Viability Report

Ferrous, Manchester

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1. Introduction

1.1. Purpose of Report

This report has been prepared in accordance with the instructions received from Capital & Centric in respect of the site known as Ferrous, Manchester. We have been instructed to undertake an assessment of site viability based on the proposed residential scheme, which comprises 34 x 1 bedroom apartments, 69 x 2 bedroom apartments, 4 x 3 bedroom apartments and 1,716 sq ft of commercial space on the ground floor and a 103 sq ft Pavilion. The viability report is required to respond to the Council's requirement that 20% of the residential units in the scheme need to be affordable.

It will provide a brief overview of the location, site and development proposals. We will then provide an assessment of the local market to include local market trends, new build sales evidence, rental comparables, second hand sales evidence, development land market commentary and relevant land transactions. We will then assess the appraisal inputs including gross development value, standard build costs and other relevant costs in order to establish the level of affordable housing that can reasonably be provided on site.

1.2. Objectivity and Impartiality

In accordance with RICS Professional Standards, we can confirm that there are no conflicts of interest that affect our independent opinion being provided.

We have acted with objectivity, impartially, without interference and with reference to all appropriate available sources of information.

We can also confirm that no performance related or contingent fees have been agreed in respect of the provision of this report and subsequent viability advice.

1.3. Report

This report is dated 2 December 2021. It has been produced by Adam Mirley MRICS and reviewed by Charlie Alcroft MRICS.

The people stated above with MRICS qualifications are suitably qualified practitioners that have previously advised in respect of viability assessments across the North West.

1.4. Information Provided

We have been provided with and have relied upon the following information:

- Site Plan, produced by BDP (Appendix 1)
- Accommodation Schedule, produced by BDP (Appendix 2)
- Apartment Types, produced by BDP
- Area Schedule Plans, produced by BDP
- Cost Plan, prepared by Abacus (Appendix 5)

2. Site Information

2.1. Site Location

The site is located in Manchester city centre to the north of Manchester Piccadilly Station in an area known as 'Piccadilly East'. Manchester is the third largest city in England and the administrative and commercial hub of the North West region. It benefits from excellent motorway connections, including the M60 orbital motorway, which links to the M62/M6/M56/M61 and the M602, which provides a direct link into the city from the west.

There are two city centre main line railway stations, Piccadilly and Victoria, providing inter-city services throughout the UK. The fastest services to London Euston currently take 1 hour and 58 minutes. Manchester Piccadilly is the fourth busiest station in the United Kingdom outside London. Both stations are integrated into the Greater Manchester Metrolink tram system. Services into the city centre from Bury to the north, Rochdale to the north east and Ashton-under-Lyne to the east are now operational. To the west there are connections to MediaCity and Eccles. To the south several extensions have been completed including the South Manchester line to East Didsbury and the Airport line, in addition to the existing line to Altrincham. In the city centre work has now completed on a second city centre crossing. The Ordsall Chord is also now complete to create a link between Victoria, Oxford Road and Piccadilly stations which has further enhanced the city's connections.

