to secure the stop in position for a period at least equal to that required for the compartment wall or floor against which the works abut. If fire resistance is required for space separation purposes, comply with functional requirement B4 of the Building Regulations. The external surfaces of the cladding to comply with functional requirement B4 of the Building Regulations.
Any insulation in the external wall construction that is exposed in a ventilated cavity shall be of limited combustibility, in accordance with the guidance in Section 12 of the Approved Document B.
Provide a floor to floor fire separation as required at the perimeter of each level. Submit details of suitable products, including fire tests information complying with BS 476: Part 20, test method.

7.14.27 Office ribbon glazing system
To match main entrance Senior Architectural Systems aluminium framed system with a glass fibre reinforced, polyamide thermal break, dry-glazed with EPDM gaskets, or similar and approved.
In-line opening lights as defined on the design drawings with restriction stays allowing the windows to be fixed to 100mm for safety and security.
Exposure category to BS 6375-1:2015
Design wind load: Consult Senior Architectural Systems for details
Airtightness - 600 Pascals
Watertightness - 600 Pascals
Colour/ Finish - Polyester powder coating is available in any standard RAL colour, or

Ironmongery/ Accessories: All handles, locks and hinges to be supplied by Senior Architectural Systems in satin anodised aluminium finish or to be agreed with EA to match adjacent windows, curtain walling and doors.

7.14.28 Glass
Light transmittance 69% (min)
G-value - 0.41 (min)
Inner pane: minimum 6mm thick
Cavity: 12mm min argon filled
Outer pane: minimum 6mm thick
Centre pane 'U' Value 1.0 w/m2K and edge spacer PSI value to be confirmed or in line with required U-value as per item 7.0 (External Fabric) within this document.
Durability requirements of class C of European standards EN 1096-1 -2:2012
Light and solar performance according to EN 410:2011
All glass shall be toughened and heat soaked.
Thermally toughened safety glass shall be classified according to EN 12600; for its pendulum impact performance. This product is to be used in critical locations (see BS 6262-4:2005)
Heat soaked thermally toughened products shall comply with EN 14179-1:2006 for soda lime silicate glass and EN 15682-1 for alkaline earth silicate glass

Panel/ facing type: vacuum insulated aluminium glazed into and forming part of the curtain wall assembly.
External material: 3mm (min thickness) aluminium
External finish: anodised
Internal material: 3mm (min thickness) aluminium
Internal finish: mill and PPC
Core insulation: non-combustible or enclosed rigid foam (limited-combustibility element)
Centre pane 'U' Value 1.0 w/m2K or as dictated by the performance requirements within the Service engineers design reports or in line with required U-value as per item 7.0 (External Fabric) within this document.
Glazing system: as manufacturer's recommendations
All glazing indicated on drawings should be fabricated as a complete glazing system and in strict a/w manufacturer's recommendations.

7.14.29 Impact and Abrasion Resistance
Resist abrasion from cleaning methods and maintenance systems without noticeable change in surface appearance. Generally, surfaces to be sufficiently hard (including glass coatings) to resist all reasonable impacts from hand-held objects without any noticeable change to the surface appearance.
Impact tests to be carried out to all assemblies adjacent to pedestrian areas in accordance with the recommendations of BS 8200. Tests shall conform to category B requirements.
The extent of any damage determined through testing to be recorded and, where possible, quantified.
Samples shall also be submitted to the Employer's Agent.

7.15 Louvres

All louvres to be colour coated to match surrounding materials and flashing details, to include integral bird/insect mesh and insulated lining panel in coated aluminium.

7.16 Loading Doors, External Doors and Fire Exit Doors

7.16.1 Front Entrance Doors

Polyester powder coated to BS 6262-4:2018 aluminium framed front entrance doors with toughened glass vision panels all to be fully designed by specialist subcontractor. If required fitted with `FIRE EXIT' notices and ironmongery to Fire Officer approval with concealed overhead door closer and a stay against the wind. NB: type of sign to be 3Hr Mtd Lucci LED edge lit exist sign (LUCM).

Wireways are to be provided to allow the future installation of access control systems.

A 300 x 75mm letter plate is to be provided in or adjacent to the main entrance doors, powder coat finish to match curtain wall system NB to be sealed until units are occupied.

Brushed Stainless Steel Pull handles full height are to be provided to either side of the doors.

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Doors shall comply with all requirements of Part M of The Building Regulations.

Brushed stainless steel bollards 150mm diameter x 1000mm high to be provided externally either side of entrance doors to act as door stops when doors can be caught by gusty winds. Entrance doors are to be designed to allow for the future installation of security and access controls by the occupier.

7.16.2 Escape Doors

Fire escape doors shall be painted steel sheet in steel frames with concealed high security panic bar /swing restraint/ shoot bolts. Colour to match adjacent cladding.
No vision panels required to external Escape Doors. Doors to be installed in external elevations set with minimal reveal depth.

Fire Escape doors adjacent to level entry doors to have suitable ironmongery/secure locking/ furniture for external opening.

Approx. 150mm diameter - 1200mm high (above external floor level) protection bollards to be provided externally to fire exit door openings where they open out onto the vehicle trafficked yard area. Bollards are to be sleeved to facilitate easy replacement and painted with hazard stripes (black/yellow, root fixed).

7.16.3 Level Loading Doors

Level loading doors are provided as shown on the building elevation drawings, insulated lockable and electrically operated and with bollards to protect jambs. Doors are 5.0m high x 4.0m wide for level loading doors in Units 1 to 6 and 5.4m high x 5.4m wide to Units 7 to 10.

Type: Nassau sectional overhead door
Finish: Manufacturer's standard with colour as below.
Colour: To match cladding colour Anthracite (RAL 7016)

NB: internal liner panel should be white to match cladding liner sheet.

Loading doors are to be constructed of interlocking insulated sections with an overall `U' value as required under item 7.0 (External Fabric) within this document. Doors shall have a manual override device installed. NB No vision panels are to be provided in these doors.
Coated to BS EN 13438:2013
The doors are to be lockable and electrically operated with the appropriate weather tight seal and flashing.

Permanent power will be provided to the doors and the doors will be fully commissioned upon completion.
Approx. 150mm diameter - 1200mm high (above external floor level) high concrete filled protection bollards are to be provided externally to level entry door openings. Bollards are to be sleeved to facilitate easy replacement and painted with hazard stripes (black/yellow, root fixed).

7.16.4 Dock Leveller Doors

Dock leveller doors, as indicated on the site layout and in clause 2.1, to be positioned for a tailboard height (1200mm) loading/unloading will be electrically operated, insulated, sectional panel, vertical lift doors, size 3.5m high x 2.7m wide, with neutral acrylic double-glazed vision panels and lockable sliding bolts. All doors are to be robust security/anti-vandal type with safety device to prevent entrapment or injury. Details to the employer's approval.

Type: Nassau sectional overhead door
Finish: Manufacturer's standard with colour as below.
Colour: To match cladding colour Anthracite (RAL 7016)

Dock equipment is to be installed in accordance with 7.17 below.

Below each door location, two moulded rubber and nylon reference bumpers will be bolted to the front plates attached to the dock leveller.

Tailgate slots will be provided to all dock levellers.

7.17 Dock Levellers

7.17.1 Electro-hydraulic dock levellers shall be provided to Units 7 & 10, as indicated on the drawings to the ramped loading docks and to include dock drop-off protection.

Dock leveller type Nassau hinged lip dock leveller.

Dock height is to be 1200mm.

All electro-mechanical equipment is to be sourced from a single manufacturer/ supplier to provide a fully functional single control panel for all equipment at each door.

A cable way is to be provided through the floor slab and through the dock wall to allow for future fitting of a wheel lock system.

7.17.2 The dock wall is to be of pre cast or in-situ concrete open pit construction and is to be designed to allow safe access for cleaning.

