

P2M

Construction Consultants

P2M (UK) Limited

Church House Business Centre
Church House
1 Church Road
Croydon, CR0 1SG

Tel: 020 8401 7510

Fax: 020 8401 0808

www.p2m-uk.co.uk

info@p2m-uk.co.uk

GLE PROPERTY DEVELOPMENTS

ALDER CLOSE ERITH

SPECIFICATION



01 DECEMBER 2006



Our Ref: Alder Close - Final Contract Specification Rev A

Document control sheet

Client: GLE PROPERTY DEVELOPMENTS LTD
 Project: Alder Close Erith Job No:
 Title: FINAL SPECIFICATION

Prepared by Reviewed by Approved by

ORIGINAL	NAME Terry Holmes	NAME	NAME Terry Holmes
DATE 08.12.06	SIGNATURE 	SIGNATURE	SIGNATURE 

REVISION A	NAME Terry Holmes	NAME	NAME Terry Holmes
DATE 28.03.07	SIGNATURE 	SIGNATURE	SIGNATURE 

REVISION	NAME	NAME	NAME
DATE	SIGNATURE	SIGNATURE	SIGNATURE

This report, and information or advice which it contains, is provided by P2M UK Limited solely for internal use and reliance by its Client in performance of P2M UK Limited's duties and liabilities under its contract with the Client. Any advice, opinions, or recommendations within this report should be read and relied upon only in the context of the report as a whole. The advice and opinions in this report are based upon the information made available to P2M UK Limited at the date of this report and on current UK standards, codes, technology and construction practices as at the date of this report. Following final delivery of this report to the Client, P2M UK Limited will have no further obligations or duty to advise the Client on any matters, including development affecting the information or advice provided in this report. This report has been prepared by P2M UK Limited in their professional capacity as Consulting Engineers. The contents of the report do not, in any way, purport to include any manner of legal advice or opinion. This report is prepared in accordance with the terms and conditions of P2M UK Limited's contract with the Client. Regard should be had to those terms and conditions when considering and/or placing any reliance on this report. Should the Client wish to release this report to a Third Party for that party's reliance, P2M UK Limited may, at its discretion, agree to such release provided that:

- (a) P2M UK Limited's written agreement is obtained prior to such release, and
- (b) By release of the report to the Third Party, that Third Party does not acquire any rights, contractual or otherwise, whatsoever against P2M UK Limited, and P2M UK Limited accordingly assume no duties, liabilities or obligations to that Third Party, and
- (c) P2M UK Limited accepts no responsibility for any loss or damage incurred by the Client or for any conflict of P2M UK Limited's interests arising out of the Client's release of this report to the Third Party

Our Ref: Alder Close - Final Contract Specification Rev A

Contents

CONTRACT SPECIFICATION

1.1	Introduction	4
1.2	General	5
1.3	Substructure	5
1.4	Superstructure	5
1.5	Upper Floors/Staircases/Balustrade	6
1.6	Roof Coverings	6
1.7	External Walls	7
1.8	Internal Walls and Partitions	7
1.9	Internal Doors	8
1.10	Finishes	8
1.11	Fittings	9
1.12	Electrical Installation	9
1.13	Mechanical & Plumbing	10
1.14	External Works	10

	SCHEDULE OF ACCOMMODATION	12
--	----------------------------------	-----------

CONTRACT SPECIFICATION

1.1 Introduction

1.1.1 The scheme will be designed and constructed in accordance with relevant statutory instruments, regulations, codes and standards current practise at the date of commencement of the works including but not limited to the following:-

- Town & Country Planning Act 1990
- Building regulations 1991
- Construction (design & Management) Regulations 1994
- Environmental Protection act 1990
- Construction Health & Safety at Work Act 1994
- Electrical Equipment Safety Regulations 1994
- Gas Safety (Installation and Use) Regulations 1994
- Water Industry Act 1991
- Water Resources Act 1991
- Water Bye-laws
- IEE Regulations
- British Standards Codes of Practice
- CIBSE Guides, Codes, Commissioning Procedures and Technical Memoranda
- Institute of Plumbing Design Guide
- BSRIA code of Practice: 1994 Environmental Code of Practice for Buildings and their Services.

1.1.2 It will be the responsibility of the ingoing occupier to satisfy the requirements of the local fire service and obtain the necessary documentation since precise requirements are dependant upon the specific use to which each unit is to be put.

1.1.3 The approach to design adopts conventional techniques, materials and detailing and endeavours to provide a flexible 'base building', which will be fitted out by incoming occupiers. For the avoidance of doubt this document sets out the scope of works in respect of the 'Base Building'.