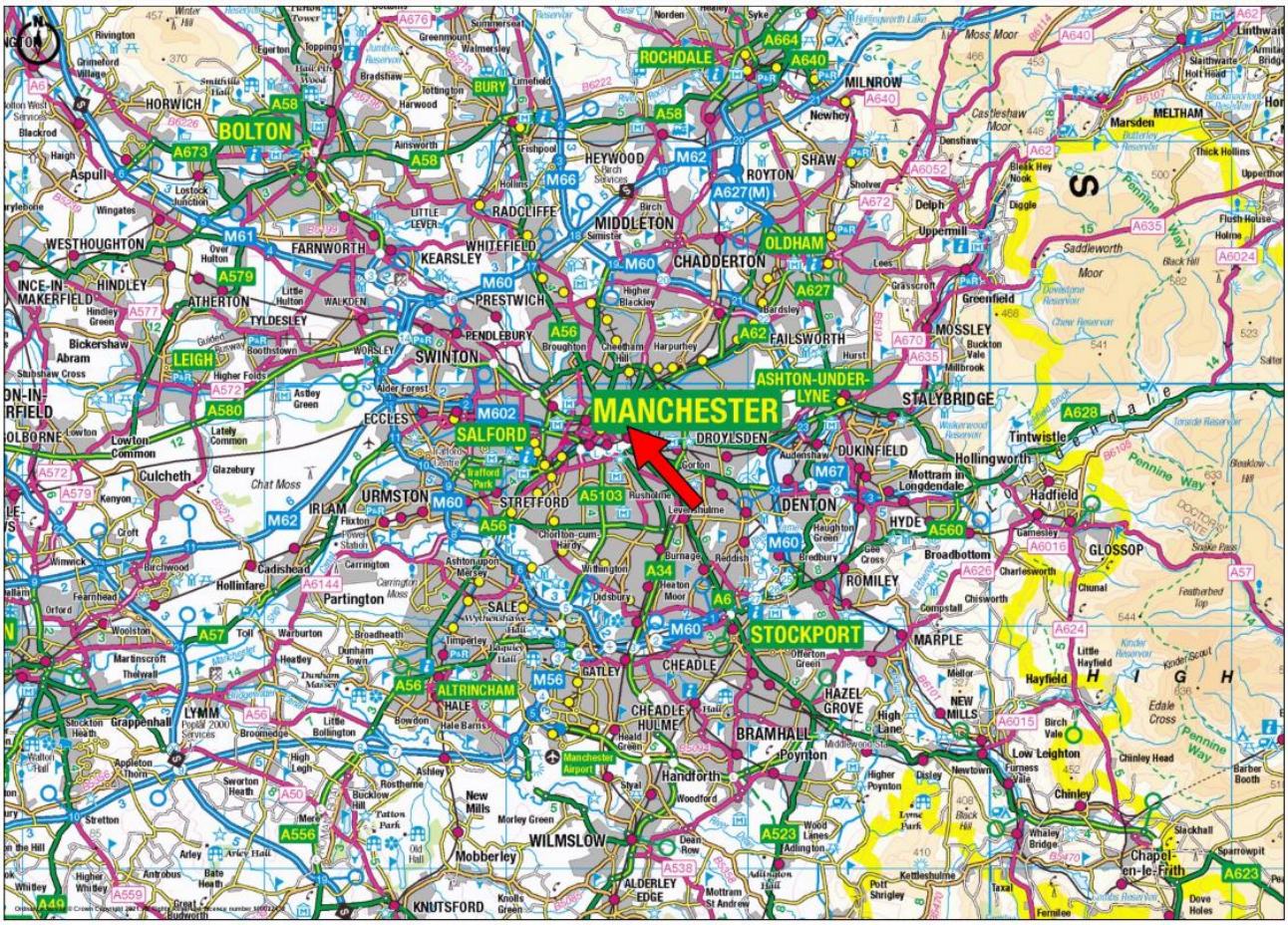


Figure 1: Site Location (Source: Promap October 2021)

2.2. Site Description

The site (outlined red on Figure 2) is irregular in shape and extends to approximately 0.42 acres (0.17 ha). A copy of the Site Plan is enclosed in **Appendix 1**.

The site currently comprises an area of grassland. To the south of the site is the Manchester Metrolink link line, to the west is Capital & Centric's Phoenix apartment scheme and to the north is Chapeltown Street and Quantum Apartments.

The development is well placed for the amenities of the city, and particularly the leisure and social amenities of the Northern Quarter and increasingly popular Ancoats and New Islington neighbourhoods.