7.17.3 Design Criteria

Lip length:	500mm
Length of Leveller (NL):	3000mm
Width of Platform (NW):	2000mm
Overall Length (OL):	3500mm
Length of Gradient (GL):	3360mm
Minimum Pit Depth (PD):	810mm
Single axle load Capacity:	6000kg
Maximum Rise (A):	1019mm
Maximum Fall (B):	316mm
Leveller Height (LH):	800mm
Finish:	RAL 9005 Black

7.17.4 The dock leveller ramp / pit is to have galvanised steel staircases to both sides to allow for pedestrian access / egress.

7.17.5 Sliding Buffers
All loading docks are to have a pair of yellow polyethylene buffers, 260mm x 750mm x 110mm (WxHxD) mounted in galvanised steel frame with rubber impact absorbing packers. Including bolt free from face and easy change system.

7.17.6 Dock Traffic Lights
Loading docks only to have external traffic lights or similar approved, long life DOK-TEK PRG 100mm LED circular arrays grouped in clusters to provide added security. Each cluster is powered individually meaning that should a light fail, the rest of the clusters would still be operational and the traffic lights will still illuminate. To be installed in line with the manufacturers recommendations.

7.17.7 Dock Loading Lights
Loading docks are to have Gooseneck Dock Lights. The light has to have a flexible stainless steel arm that will not sag. To be installed in line with the manufacturers recommendations.

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7.17.8 Wheel Guides
No wheel guides to be provided (to be retro-fitted by occupiers to their requirements)

7.17.9 Dock Shelters
Dock shelters to be provided to units with dock leveller doors, as indicated on the site layout and in clause 2.1, and to be retractable dock shelter with rain channel.
Standard sized shelters Height – 3750mm, Width – 3450mm, Depth – 600mm
Colour: Black.

7.18 Movements Joints

Movement joints shall be installed in accordance with manufacturer's recommendations, shall be sealed with 2 part polysulphide or low modulus silicone based sealant on an expanded polyethylene backing strip. Sealant colour is to match the surrounding materials to EA approval.

Contraction and expansion joints for the structure and blockwork are to be provided where required and fully co-ordinated. Back to back plaster stop will be provided at contraction and movement joints to avoid plaster cracking, with sealant finish by Tremco `Dymeric' or equivalent.

7.19 Lintels

Provide suitable precast concrete lintels to BS 5977-1:1981.
To contractor's selection.

Provide suitable pre-stressed concrete lintels to BS 5977-1:1981.
Manufacturer: Tarmac Topfloor or similar.
Product reference: Beam Lintel.
Placement: Bed on mortar used for adjacent work with bearing of not less than 150mm. Prop at not more than 1.2 m centres to prevent displacement during construction. Retain props in position for not less than 14 days or until mortar has matured, whichever is longer.
Lintels to all openings, Lintels to be set at approximately 2100mm above FFL. Exact height to be confirmed due to varying floor finishes.

7.20 DPCS and Cavity Trays

All DPCs and cavity trays to be "Permabit" by Ruberoid Ltd (or equal) used at ground level and where the cavity is bridged horizontally and vertically. All DPC's installed in strict accordance with manufacturers requirements. All cloaks, stop ends abutments, corners etc., and accessories to be pre-formed.

Provide suitable damp-proof course in either bitumen to BS 6398, polyethylene to BS 6515:1984 or polymeric material to BS 6398:1983.

Manufacturer: Ruberoid Building Products Ltd, Welwyn Garden City, Herts. AL7 1BP.
Product reference: Hyload'2' Polymeric DPC or equal approved.

Cavity Trays
Provide suitable cavity trays, junction cloaks and stop ends.
Manufacturer: Ruberoid Building Products or equal approved.
Product references and locations: Special preformed units at internal/external corners and at steps in linear cavity trays.
Placement: To provide a free draining and watertight installation. Seal laps with DPCS and/ or cavity trays.

7.21 Wall ties/ ancillary masonry items

Wall Ties: Provide suitable stainless steel wall ties free from sharp, pointed edges, Grade 1.4401 to BS EN 845-1:2013 and Agreement certified. Wall ties shall maintain the stability of the works in accordance with BS 5628-12005.

Fixing Ties in Masonry Cavity Walls with Partial Fill Cavity Insulation
Embedment in mortar beds (minimum): 50 mm.
Placement: Sloping slightly downwards towards outer leaf, without bending. Drip centred in the cavity and pointing downwards.
First Row Spacing: Evenly space first row of ties at 600mm centres to secure bottom edge of insulation board at a minimum of two points.
Spacing: Evenly space in staggered horizontal and vertical rows.
Horizontal centres: 900mm.
Vertical centres: 450mm.
Secure each insulation board at a minimum of 3 points.
Spacing centres of top (eaves) row of ties: Not more than 450mm.
Provision of additional ties: Within 225 mm of reveals of unbonded openings.
Spacing: at not more than 300mm centres vertically.

Wall Starter/Connector
Provide suitable wall starter/connector.
Manufacturer: Ancon.
Product reference: SP21.
Material/ finish: Stainless Steel Grade 304.
Sizes: 125mm Long.

Slot Ties for Fixing Blockwork to Concrete and Steel Columns (Shot Fired)
Manufacturer: Ancon.
Product reference: SP21.
Material/ finish: Stainless Steel Grade 304
Sizes: 125mm long.
Slot Ties for Fixing Block to Concrete Column (Cast In Channels)
Manufacturer: Ancon.
Product reference: PP21.
Material/ finish: Stainless Steel Grade 304
Sizes: 125mm long

Head Restraint Ties
Provide the following:
a) Concealed type:
i) Concealed type lateral head restraint ties with slotted holes and debonding PVC sleeve.
ii) Material: Stainless steel grade 1.4301 to BS EN 10088:2014.
b) Exposed type:
i) Exposed type comprising galvanised mild steel angle cleats nominal 100mm x 100mm x 6mm x 150mm long at 450mm centres.
ii) To incorporate suitable deflection movement, compressible joint filler and sealant as required.

Concrete Fill to Base of Cavity
Concrete generally: To BS EN 206:2013 and BS 8500-2:2015.
Designated concrete: Gen 1, Refer to spec E10/130.
Workability: High.
Extent: Maintain 75 mm between top of fill and external ground level and a minimum of 225 mm between top of fill and ground level DPC.
Placement: Compact to eliminate voids.

Partial Fill Cavity Insulation Expanded Polystyrene (Eps)
Insulation: Expanded polystyrene boards to BS EN 13163.
Manufacturer: Celotex.
Product reference: CW3000Z.
Face size (length x width): 450x1200mm.
Thickness: 55 mm rigid insulation (reduced to 35mm behind 25mm setbacks).

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7.22 Timber

Structural sawn timber to BS EN 14081-1:2016, framing and battens to be preserved to British Wood Preserving Association Commodity Specification C8.

7.23 Front Entrance Canopies

Canopies to be 12mm clear laminated toughened glass panels on a powder coated steel structure. Glass and steel structure colours to match curtain walling glazing and frame. All connections in satin stainless steel, polyester powder coated gutter and down pipe. Sized to match design drawings.

7.24 Air Pressure Test

An air pressurisation test will be carried out to provide an air permeability as per item 7.0 (External Fabric) within this document in line with the Building Regulations and the project Energy Strategy.

7.25 External Occupier Signage

A zone shall be designated and left ready for the future installation of occupier signage. Illumination, planning approvals and installation are to be undertaken by the Occupier. Suitable allowance to be made for additional internal steel structure to support this (requirements to be provided or agreed with EA).
Each unit to have a separate unit number located at high level to the side of the office windows as indicated on the elevations.
The numbers are to be fabricated from 3mm aluminium with a black anodised finish.

8.0 INTERNAL CONSTRUCTION

8.1 Internal Walls and Partitions

Layout of the cores, offices and associated areas are to be designed as per the design drawings.