Our Ref: Alder Close - Final Contract Specification Rev A

1.2 General

- 1.2.1 General site clearance and bulk dig/fill to achieve the desired site levels will be undertaken
- 1.2.2 A site investigation document exists which highlights the nature of the soil strata below the site. The report indicates that due to the presence of peat within the general Thamesmead area, all buildings will require both piled foundations and piled ground floor slabs to meet loading requirements. In addition settlement of the external courtyards and roads can be expected over a period of time from completion of the Development. To cater for such possibilities the design of the courtyards includes for a transition slab between the vehicle entrances and the building. This will alleviate any settlement and maintain a level vehicle entrance threshold.

Provision has also been made within the design of the external foul and surface water drainage to cater for possible settlement.

1.3 Substructure

- 1.3.1 Consideration of the existing ground condition will dictate the type and depth of foundations. As previously stated the site investigation report notes that 'piled foundations' will be required. These foundations will be designed in accordance with good practise to meet the loading requirements of the buildings detailed in this specification
- 1.3.2 The ground floor slabs will be 250 mm thick mesh reinforced concrete; grade C35, with slab thickenings underneath party walls and external walls as necessary, Where required insulation board and 1200 gauge polythene dpm or alternatively a gas membrane will be laid as required to a suitable sub-base. The slabs will have a power floated finish and dust sealer.
- 1.3.3 The ground floor slabs will be designed to carry a maximum UDL of 20 KN m² (400 lbs per sq ft).
- 1.3.4 The surface flatness of the floor slab will conform to FM2 Property IV only in accordance with the Concrete Society Technical Report 34 Second Edition

1.4 Superstructure

- 1.4.1 The structural frame will be of portal frame construction. Roof pitch will be 10 degrees.
- 1.4.2 The structural frame will provide a minimum internal clear height to roof purlins of 6230mm.

Our Ref: Alder Close - Final Contract Specification Rev A

- 1.4.3 Where mezzanines are installed a minimum internal clear height of 2800mm to 2850mm (2690mm in localised areas of primary beams) will be provided under the mezzanine. At mezzanine level a 3000mm internal clear height to roof purlins will be provided (reducing to 2400mm in isolated areas under primary steel haunches)
- 1.4.4 The frame will be designed for imposed mezzanine floor loadings of 2.5 KN/m² with an additional 1 KN/m² for partitions (small office loadings)
- 1.4.5 Fire protection, where required, to the external wall beams, the internal party wall beams and columns above 2.4m will be by dry lining encasements.
- 1.4.6 Fire protection to the mezzanine floor intermediate beams and party wall columns from finished floor slab to 2.4m will be intumescent paint, Nullifire or equally approved (non-decorative finish). All fire protection will provide one hour fire resistance.
- 1.4.7 Where structural steelwork is encased in masonry construction it will be painted with two coats of bitumastic paint, including base plates/connecting plates/bolts.
- 1.4.8 All structural steelwork will be shot-blasted and painted at works with one coat epoxy primer/finish @ 75 microns dry film thickness.

1.5 Upper Floors/Staircases/Balustrade

- 1.5.1 Upper mezzanine floors will be constructed of Richard Lees Ribdeck E60 or equally approved, 0.9 gauge metal decking, with a 130mm thick insitu reinforced concrete slab. Reinforcement is provided by one layer of A142 mesh. The slabs will have a power floated finish and dust sealer.
- 1.5.2 The surface flatness of the floor slab will conform to FM2 Property IV only in accordance with the Concrete Society Technical Report 34 Second Edition
- 1.5.3 Staircases will be of metal, including all necessary hand rails and balustrades. A contrasting stair tread nosing/painted edge detail will be provided to meet Building Regulations.

1.6 Roof Coverings

- 1.6.1 The roof cladding will be a built up system comprising a standard colour HPS200 coated profiled steel external layer 0.55mm minimum thickness with a 0.40mm minimum thickness white coated steel liner panels with mineral wool infill and galvanised zed spacers to achieve a minimum of 0.25 "U" value, all laid to a minimum pitch of 10 degrees on purlins, with all laps sealed and air-tight, to achieve 0.25 "U" value

Our Ref: Alder Close - Final Contract Specification Rev A

- 1.6.2 Double skin, GRP translucent safelights to BS 4154 will be provided equivalent to a minimum of 10% of the gross internal area of the warehouse floor area.
- 1.6.3 Perimeter eaves gutters are designed to be external to the main envelope. All gutters will be complete with weir overflows and outlets. Internal faces of the gutters will be factory coated in Sigma TCN 440.
- 1.6.4 Guttering is to be galvanised steel HPS200 plastisol coated complete with eaves cover flashings as necessary. Rainwater pipes will be powder coated galvanised pressed steel. All rainwater down pipes will be external and protected at ground level by mild steel framing where there is a risk of impact damage
- 1.6.5 Roof access points and safety line systems to be provided to facilitate safe maintenance operations.