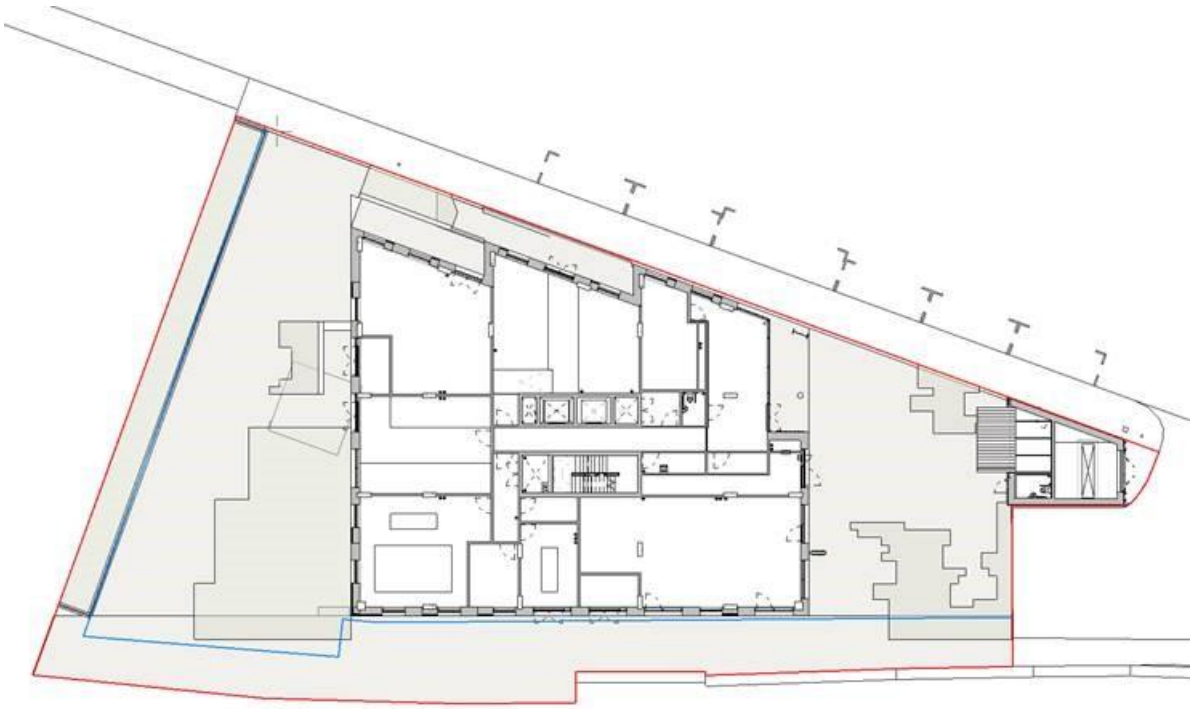


Figure 2: Site Boundary Plan (Source: BDP 2021)

2.3. Proposed Development

The site comprises 107 build-to-rent apartments over 14 floors with additional commercial accommodation at ground floor level and a Pavilion to the east of the site. Capital & Centric have provided the following schedule of accommodation for the site which has been prepared by BDP:

Accommodation Type	Beds	Bath	Sq M	Sq Ft	No.	Total Sq Ft
Commercial Unit 1	n/a	n/a	94.4	1016	1	1,016
Commercial Unit 2	n/a	n/a	65	700	1	700
Pavilion	n/a	n/a	13.2	142	1	142
				Total Commercial:	**2**	**1,858 GIA**
Apartment 1A	1	1	53	570	21	11,970
Apartment 1B	1	1	54	581	12	6,972
Apartment 1C	1	1	52	560	1	560
Apartment 2A	2	2	72	775	14	10,850
Apartment 2B	2	2	67	721	14	10,094
Apartment 2C	2	1	61	657	12	7,884
Apartment 2D	2	2	71	764	9	6,876
Apartment 2D	2	2	72	775	8	6,200
Apartment 2E	2	1	62	667	6	4,002
Apartment 2F	2	1	61	657	6	3,942
Apartment 3A	3	2	91	980	4	3,920
				Total Residential:	**107**	**73,281 NIA**

Figure 3: Schedule of Accommodation

The total NIA across the apartments is 73,281 sq ft which equates to an average unit size of 685 sq ft.

We have included the schedule of accommodation prepared by BDP at **Appendix 2**.