8.2 Party Walls

The party walls between Units 1 & 2, 3 to 6 and 8 & 9, are to be constructed of composite panels or 140mm solid blockwork to **BS 6073: Part 1** (up to 2.25m height/10 courses) with adjustable steel beam head restraints system and insulated metal stud wall above to the underside of the portal frame, incorporating full fire sealing to achieve both fire compartment and structural requirements. Blockwork to be flush pointed with grey mortar in line with section 7.13.

If blockwork, all internal block party walls to be painted with one mist coat and two coats of white vinyl matt emulsion paint. If required the walls are to be restrained laterally by steel posts bolted to the floor and the portal frame, which are capable of being removed without damaging the floor slab or bolts remaining in the floor slab. If necessary, bed joint reinforcement or additional restraint steelwork shall be included to ensure the lateral stability of the walls, which are also capable of being removed if the units are to be combined.

Composite panels to be finished white.

All party walls separating the units are to achieve a sound reduction factor of 41 dBA.

8.3 Walls to Offices / WCs (including disabled WCs) / Lobby

Save for where specifically specified elsewhere internal walls (including linings to external elevations and column encasements) are to be constructed of 100/140mm solid blockwork to BS EN 772-2:1998 or insulated metal stud to achieve both fire compartment and structural requirements. Walls forming divisions

between office space and warehouse are to be insulated to achieve a minimum of 0.6W/m²K and achieve a 1 hour fire resistance where required by the Building Regulations.

All partitions, ceilings & doors to plant areas and walls separating the office from the warehouse are to achieve a sound reduction factor of 41 DBA.

Movement joints to be incorporated in the blockwork in accordance with manufacturer's recommendations and to be fitted with polyethylene strip at the top junction with slab and beams. Corofil C14 to be used at this joint for fire compartment walls. Top of blockwork wall to be restrained with steel angles/sliding anchors/brackets to structural engineer's design and with sealant to joint where exposed to view.

8.4 Internal Doors

8.4.1 Offices / Reception / WC's (including disabled WCs)

Doors to be factory finished. The contractor will submit a door sample for EA approval.
Front of house - American White Oak timber veneered solid core flush door-sets with hardwood flush beads and lipping on three edges hung in hardwood painted frames. Vision panels will be provided as required by Building Control and as shown on the project design drawings.

All fire doors will comply with FD60S and BS EN 476: 2022 and to be self-closing and all necessary fire signs to Fire Officer approval. 2mm intumescent strip is to be concealed within door frame at door stop. Smoke seals to be fixed to frames as required by the Fire Officer.

Full height vision panels of 150x1600 mm are to be provided to the office and reception doors as necessary.

Vision panels to fire escape route doors to be 'Pyran' or similar fire resistant clear glass to comply with BS 476:2022

Back of house (production toilets) – shall match the front of house doors in general appearance and arrangement, factory primed and site painted ply faced flush fire-rated type in painted softwood frames.

8.5 Architraves and Skirting

Architraves to be factory primed MDF, site painted.
Skirting to offices to be factory primed MDF site painted (white) or where no raised access floor system is installed (Units 1 to 6) skirting trunking (white) with one double socket outlet @ 2m centres to be provided.
Tiled floor areas to have matching skirting tiles.

8.6 Entrance Mat

Entrance matwell and recessed stainless steel frame – MatWorks Frameworks 12 with MW Rib anthracite insert. Door containment for tenant security shall be set within a recess within the slab beneath the mat.
Entrance mat is to be provided to entrance door, sized to be 1200mm in depth across the full width of the entrance screen.

8.7 Ironmongery

Doors to be complete with heavy duty floor/overhead hydraulic closers, push plates, and pull handles, lever handles and latches, protective plates and kick plates, mortice locks fitted with interchangeable suited key barrels, etc.
Locks will be individually keyed under master key.
All Ironmongery to be generally heavy duty SAA finish by FSB or equal.
Allow for Stainless Steel doc M gab rails to dis. Showers and WC's areas.

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8.8 Staircases

Staircases can be either precast or steel with metal trays and concrete infill treads and designed to meet all the requirements of the Building Regulations including Part M and Part K.

Staircases shown on the design intent drawings and described in this specification are to be designed to BS 5395:2010 where applicable.
The supplier/subcontractor must complete the design and detailing to ensure compliance with the structural and safety requirements of BS 5395:2010
Occupancy class for dead and imposed loadings on stairs and landings to BS EN 1991-1-1:2002 and BS EN 1991-1-7:2006+A1:2014

Building use category for balustrades and handrail loadings (as specified in BS 6180:2011): 4
Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication. Designated items: Stair balustrading, handrails, rods and ancillary support sections, roof access ladders and service step overs.

All internal stairs are means of fire escape which will be used as general accommodation stairs for occupants.
The design intent drawings illustrate the stair in terms of layout and finishes: the fabricator/subcontractor shall progress the design to completion with the same design concept. For this purpose, the following criteria shall be maintained. Stair supports shall only be as shown on the design drawings.

Stairs shall have painted mild steel balustrading, rails and brushed 50mm stainless steel handrails.
Metalwork finishes: The drawings show the degree of steelwork that will be visible on completion of the stair.

Balustrades (to stairs and landings) are to be painted mild steel of 2 no 40 x 10mm flats as uprights with 4 no 12mm dia rods horizontally, fixed off top of staircases with 50mm brushed stainless steel handrails. Handrails at wall to be fixed with metal brackets with a finish to match adjacent handrail (brushed stainless steel).

Balustrades are to be fully ramped/arrissed to ensure a fluid and smooth line at all changes in direction. Handrail at wall perimeters to be supported on bespoke stainless steel wall brackets as design intent drawings.

Any exposed string is to be finished smoothly and painted.
The staircase is to be finished with carpet as office with Gradus aluminium nosings (G range - G11 profile) with colour coated inserts (colour: glacier or similar achieving required light reflectance value).
The skirting to staircases is to be painted softwood with cut string to match the general skirting.

8.9 Roof Access

Via using MEWP which will access building perimeters. *Man-safe system to be installed in roof refer to clause 7.5.* ***CURRENTLY UNDER REVIEW***

9.0 INTERNAL FINISHES

9.1 Floors

9.1.1 Floor to Reception and Ground Floor Lobby:

10mm anti-slip ceramic tile bedded on power floated slab laid to pattern and pointed up in grey grouting cement to BS 5385 -1:2018. Colour: Mapei 114 Anthracite.
Solus Stonework Dalix Matt 300x300mm 3LBG506 tile to be laid with matching skirting tiles.

9.1.2 First Floor Offices and staircases

Heavy contract grade carpet tiles
Office: ref: 500x500 Heavy contract grade carpet tiles, Desso Essence Stripe, colour: AA91 9502, laid on raised access floor where applicable (see below).
The carpet is to be laid in a linear pattern perpendicular to the main office windows in all cases.
Size: 500x500 tile
Method of laying: Tiles to be bonded with tackifier or in a/w carpet suppliers recommendations.
Accessories: Brushed stainless steel threshold bars to all doors with change of floor finish (carpet/tiling) below door opening.

Laying of coverings will be taken as joint acceptance by the Main Contractor and Subcontractor of the suitability of the bases and conditions within any given area.

9.1.3 Raised Access Floor – Units 7 to 10 - first floor offices.

New raised floor system to office areas, Kingspan RG3. Depth is to be 150mm including 32mm tray.
Steel encapsulated/particle board construction, loose lay raised access floor panels to the requirements of PSA MOB PF2 PS/SPU and BSEN 12825. 600x600mm with oversized tiles to suit the floor layout, cuts of less than 450mm will not be accepted. Complete works in a/w Kingspan technical recommendations including expansion and contraction joints.
Fire stop the floor to the requirements of Part B and specifically at riser interfaces and cladding perimeters, provide any additional bridging and support as required. Finish the sub-floor with two coats of floor sealer in contrasting colours. Provide fire barriers to comply with the requirements of Approved Document B.