1.7 External Walls

- 1.7.1 Wall cladding generally will comprise built up cladding of 0.55mm min. thick standard colour HPS200 plastisol coated profiled steel sheeting over rail lined with 0.40mm min. thick white coated steel liner panels with mineral wool infill and galvanised zed spacers to achieve a minimum of 0.35 "U" value. All laps are to be sealed and air-tight.
- 1.7.2 Fire resistance to external walls will be provided where required to comply with Building Regulations.
- 1.7.3 External walls will have a fair faced concrete inner leaf to 2250 mm above finished floor
- 1.7.4 All external walls will provide a U-value of 0.35W/m² K or better.
- 1.7.5 Flush faced powder coated steel entrance door set complete with entrance lever handle and lock and two number dead locks (all locks suited) and letter plate.
- 1.7.6 Powder coated aluminium double glazed windows, with 50% openable lights.
- 1.7.7 Manually operated factory plastisol coated insulated sectional steel overhead doors shall be provided. Doors to be 4 metres clear height by 3.0 metres clear width.
- 1.7.8 Where needed to rear of units, fire escape doors will be steel faced flush security doors in steel frames with gloss paint finish.

1.8 Internal Walls and Partitions

- 1.8.1 Internal party walls between units up to 2250 mm in height will be of concrete block. Above 2250 mm in height a metal stud partition faced both sides with plasterboard with taped and filled joints to provide 60

Our Ref: Alder Close - Final Contract Specification Rev A

minutes fire rating to accord with ordinary hazard group 6. The wall will include a single layer of MD1 Securilath mesh.

- 1.8.2 Where internal walls are required to enclose staircases to meet Building regulations these are constructed in metal stud faced both sides in plasterboard with taped and filled joints.
- 1.8.3 WC enclosures will be of 100 mm concrete block.

1.9 Internal Doors

- 1.9.1 Internal WC and staircase doors where required to meet Building regulations will be solid core painted plywood veneer faced doors with painted softwood frames. To be fire rated as appropriate.
- 1.9.2 Ironmongery to be of good quality stainless steel.
- 1.9.3 The doorway to the WC will include fitted MDF architraves painted white gloss

1.10 Finishes

General

- 1.10.1 Finishes generally will be as the exposed structure and pre-finished white lining tray.
- 1.10.2 All block work will be fair faced with bucket handle joints.
- 1.10.3 All plasterboard will be emulsion painted
- 1.10.4 Insitu floors will be power floated and sealed with a dust sealer.

Toilets

- 1.10.5 Internally the block walls of the WC will be painted with white emulsion.
- 1.10.6 White tiling as splash backs to WC basin
- 1.10.7 The WC floor will have welded vinyl floor covering and coved skirting. Where fixed to fair faced block work a plywood backing complete with capping piece will be provided.
- 1.10.8 Where a toilet is not positioned under a mezzanine floor, a roof will be provided to the toilet. The roof will be constructed of timber and plywood with the underside finished with painted plasterboard. Externally the roof will be finished with a capping and fascia (250mm in depth) in 18mm plywood, gloss painted.
- 1.10.9 All sanitary and plumbing pipe work will be exposed and left unpainted.

Our Ref: Alder Close - Final Contract Specification Rev A

1.11 Fittings

- 1.11.1 Signs and Notices will comply with current standards for a shell building.
- 1.11.2 Large external unit identification signs as shown on the drawings will be provided
- 1.11.3 A post and plank estate sign with arched header panel will be provided at the site entrance. The sign will include individual unit numbers and company names.

1.12 Electrical Installation

- 1.12.1 Incoming electrical supplies will terminate within the general ground floor area of each unit at a switchgear panel of suitable size to accommodate power, lighting and heating circuits to the ground and where included within the unit the mezzanine floor level with 4 spare ways. Each unit will be separately metered with a minimum 100 amps three phase supply
- 1.12.2 Lighting levels to be achieved will be
 - Toilets: 150 lux
 - General warehouse and underside of mezzanine floor where appropriate: To meet Building Regulations for a shell unit for escape purposes only (Note: High Bay lighting will not be provided)
 - Externally: 20 lux average up-rated to 35 lux average immediately outside the building
- 1.12.3 Luminaries where required will be either suspended strip lighting or pendant lights. All luminaries to have final connection via a plug-in ceiling rose
- 1.12.4 Externally the floodlight is to be fixed to the external elevation of each building and controlled by photocells.
- 1.12.5 Emergency lighting within all areas is to comply with BS 5266: Part 1 Category M3 or NM/3 to provide maintained or non maintained emergency lighting for three hours duration in compliance with Building Control. All emergency lighting will be provided with test key switches adjacent to light switch positions.
- 1.12.6 Lightning protection systems to BS 6651: 1992 to be provided if required.
- 1.12.7 Power circuits are to be by the future purchaser.