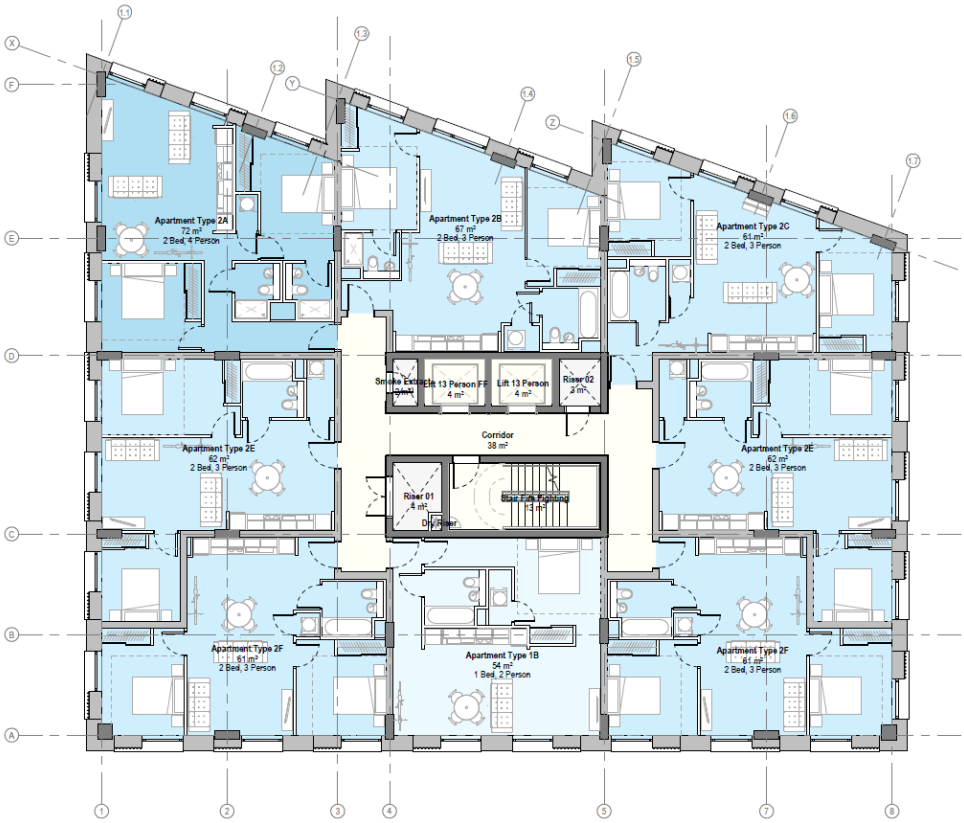


Figure 4: Typical Floor Plan for the scheme (Source: BDP 2021)

For the purpose of this assessment, we have assumed that the development will be finished to an appropriate standard of workmanship, specification and layout commensurate with new build schemes delivered by Capital & Centric and other developers in the local market.

2.4. Planning Policy

There are currently no planning applications associated with the site besides an historical change of use application from B2 to B8 in 1996.

The Development Plan for Manchester comprises the Manchester Core Strategy (adopted July 2012) and saved policies from the Unitary Development Plan (UDP) (adopted 2004).

The Core Strategy sets out the City Council's vision for Manchester to 2026, along with the planning policies that provide the framework for delivering that vision. It provides a spatial strategy for growth, identifying that Manchester will be the driver of the City Region economy due to the location of key assets in Manchester City Centre and the Regional Centre.

The Manchester Core Strategy, Development Plan Document, adopted July 2012 divides the city into five regeneration areas in addition to the City Centre. As defined by the proposals map, the site is located within the City Centre (CC) area as well as within the wider Manchester Regional Centre – Policy EC3. Relevant to the site, EC3 notes:

'In order that Manchester can continue to provide housing to support its sustainable economic growth and the regeneration of its inner areas, housing will be supported in the Regional Centre. It will be important that this complements the centre's overarching economic character now and in the future. The Council would expect the Regional Centre to be a location where apartment development is appropriate. However the exact mix of housing and density will need to be informed by its location relative to the City Centre and public transport facilities (especially the Metrolink).'

Policy CC3 – Housing relates specifically to the City Centre area and involves the delivery of c. 16,720 residential units over the period 2010-2027. Specifically, it notes:

'Residential development in the City Centre will comprise apartment schemes. The Council will encourage accommodation of a high standard which offers accommodation which is large enough to suit a range of occupants, in terms of both the number of rooms and their size.'

2.4.1. Affordable Housing and Other Requirements

In respect of affordable housing, the Supplementary Planning Document and Planning Guidance, adopted September 2008 stipulates 20% Affordable Housing on developments sites of 15 or more dwellings. Of this, 5% should be social rented and 15% should be intermediate housing, delivering affordable home ownership options. However, it notes that the proportion of intermediate or social rented housing might vary on each site.

2.5. Regeneration Framework: Piccadilly Central SRF

The site falls within the Piccadilly Central Strategic Regeneration Framework (SRF) which was approved in July 2018. Piccadilly Central is described within the SRF as 'an area characterised by dense mixed use development focused around a series of high quality public spaces'. The site is identified as a proposed residential and commercial development, as shown in Figure 5.

Figure 5: Piccadilly Central SRF (red arrow showing the site)

2.6. Infrastructure and Services

The assumed works required are accounted for within the construction costs where possible, which are further outlined in Section 7 of the report.

2.7. Highways and Access

We have assumed that the site can be freely accessed over the existing pavements and that there is sufficient access to plant and refuse areas. Fair Street that currently runs between the site and Phoenix Works will be stopped up as part of this application at the request of Manchester City Council but at a cost to Capital and Centric.

2.8. Tenure

The site is held freehold under title numbers GM800311, LA297790, MAN111891 and LA303564.