9.1.4 First Floor to Units 1 to 6.
To have 50mm sand/cement screed with no raised access floor. Carpet finish as para 9.1.2

9.1.5 Floors to WC's

10mm anti-slip ceramic tile bedded on power floated slab laid to pattern and pointed up in grey grouting cement to BS 5385: Part 3. Colour: Mapei 114 Anthracite.
Solus Stonework Dalix Matt 300x300mm 3LBG506 to be laid with matching skirting tiles to WC areas, surface finish to comply with slip resistance requirements.

9.1.6 Floors to Disabled WC / shower.

10mm anti-slip ceramic tile bedded on power floated slab laid to pattern and pointed up in grey grouting cement to BS 5385: Part 3. Colour: Mapei 114 Anthracite.
Skirting tile to be installed, shower drains to be 150mm square chrome plate finish.
A wet room type shower facility is to be provided at ground floor level with flush entry and Harmer floor drain to comply with Part M1/M3 diag. 23 and 24 of the building regulations. Tiling to BS 5385 Part 1.
Solus Stonework Dalix Stone 3LBG506 150x150x10.8mm porcelain unglazed anti slip floor tile, Slip resistance R12 and a water displacement of V4, to form 1200x1200mm shower (shower wall tiles to be 150x150mm, white finish, coordinated with floor joints - see Hale drawings).

9.2 Walls

9.2.1 Walls Generally

Full height plaster or skimmed plasterboard linings according to location to all walls and columns. Finished with three coat emulsion paint; 1 mist, 2 full.

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All external plaster angles reinforced with angle beads, all changes in direction shall include crack control beads. All external plaster angles reinforced with angle beads including all necessary stop beads and expansion joints at junctions of dissimilar backings and steel columns or expansion joints in blockwork.

9.2.2 Rear Walls to office toilets

IPS panels by Inscape.
Substrate: Treated softwood framework, notched, screwed and site assembled.
Board /Panels: Solid grade laminate panels, full height in three panel sets.
Thickness: 12/13mm overall
Core material: Not applicable
Facing: Not applicable
Colour: dark grey
Moisture content at time of fixing: As recommended by fabricator to suit environmental conditions.
Edge treatment: Exposed edges are machined to a smooth profiled finish.
Method of fixing panels: Concealed Keku 'lift off' brackets or concealed hinged system with two panels per cubicle and elsewhere as design drawings, keyed locks to be provided to prevent unauthorised access.
Joint treatment: With vertical flash gaps and close butted horizontally, flashgap laminate to match panel colour.
Included features: All duct / panelling cistern duct sets to be made to site dimensions with vertical flashgaps set to 20mm.
Accessories: All fixing components.

9.3 Ceilings

9.3.1 Ceilings

9.3.1.1 MF ceiling and accessible tiled ceilings with lay-in grid in perimeter MF suspended ceiling. CURRENTLY UNDER REVIEW.

Location: Lobbies and Offices

Floor to ceiling height to be a minimum of 2,700mm as Design Drawings.
Light fittings are to be lay in recessed modular fittings and arranged evenly to achieve the required Lux levels.
Manufacturer and reference: Armstrong 'Duno Evo' with Tegular edge detail, White painted or similar approved, all trims to be white (RAL 9010), Size 600 x 600 mm
Board materials: Mineral Fibre 400kgm³
Accessories: Perimeter trims to offices to be finished powder coat white RAL 9010.
Fittings to be arranged to allow for required Lux levels and open plan/cellular layout.
Light fittings are to be LG3 & LG7 compliant to office areas only, and suit tile size.

9.3.1.2 Accessible tiled ceilings with lay-in grid

Location: WCs

Floor to ceiling height to be a minimum of 2,400mm or as Design Drawings.
Light fittings are to be lay in recessed modular fittings and arranged evenly to achieve the required Lux levels.
Manufacturer and reference: Armstrong 'Duno Evo' with Tegular edge detail, White painted or similar approved, all trims to be white (RAL 9010), Size 600 x 600 mm
Board materials: Mineral Fibre 400kgm³
Accessories: Perimeter trims finished powder coat white RAL 9010.
Fittings to be arranged to allow for required Lux levels and open plan/cellular layout.
Light fittings are to be LG7 compliant to office areas only, and suit tile size.

9.3.1.3 Accessible tiled ceilings with lay-in grid

Location: Disabled WC and Shower

Floor to ceiling height to be a minimum of 2400mm or as Design Drawings.
Manufacturer and reference: Armstrong Hydroboard with Tegular 90' edge detail (Moisture resistant grid, 37dB reference U1800 or similar approved), all trims to be white (RAL 9010),.
Membrane Material: Calcium silicate matrix.
Tile Size: 600 x 600 mm

9.4 Ancillary Items

9.4.1 Cills Window Boards

Where applicable 38mm section solid painted mdf with square/round edging.

High level timber backing is to be provided to all office windows to allow for the fixing of blinds by the occupier.

Windows to undercroft areas to include white flashing trims to window to PCF interface to hide all insulations to perimeter windows.

10 FIXTURES AND FITTINGS

10.1 Sanitaryware – Office

10.1.1 WC Pan and cistern
Arrangement: back to wall pan with concealed cistern
Pan: Twyford E100 B.T.W. white vitreous china with horizontal outlet REF: E11488WH (see Twyford detail sheet 4.12)
Seat: White E17861WH
Pan connector: Simpla inlet ref: S450567
Cistern: Grohe WC Concealed Cistern 0.82m,6/3 l Ref: 38691000. Six litre capacity with Freeflow plastic syphon fittings, 15mm microvalve side supply, 20mm side flow, plastic flush bend.
Other accessories:
Grohe Eau2 Air Button Ref: 38692P10 with escutcheon 100mm dia pneumatic hose 1500mm long.
Sealing: White silicon sealant to pan/floor/wall junction.

10.1.2 Cleaners Sinks
Armitage Shanks Birch cleaners sink with stainless steel grating with hot and cold water.

10.1.3 Washbasins
Basin: Twyfords E200, ref: E24811WH, with integral overflow in vitreous china to be wall fixed on the IPS back panels of office toilets without the need for exposed brackets or pedestal. Min width of washbasin is to be 400mm.
Waste: Chrome plated restrained.
Trap: Chrome plated bottle trap.
Sealing: To Granite-silicone.

10.1.4 Taps to Cleaners Store.
Allow for 1 set of Nimbus 21 Bib taps ½", Chrome finish, hot and cold water.

10.1.5 Taps to office Toilets.
Aerated Taps Grohe Eurodisc Cosmopolitan Pillar tap XS-Size with Chrome Plated disc waste

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10.1.6 Disabled WC

To comply with BS 8300-2:2018 and Approved Document Part M.
Doc M Contour 21 close coupled left hand corner pack, WC pan, water saving delay fill cistern with spatula lever, basin, chrome grab rails, hinged support rail with toilet roll holder, seat no cover with retaining buffers, copper tails on TMV3 mixer tap
Wash basin to have :-
Waste: Chrome plated restrained.
Trap: Chrome plated bottle trap.
Sealing: To Granite-silicone.

10.1.7 Tea point provision

Allow for cold water supply and drainage points as indicated on drawings to first floor offices in each unit.
These are to be adjoining the main cores.

10.1.8 Disabled WC & Shower

Shower room pack with folding shower seat and back support in grey, 3 x 60cm grab rails, 2 x hinged rails and 2 x 45cm stainless steel grab rails, lever operated thermostatic mixer for concealed supplies, shower handset holder, handset & hose, fixed short projection shower head. lever operated diverter.
Contour 21 close coupled raised height WC pan, 75cm projection with floor fixing kit.
Contour 21 close coupled delay fill, syphon cistern 4.5 litre single flush for 75cm projection pan bottom supply and internal overflow, secure cover fastener, no lever.
Spatula cistern lever close coupled
Contour 21 seat no cover, top fixing hinges and retaining buffers
Contour 21 grab rail straight 60cm long x 35mm diameter
Portman 21 washbasin 50cm, 1 taphole with overflow, no chainstay hole
Bracket concealed with clamps and centre waste support for Portman 21 washbasins 60 and 50cm.
Contour 21 washbasin mixer thermostatic 1 hole, single sequential long lever, copper tails.
Waste 1¼" brass anti theft swivel plug waste, 80mm slotted tail
Trap 1¼" plastic bottle, 75mm seal, multi-purpose outlet.
Contour 21 hinged support rail 80 x 35mm diameter, Doc M Compliant.