1.13 Mechanical & Plumbing

- 1.13.1 A full DOC M accessible toilet pack will be provided to each WC on the ground floor, including white vitreous china exposed cistern, WC, pedestal basin and disabled fittings.
- 1.13.2 UPVC wastes and soil and vent pipes.
- 1.13.3 Potable water supply shall be extended from the meter location and terminate within the unit. Feeds to WC's and point of use electric water heater adjacent to the WC basin will be installed.
- 1.13.4 No provision for smoke ventilation or automatic sprinkler protection systems will be made within the unit.
- 1.13.5 No heating provisions will be installed in the unit however the gas main at the meter location will be sized to allow for future provision of a gas fired heating system based upon achieving 16°C with an external ambient of -4°C. The gas pipe connection will be valved and plugged for future extension.
- 1.13.6 Each unit will be metered separately.

1.14 External Works

- 1.14.1 Service yards and access road will be designed to accommodate HGV vehicles and shall have a surface suitable for the abrasion characteristics for HGV use.
- 1.14.2 The pavements will be designed in accordance with BS 7533 and Department of Transport Standards taking due consideration of both usage and the site investigation report.
- 1.14.3 Courtyards will be constructed using a permeable paving system with car parking bays delineated.
- 1.14.4 Where required fire escape paths around the perimeters of Warehouses will be washed granular material retained by tanalised softwood edging boards and stakes.
- 1.14.5 Fencing to boundaries and courtyards to unit 1 and 28 will be 2m high powder coated (black) steel palisade.
- 1.14.6 The development will be gated with a 2 m high hinged palisade gate at the front entrance. The courtyards to units 1 and 28 will also be gated with a 2m high hinged personnel gate and a 2m high sliding palisade vehicle gate. All gates will match the fencing colour of the boundaries.
- 1.14.7 Protective steel tube filled bollards will be provided as necessary in areas where no pavement exists and safety from vehicles or potential damage from vehicles could occur.
- 1.14.8 Areas and enclosures for communal Refuse bins will be provided.

Our Ref: Alder Close - Final Contract Specification Rev A

- 1.14.9 A central bicycle store area with adjacent shower room will be provided. This will be located to the front of the site and is linked to all units by paths and pavements.
- 1.14.10 A minimal soft landscaping scheme will be implemented to satisfy the requirements of the planning permission.
- 1.14.11 Separate foul and surface water underground drainage systems designed and constructed in accordance with the requirements of BS 8301 and BS 8005 and
- 1.14.12 Surface water run off from roofs, roads, yards and parking areas will discharge through a permeable paving system to a headwall constructed within the Great Beam Reach adjacent to the site.
- 1.14.13 Two landlord watering points for maintenance of the soft landscape will be provided, one located adjacent to the cycle and shower enclosure and one located in the area of landscape adjacent to unit 20.
- 1.14.14 Fire hydrants shall be provided in accordance with the requirements of the Building Control and Local Fire Officer. Suitably located infrastructure ducts shall be provided to each building for the introduction of future Tenants service requirements.
- 1.14.15 Two independent underground duct systems for telecom provisions shall be provided into each building.

SCHEDULE OF ACCOMMODATION

Horizon Business Centre, 1-28 Alder Close, Erith, Kent Schedule of Floor Areas and Car Parking Allocation

Address of unit in Alder Close	Ground Floor Gross External s/f	Mezzanine Net Internal area s/f	Total area s/f	Yard/Car spaces	
				Exclusive Yard	Spaces
1	2,237	915	3,152	Yes	5
2	1,805	719	2,524	-	2
3	1,778	732	2,510	-	2
4	1,805	763	2,568	-	2
5	902	-	902	-	2
6	889	-	889	-	2
7	902	-	902	-	2
8	1,791	721	2,512	-	3
9	902	-	902	-	2
10	2,185	758	2,943	-	3
11	1,572	521	2,093	-	2
12	1,572	521	2,093	-	2
13	1,572	521	2,093	-	2
14	1,572	521	2,093	-	2
15	2,185	758	2,943	-	3
16	2,028	875	2,903	-	4
17	1,014	418	1,432	-	2
18	1,014	418	1,432	-	2
19	1,014	418	1,432	-	2
20	1,014	418	1,432	-	2
21	1,014	418	1,432	-	2
22	1,014	418	1,432	-	2
23	1,583	631	2,214	-	2
24	1,583	631	2,214	-	2
25	1,568	630	2,198	-	2
26	1,598	621	2,219	-	2
27	2,212	758	2,970	-	3
28	2,212	758	2,970	Yes	6
Totals	42,537	14,862	57,399		69

(All areas are approximate with a building tolerance of +/- 5% and measured in accordance with the RICS Code of Measuring Practice 5th Edition)