10.2 Production/Amenity Core

10.2.1 Provision for production toilets & showers cores to be allowed for capped-off cold water supply and drainage points to rear of ground floor core of Units 7 to 10, for the potential fitting of future production wc/shower cores by incoming tenant.

10.3 Pipework

To be designed to minimise the number and length of horizontal runs.
Any cisterns/ cistermizers (or similar) are to be concealed above the suspended ceiling.

Soil stacks, SVP's to be to be concealed and if they cannot be contained within the structure they are to be carefully positioned in corners and fully boxed in between floor and ceiling. Hot and cold water feed pipework and foul drainage (washbasin) pipework to be concealed within partition stud structure. Horizontal runs of 100mm soil wastes and 38mm runs are to be avoided.

All exposed pipework to be chromed brass.

10.4 Toilet roll holders/ mirror(s)/ coat hooks / door stops
Provide one of each per toilet.

Metal to be SAA by FSB to match main door furniture.

Where vanity basins are to be fitted full height and length Mirrors should be installed. Refer to drawings for details.

Door stops (brushed/satin stainless steel) to be provided for all internal office core doors except disabled area door openings.

10.5 Fire Precautions and Statutory Signage
The requirements of the Local Fire Prevention Officer will be incorporated, in respect of means of escape, fire resisting doors and partitions, fire exit doors and fittings and all associated signs and notices.

Signs and notices will comply with Associated Signs and BS ISO 3864-1:2011 'Fire Safety Signs, Notices and Graphic Symbols'. All signs to be metal or rigid plastic and screw fixed.

11 SERVICES

11.1 Below Ground Services
All below ground services to be installed in accordance with the NJUC (National Joint Utilities Group) recommendations as outlined in the NJUG Publication No.7 dated January 1997.
All mains connections are to be co-ordinated and laid in the new access road.

11.2 Electrical

11.2.1 3 Phase power

A 3 phase power supply is to be brought into the building to a suitable position to be agreed with the Employers Agent.

Load as paragraph 2.6

A main switch and distribution board will be located in a position agreed with the Employers Agent.

11.2.2 The supply shall include an allowance of:

Office Lighting	12-15w/m²
Office small power	25 w/m²
External /Car Park Lighting	5 w/m²
Spare Capacity	15 w/m²

11.2.3 Recessed floor boxes to also be provided as indicated on drawings for potential reception desk position (reception desk by occupiers), together with floor ducts to service the floor boxes.

11.2.4 Units 1 to 6 to have 50mm deep sand/cement screed to 1st floor offices with DDA compliant perimeter skirting trunking to all office areas and one to wall of the entrance lobby. One double socket outlet @ 2m centres to be allowed for within skirting trunking. NB EI/BT/IT cabling to be installed by tenants.

11.2.5 Sub stations
The contractor is to allow fully for the design, and installation of two electrical substations located as shown on the site layout plan.

11.2.6 Emergency power, power, data and lighting ducts
To be supplied to a floor box within the entrance lobby in a position to be agreed with the EA, including the provision of a BT duct. Allowance is to be made for 1 no. spare incoming 100mm duct.

11.2.7 Hand Drier
One electric spur suitable for hand drier purposes to be installed in each toilet area.

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11.2.8 Housekeeping

Adequate wall sockets are to be allowed in wc/changing areas, lobbies, staircases and reception areas for cleaning. Sockets are to be positioned at min 450mm above finished floor level.

11.3 Gas

11.3.1 Capped-off supply to the warehouses of Units 1 to 10.

11.4 Water

11.4.1 A suitable metered water supply shall be provided to serve the new office areas of each unit together with 4 number external water points provided for the maintenance of external landscape. Type and location of water points as below:.
- 3 number external bib taps to be provided to the back of Units 2, 7 and 9 (one each).
- 1 number to the landscape adjacent to Unit 10.

5 number taps to refuse stores, 1 number per refuse store as per point 12.7.1.
2 number external bib taps per unit to be provided adjacent to loading doors on Units 7 and 10.

1 number external bib tap per unit to be provided adjacent to the loading doors on Units 8 and 9.
1 number external bib tap to be provided for Units 1-6. Tap to be connected to the refuse store water point to service the yard area.

Hot and drinking water supply to be provided to all toilets. Any water heaters must be concealed but fully accessible for maintenance in all cases.

11.5 Heating

11.5.1 Units 7 to 10, heating & cooling to supply all office areas, reception via VRF air conditioning units. Electric wall heaters to be provided to the toilets.

11.5.2 Units 1 to 6, heating via LPHW radiators from individual gas boilers in each of the units. Electric wall heaters to be provided to the toilets. ***CURRENTLY UNDER REVIEW.***

11.5.3 Warehouse
No heating is to be provided to the warehouse areas.

11.5.4 Performance Criteria
The heating is to be designed to the following criteria and to take account of roof voids.

Outside design temperature	=	-4°C
Inside design temperature		
Offices	=	21°C
Corridors	=	18°C
Toilets	=	18°C
System flow temperature	=	82°C
System return temperature	=	71°C
Infiltration Rate	=	2a/c per hour

The installation to be designed and installed in accordance with the requirements of all relevant Statutory Authorities, the Building Regulations, and shall comply with the standards set down in The latest Chartered Institute of Building Services Engineers (CIBSE) guide.

11.5.5 Overhead Air Curtain (Entrance)

Dimplex Air Curtain (finish to be confirmed). Section size over all 321mm deep by 262mm high. Width to coordinate with curtain walling mullion centres (approx. 2500mm). Heater wiring shall be concealed.

11.6 Lighting

11.6.1 Office lighting

Office lighting is to suit suspended ceiling grid/tile size LG7:2005 compliant modular light fittings and is to be designed to the current CIBSE standards to provide the lux levels set out below: 597x597 recessed luminaries by Rexel LED Solutions. NB Lighting in entrance area, first floor offices, ground floor toilet areas & lobbies to be LED type.

Lighting levels: 450 lux for reception, and offices (including individual offices), 150 lux for ancillary areas, 200 lux for toilets, 350 lux for kitchens, canteen and welfare areas.

Switches to be located adjacent to the door only with zoned and adjustable time and movement sensors, to be set at min 30 minutes at commissioning.

Lighting to corridors, office toilets (1 no. per toilet) and disabled toilets is to be with Concord low energy fittings recessed into ceiling tiles.

No lighting to the warehouse, with the exception to 2 flood lights to allow for inspection of the warehouse space. Flood lights are to be attached to the rear wall of the first floor offices.

Lobby corridor lighting is to have recessed fittings Rexel LED Solutions to achieve the specified lux levels. Fittings to be LED.

This is for future connection of pendant lights by the occupier.

Emergency lighting will be provided in accordance with BS 5266-1:2016.

11.6.2 External lighting

Kingfisher Guardian Pro Floodlight 100W and 155W to the yard and car parking areas building and column mounted to suit lux levels.
Kingfisher 80w LED Viva City Pro 4000k 800mA with FW70 Optic column mounted.
Kingfisher 60w LED Viva City Pro 4000k 600mA with AY70 Optic column mounted.
Kingfisher 13.5w LED Quatro bulkhead with cycle optic building mounted.

All lighting to be connected to respective buildings and estate road lighting & petrol interceptor alarms to landlord's supply. Colour of fittings to match surrounding cladding and positions as indicated on drawings.
Min average 20 Lux. Loading bay to be 150 Lux.
All fittings are to be controllable via photocell and timers with manual overrides.
Position of landlord's supply to be agreed with the Employers Agent.

11.7 Ventilation

11.7.1 Mechanical Ventilation
Flush ceiling mounted mechanical ventilation to be provided to WCs, Disabled WC and shower with timed control facility and in the case of twin fan units an auto changeover control. All external grilles to be colour coated to a RAL colour to match cladding background. No grilles to be located on front elevations. Ventilation is to comply with Building Regulations.

11.7.2 SVP's flues and ventilation pipework
To be built into ductwork comprising 2 layers plasterboard/proprietary fire resistant board to the required fire rating with staggered joints on sw framing, with skim and emulsion paint. Pipes are to be fire stopped with proprietary

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sleeve connectors in accordance with Fire Officer requirements.

11.7.3 Smoke extraction or sprinkler systems
Shall only be provided if required to satisfy the requirements of The Building Regulations and/or Local Acts.

11.8 Security

11.8.1 Security Systems
Shall be installed by incoming occupier.

11.9 Fire Alarms

11.9.1 Fire Alarm and Detection System

A fire alarm and detection system is to be installed to all areas in accordance with Local Authority requirements and to be installed to BS 5839-1:2017
Manual alarm systems with break glass points, sounders, and sounder circuits wired in firetuf.
Addressable recessed fire alarm control panel to allow for the provision of minimum 2 No. additional zones to be linked in at a later date.
Main fire alarm panel to be located in the reception and shall be co-ordinated with other panels / devices to ensure uniform and symmetrical layout.

11.10 Emergency Lighting

11.10.1 Emergency Lighting
Emergency lighting, in accordance with BS5266-1:2016, to be provided throughout the building.
In offices, stairs / entrance lobby, lobbies and toilets emergency lighting shall be integral with ceiling light fittings.

11.11 Lightning Protection

11.11.1 A fully certified lightning protection system will be installed in accordance with BS EN 62305:-1:2011

All points of lightning conductor tape are to be concealed and outlets to be positioned away from main entrance and doorways etc.

11.12 Commissioning

All systems shall be commissioned in accordance with the CIBSE Codes. All water services shall be balanced to comply with the requirements of HSG 70, the water Bye Laws and BS 8558:2015

11.13 BT and Data

There is to be provision of a BT and data duct to the buildings with BT boxes position to be agreed.
In addition a BT line will be required for each lift.

11.14 Lifts

A passenger lift for 8 persons, 630kg capacity is to be provided to each of Units 7 & 10. The lift is to serve ground and first floor office levels.

Lift pit to be provided to Units 8 and 9 for future lift provision. Location as per drawings. No lifts to be installed in Units 1 to 6.

Where specified, the lift to be supplied and installed by Orona Lifts or similar and approved and fully comply with the requirements of BS 5655 and EN81.

The lift entrance door will give a 900mm clear opening and will be side opening. The entrance frames,

doors, skirting, car console and controls will be satin stainless steel.

The lift car will be a minimum of 1100mm wide and 1400mm deep with an internal height of 2100mm. The lift cars will be finished with brushed stainless steel panelling and a 3/4 height mirror to central section of rear wall. The car controls, incorporating floor section, door open digital floor indicator, emergency lighting, telephone point and alarm will be fitted to a height of 1200mm above floor level, lift floor finish to match entrance lobby tiles.

The contractor shall install a fully operational telephone line for REM system.

The lift overrun from top landing is not to exceed 3,400mm.

11.15 Electric vehicle charging points

Vehicle charging points as below and in line with latest planning drawing layout information.
Install below grade ducting and power supplies to vehicle charging points within the carparks to service:
- 2No. parking spaces (1No. pedestal) to Units 3 to 6 (per unit).
- 4No. car parking spaces (2No. pedestal) to Units 1 & 2 (per unit)
- 18No. car parking spaces (9No. pedestal) to Unit 7
- 10No. parking spaces (5No. pedestals) to Units 8 & 9 (per unit)
- 24No. parking spaces (12No. pedestals) to Units 10.

Total No.78 EV car parking spaces (39No. pedestals) across Phase 1.

1000mm Rolec EV charging pedestals, or similar & approved, with root mounted bases.
2No. 2 way charging sockets per pedestal.
Foamex outer shell in Standard PPC finish.
Charging Solution: IEC 62196 (Type 2) charging sockets wit 16 amp single phase charging.
Mode 3IEC 61851-1 Communication compliance.
Hatch lock facility.
LED indicator.
Built-in overload, DC sensitive and fault current protected.
Photocell controlled LED amenity lighting head & full internal wiring.
Include 2 No. Stainless steel protective bollards (or similar protection measures agreed with EA) and concrete footings per pedestal (where relevant).

Underground ducts for future vehicle charging points to be provided to the same number of car spaces as above. These are to included pop-ups with pull cords.

11.16 PV Panels

PV panels are required on the roofs of the units by Manchester City Council to comply with policy for 5% energy from renewables and in line with Hive's Energy Report Rev D, dated 19/10/2020

Total of 95kWp solar PV, as set out in Hive's Energy Report, to achieve 5% C02 saving in accordance with BREEAM ENE04.

Panels to be 250wp monocrystalline PV panels (1638 x 982mm) with modular efficiency of 15.5% and a solar efficiency of 95%.
The 95kWp is estimated to be split between the units as follows:-

Unit 1	4 kWp (26 m²)
Unit 2	3 kWp (19.5 m²)
Unit 3	2.5 kWp (16.25 m²)
Units 4, 5 & 6	2 kWp each (13 m²)
Unit 7	9.5 kWp (61.75 m²)
Unit 8	8 kWp (51.5 m²)
Unit 9	9 kWp (58 m²)
Unit 10	12 kWp (77.5m²)

NB It is to be emphasized that the split in the total 95kWp is for guidance only at the time of issue of this Specification and the split and total will need to be re-calculated & verified by a specialist energy consultant, as

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necessary, in due course.

12 EXTERNAL WORKS

12.1 Drainage

12.1.1 Drainage above and below ground rainwater, surface, soil and foul to be constructed to the contractor's design and Local Authority, Environment Agency, National Rivers Authority and Building Regulations Approval.
Rainwater pipes locations are to be confirmed.
Petrol interceptors are to be provided to external parking and service yard areas. Petrol control/alarm panels are to be located in positions agreed with the Employers Agent.

12.1.2 No inspection chambers are to be positioned in the footpath immediately in front of or adjacent to the main entrance door and level access doors.

12.1.3 Pre-cast channel drains with bolt down grates may only be adopted in lorry manoeuvring areas if they are provided within a reinforced concrete surround.

12.1.4 Road gulley and slot drains are acceptable in all other areas.

12.1.5 Surface water drainage is to be designed in accordance with the structural engineers design and details.

12.2 Roadways and Crossover

12.2.1 Construction of crossovers will be in accordance with Transport Research laboratory Structural Design of Bituminous Roads and BS 594-1:2006. All street paving and road kerbs will be to the approval to Local Authority Highways Department.

12.2.2 Access roads will be designed by the Structural Engineer in accordance with the Highways Agency 'Design manual for Roads and Bridges'. Kerbing will be Conservation sections throughout.

12.2.3 Allowance to be made for the upgrade/refurbishment of the private access road from Grimshaw Lane to the site entrance, including the provision of new pavement on right hand side at Grimshaw Lane end /upgrade of existing pavement as shown on the site layout drawing.

12.3 Footpaths

12.3.1 Footpaths to be Marshalls concrete block paving, charcoal, 200x100 rectangular lock paving with integral spacers to comply with BS EN: 13108-4:2016 (thickness to suit location). Refer to Site Plans for locations. Blocks are to be laid and bedded on sand in accordance with the manufacturer's instructions. Standard pre-cast kerb edging to BS EN 1139:2003

12.3.2 Footpaths to the rear of the units to be insitu concrete with light brush finish and trowelled edge. Refer to Site Plans for locations.

12.3.3 For new footpath to existing site access road from Grimshaw Lane refer to para 11.2.3 and engineer's drawing.

12.4 Car Parking and car manoeuvring areas

12.4.1 General car parking and all car manoeuvring areas are to be finished in permeable asphalt to enable storm water run-off to be drained & discharged to the underground drainage system. The permeable asphalt system reduces the run-off rate and subsequently the discharge rate of surface run-off to the storm water discharge location.

The permeable asphalt is to include for the following:

- 120mm thickness of permeable Binder & Surface courses in 2 applications to include Hydraulic Conductivity testing as Tarmac QA requires.
- 300mm thickness of permeable Granular Reservoir Aggregate providing minimum compacted voids of 30% and mechanical resistance to rutting
- Heavy duty impermeable geomembrane with welded joints laid to horizontal & vertical faces with protection fleece to underside (dressing to intrusions to be agreed). Discharge from the permeable asphalt to discharge to underground attenuation tank via a collection manhole.
- White linings to car parking areas within the service yards and in front of the offices will have 'white' thermoplastic marking paint to a total width of 100mm. Falls shall be a minimum of 1:80.

Any car parking shown in the service yard areas are to finished in concrete (as 12.5.1).

12.4.2 Car parking spaces
Will be of a size 2.5m x 5m minimum and the road width between bays will be 6.0m minimum. Disabled car parking spaces are to be provided to the approval of the Local Authority. Appropriate thermoplastic disabled space markings shall be provided.

12.5 Service yards, access roads and adjoining areas to the unit

12.5.1 Concrete
Insitu concrete with light brush finish and trowelled edge.
The concrete bays are to be of a similar size and orientation as far as possible.

These areas are to be designed in accordance with the requirements of Design Manual for Roads and Bridges, IAN 73/06 – Foundations and HD 26/06 – Pavement Design published by the Highways Agency.

The service yard areas and access roads shall provide for commercial vehicles with a gross laden weight of 44 tonnes and maximum vehicle length of 16.50m.

Falls within vehicle parking areas shall be a maximum 1:30 and 1:40 in circulation areas.
The surface tolerance for the concrete paving should be ± 10mm.
Concrete bay sizes shall be kept to the minimum to prevent future cracking.

The service yard and associated access and hard standing areas will be excavated to the required formation level, trimmed and a sub base thickness depending on CBR values established at formation level of suitable fill material blinded with fine chippings, sand or clinker ash.
The slab will be reinforced concrete to the Structural Engineers details and laid to falls generally not exceeding 1:30 with tamp or brush finish surface and 100mm trowelled margin.

Bay sizes and all longitudinal, contraction, expansion and isolation joints will be formed in accordance with the recommendations of the Structural Engineer.

All concrete work generally will be in accordance with BS EN 1992-1:2004 Eurocode 2 'The Structural Use of Concrete' using appropriate grade Air Entrained concrete.

Precast concrete kerbs shall be provided to the perimeter of the services yard with Trief or similar kerbs used in all areas where lorries are likely to cause damage.

White thermoplastic linings shall be provided to define lorry parking and safety defined spaces.

All works to be completed in accordance with BS EN 13108:2006 Part 1 and part 7.

Please note that the yard area to the south west of the internal site access road to Unit 12 is to be finished in concrete, with the specification as above, for potential use as additional lorry parking or storage by future tenants.

12.6 Building Perimeter

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12.6.1 Where there aren't footpaths as in para 12.3.2, the buildings to have a 300mm wide gravel margin with concrete edging with 2.5m wide maintenance zone beyond to be finished in insitu concrete sufficient for MEWP maintenance vehicles' loading.

12.7 Refuse Area and External Plant Enclosures

12.7.1 Galvanise steel panels to refuse storage areas with lockable ledged and braced steel panelled gates to match will be provided with lighting, water supply, tap and gully drainage to each unit. The space will be size to accommodate 4no 1100 litre lockable euro-bins to the Local Authority approved specification provided by the Contractor. Each enclosure will be approx. 5.0m x 5.0m (or as per BREEAM requirements).

12.7.2 The refuse area store will be positioned as identified on the design drawings subject to the agreement of the Local Environmental Services Dept.

12.8 Soft Landscaping

12.8.1 The soft landscaping to be completed in accordance with the landscape scheme approved by the Employer and Local Authority.

Trees, shrubs and other plants to be detailed and described on a landscape plan and agreed with the Local Authority, will be planted, with minimum 50mm bark mulching, watered, staked and supported as necessary. One year's maintenance of trees, shrubs and landscaping areas shall be provided, including the replacement of plants/trees that die during this period. Grass, shrubs and trees shall be adequately maintained and watered during the maintenance period.

12.9 Fencing / Walls

12.9.1 A 2.4 metre high steel paladin fence shall be provided as shown on the site layout drawing. Colour to be black. Pedestrian gates will be provided within this fencing to give access from both service yards and to the gaps between the units for access & maintenance purposes as shown on the site layout & fencing layout drawings.

12.9.2 Allowance to be made for refurbishing or replacement of sections of the existing palisade fencing to the perimeter of the site where the standard of the existing fencing is poor or damaged. New galvanised palisade fencing to match existing to be provided to close the gaps to the existing perimeter fencing where existing buildings currently border the site boundary.

12.9.3 2.4m high black coloured paladin bi-folding steel gates, pedestrian gate at site entrance and fencing to be supplied at the end of the existing site access road from Grimshaw Lane to match the existing paladin fencing to the east side of the existing site access road. The same paladin fencing to be provided along the canal-side boundary to Units 1 to 6, returning along the Grimshaw Lane frontage, then returning before the existing retaining wall at the site entrance road to then finish by the south east corner of Unit 2.

12.9.4 Pedestrian gates will be provided within this fencing as indicated on the drawing. All gates forming part of fire escape routes to include suitable ironmongery and maglock / fire automated opening system (or similar approved) to comply with building regulations. Implemented escape system not to compromise security of the site / enclosed areas.

12.9.5 Maglocks to be included in fire escape routes.

12.10 Cycle Shelters

12.10.1 Pemberton Cycle Shelters by Bollard Street to be provided to the units to the approval of the Local Authority and the Employer's Agent. Shelter to have a powder coat finish colour to match curtain walling

and to include Sheffield stands for each unit as shown on the drawings - also to be located as shown on the drawings. Top roof cover to be translucent finish.

12.11 Fire Hydrants

12.11.1 Will be provided in accordance with Local Authority Requirements in accordance with BS 9990:2015 and BS 5306-1:2006

12.12 External escape stairs

12.12.1 External spiral secondary escape stairs to be provided to Units 7 to 10 from 1st floor offices to ground level and will be of galvanised steel as indicated on the drawings with width and tread dimensions to comply with Building Regulation requirements. Stairs, landings, treads, risers and support framework and posts to be of galvanised steel construction. Treads and landings to be non-slip chequer plate. Mild steel balustrades and handrails to be incorporated with standard horizontal infills to landing and stairs as per Building Regulation requirements. Handrail (both sides) and nosing treatment (nominal colour yellow) as per Building Regulation requirements.

13 SUBMITTALS AND VERIFICATIONS

13.1 Final Design and Coordination

Complete the design and detailing of the Works and provide complete production information (including, as appropriate, co-ordination / fabrication / installation drawings, all design calculations, specifications etc.) based on the drawings, this specification and other information provided, liaising as necessary with the Employers Agent to ensure full co-ordination of the Works with related Works packages and services.

Information: Request additional information as necessary from the Employers Agent and provide information as necessary in time to meet the programme.

Submission: Submit sufficient copies of the design / production information to the Employer's Agent in accordance with the Contract Preliminaries.

The Employers Agent will review the design / production information, record their comments, which will be restricted to general aesthetic and functional matters and not the detail design and performance of the Works (which is the complete and sole responsibility of the Contractor). These will be returned within 5 working days to the Contractor.

Make any necessary amendments in accordance with any comments and without delay. Unless, and until it is confirmed that re-submission is not required, re-submit for further comment, and incorporate any necessary further amendments.

Co-ordinate all services requirements with other Specialist Contractors, making due allowance for out of sequence work, builders work, making good, protection and cleaning as necessary.

Submit copies of final version of design / production information for distribution as required by the Contract Preliminaries.

If submitted design / production information differs from the requirements of the Contract documents, each such difference must be the subject of a request for substitution or variation, supported by all relevant information. Such substitutions or variations may be considered where a cost saving can be achieved without prejudicing the programme, the overall design, performance and the specified quality of materials or workmanship.

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examined and accepted the quality benchmark. Carry out immediately any alterations or adjustments required by the EA in order to achieve the quality of installation required.
Upon receipt of the EA's acceptance, fully protect the quality benchmark. It shall be used, from time to time, by the EA to check and monitor quality of materials and workmanship incorporated in the remaining areas of the works, or where specifically stated for the purpose of further testing.
Remove and replace all protection when requested by the EA for such purposes.

13.4 Supervision

13.4.1 Documentary evidence of personnel experience may be requested and must be available at any time.

13.5 Quality Control Records

13.5.1 Maintain full records to substantiate that the Works comply with the specified requirements. Keep copies on site for inspection by the Architect, and submit copies of particular parts of the records on request. The records must include:
Identification of the element, item, batch or lot including location in the Works.
The nature and dates of reviews by the CA, tests and approvals.
The nature and extent of deficiencies found.
Details on any corrective action.

14 FABRIC DESIGN

14.1 CWCT

14.1.1 Complete the design, manufacture, fabrication and installation of the building cladding, curtain wall and window systems in accordance with the recommendations of the CWCT Standard for Systemised Building Envelopes.

14.2 Testing

14.2.1 A separate submittal shall be provided by the Louvre supplier detailing existing testing criteria with particular regard to wind driven precipitation.

14.2.2 Project testing (site)
At an agreed stage during preliminary installation on site arrange for the progressive testing of a section of the specified window/ screens and louvres in accordance with relevant clauses of this specification.
Protect building structure, components and finishes from any damage consequent upon testing.
Installation of general areas of cladding/ curtain walling and louvres must not continue until site test results and reports showing compliance with this specification have been submitted to the EA.

Testing authority
Project testing must be carried out by a United Kingdom Accreditation Service (UKAS) approved independent laboratory.

14.3 Lightning Protection

14.3.1 Submit drawings showing proposals for bonding the various elements of the Works for review by the Professional Team.

13.2 Quality Standards/Control: Assessment and Verification

13.2.1 General Quality of Products: Materials and Products Tests:

Provide test certificates or certificates of compliance as necessary, or as required by The Employer's Agent for tests specified within listed British Standards, Codes of Practice or other applicable documents, to confirm properties, composition or performance of materials and products proposed.
Only certificates provided by independent and authoritative testing bodies will be accepted.
Submit details in the form of a schedule, of materials and products for which evidence of tests will be provided for review.

13.2.2 Proprietary Products: Suitability for Use and Design Life

Provide written certification from manufacturers that their products or materials proposed are appropriate for their expected conditions in use together with statements on their respective life expectancies in use.

13.3 Samples/Control Samples/Mock-Ups/ Benchmarking

13.3.1 Sample Requirements:

Sample requirements include, but are not necessarily limited to, the following:

1. Curtain wall and window sections and fittings
2. Metal wall and roof cladding
3. Double Glazing units, gaskets and/or sealants
4. Louvres: to include horizontal or vertical blades, bird mesh, fly screen
5. Ironmongery (windows, doors, entrance doors).
6. Internal and external light fittings.

Samples are to be of sufficient size to be fully representative of the specified material or product.

13.3.2 Samples Generally

Samples shall include various products, natural materials, fabricated items, equipment, devices, appliances or components thereof, as may be required to satisfy the visual appearance and technical requirements of the Design.
Samples shall be reviewed for their visual characteristics only and where moving or operating elements are involved, the CA shall be given the opportunity to review working samples.
Ranges of samples shall be provided where a considerable range of colour, graining, texture, smoothness and other characteristics may be anticipated in the works.
Where custom colours are specified, samples shall be submitted illustrating precise colours, textures, patterns and finishes for review by the CA.

Provide 1No. of each sample required unless otherwise specified, for review.
Label all samples with manufacturer's name, identifying information indicating what sample represents and date.
Permission may be given for samples to be incorporated in the finished work where warranted by cost of submission.

Production drawings must identify component tolerances and show how given design tolerances are accommodated and other dimensional information given elsewhere in this specification.

13.3.3 Quality Benchmarks

Upon commencement of installation, erect complete sections of elements of the works, where described in the particular Works Sections, for acceptance of the EA. These shall be used as a quality benchmark for the remainder of the works until Practical Completion.
Installations shall not commence in other areas of that particular trade until the EA has

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15 ROOF ACCESS AND MAINTENANCE

15.1 Cleaning of Gutters and Maintenance

The new buildings roof and gutters will be cleaned at roof level via designated access routes and using the MEWP apparatus. Details and a method statement is to be prepared and submitted to the Principal Designer for approval.

16 PROHIBITED MATERIALS

High alumina cement in structural elements.

Wood wool members in permanent formwork to concrete or in structural elements.
Calcium Chloride admixtures for use in reinforced concrete.

Asbestos or asbestos products.

Naturally occurring aggregates for use in reinforced concrete which do not comply with BS EN 12620:2002 and naturally occurring aggregates for use in concrete which do not comply with the provisions of BS EN 1992-1-1:2004.

Lead or any products containing lead for use in connection with drinking water except where copper alloy fittings containing lead are specifically required for drinking water pipework supplied by any relevant Statutory Provider.

Urea formaldehyde foam or materials which may release formaldehyde in quantities which may be hazardous with reference to limits set out by The Health and Safety Executive at time of use.

Materials which are comprised of mineral fibres either man-made or naturally occurring which generally have a diameter of 3 microns or less and generally a length of 200 microns or less which contain any fibres not sealed or otherwise stabilised to ensure that fibre migration is prevented.

Concealed galvanised wall ties, fixings, brackets, angles and supports where used in external elements.

Any electronic or processor controlled equipment and component supplies which are not fully compliant with the change recognition given by the BSI document DISC PD 2000-1 A Definition of Year 2000 Conformity Requirements.

Poly-isocyanurate except where fire-rated appropriate to its intended location.

Composite panels with a core of polystyrene or other material not approved by The Loss Prevention Council.

Other substances generally known at the time of use to be deleterious or to cause risk to health or safety or to affect the durability of the Project in the particular circumstances in which they are used: and

Any substances or materials which are not used in accordance with the latest edition of the guidance contained in 'Good Practice in the Selection of Construction Materials 2011' published by the BCO or such other version of such publication at the time of use.

17 HEALTH AND SAFETY

17.1 Principal Designer

The Employer has appointed a Principal Designer in accordance with the requirements of the Construction (Design & Management) Regulations 2015 as implemented on 6th April 2015. This

appointment will address the pre-construction phase of the works only, from the point of contract award the Main Contractor will adopt the role of Principal Designer in full and will discharge all associated responsibilities in full.

The client's health and safety advisor will be retained as a client advisor and will continue to monitor the effectiveness of the management arrangements made. The Contractor shall liaise with the Employer's Agent and client health and safety advisor as required throughout the project. The contractor will be responsible for the delivery of the project health and safety and building operations manuals.

18 BREEAM

The works will be designed to achieve BREEAM 2018 rating of "very good" and EPC rating minimum B. Proof of compliance and certificates are to be produced by the main contractor.

19 APPENDIX 01

Refer to separate Planning Application drawing schedule.