3. Viability Methodology

3.1. Overview

The fundamental issue in considering viability assessments in a town planning context, is whether a development is made unviable by the extent of affordable housing, planning obligations or other requirements. A proper understanding of financial viability is essential in ensuring that:

(i) land is released for development;

(ii) developers are capable of obtaining an appropriate market risk adjusted return for delivering the proposed development;

(iii) the proposed development is capable of securing funding; and assumptions about the quantum of development that can be delivered over the course of the plan period are robust.

Where planning obligation liabilities reduce the site value to the landowner and return to the developer below an appropriate level, land will not be released and development will not take place. Whilst the RICS Guidance Note: Financial Viability in Planning, 1st Edition (August 2012) is now out-dated, it provides a useful diagram to explain how viability is assessed:

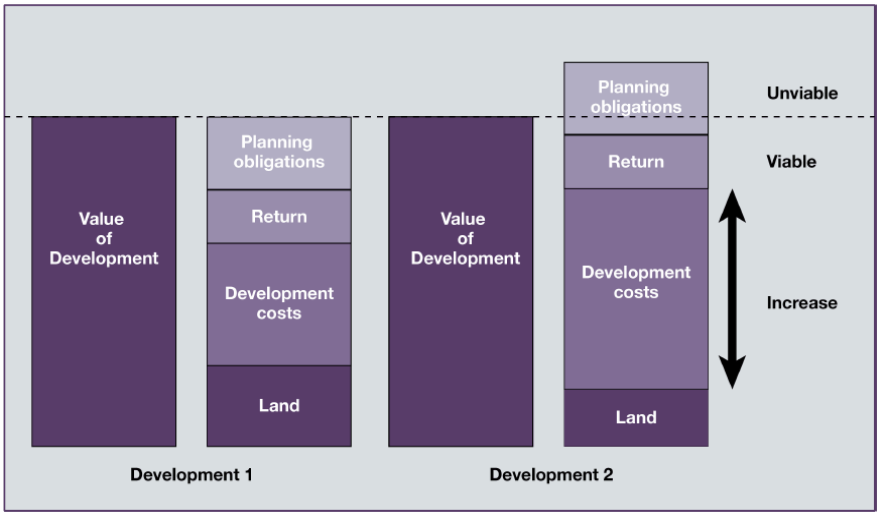


Figure 6: Development Viability Diagram (source: RICS Financial Viability in Planning)

3.2. National Planning Policy Framework and Planning Guidance

Paragraph 58 of the NPPF states that "all viability assessments, including any undertaken at the plan-making stage, should reflect the recommended approach in national planning guidance, including standardised inputs, and should be made publicly available".

It also states that: “where up-to-date policies have set out the contributions expected from development, planning applications that comply with them should be assumed to be viable. It is up to the applicant to demonstrate whether particular circumstances justify the need for a viability assessment at the application stage. The weight to be given to a viability assessment is a matter for the decision maker, having regard to all circumstances in the case, including whether the plan and viability evidence underpinning it is up to date, and any change in circumstance since the plan was brought into force.”

The Viability Planning Practice Guidance (PPG) prioritises the assessment of viability at the plan-making and development management stages. The preferred methodology in this respect is a typology approach whereby sites are grouped by shared characteristics such as location, size and whether they are greenfield or brownfield. Plan makers can then decide on an appropriate benchmark land value, average costs, average values and the subsequent policy requirements for each typology.

The PPG also sets out a preferred methodology for assessing viability at the decision making stage. A viability assessment should incorporate standardised inputs and should also be based upon and refer back to any viability that informed the development plan (subject to this being up to date). Any deviation from the figures used in the viability assessment of the plan should be explained and supported by evidence. The standardised inputs as set out in the planning practice guidance are as follows:

- Gross Development Value (GDV)
- Costs – to include build costs, abnormal costs, infrastructure costs, cost of conforming with planning policies (e.g. S.106 costs, CIL and affordable housing), finance costs, professional fees, management costs, sales/ marketing costs and contingency costs
- Benchmark Land Value – to be assessed as the Existing Use Value (EUV) plus a premium
- Developer's return

The method of assessing Benchmark Land Value is prescribed as the EUV plus an appropriate minimum premium for the landowner. The premium should provide a reasonable incentive, in comparison with other options available. Paragraph: 013 Reference ID: 10-013-20180724 of the PPG states that, "in order to establish a benchmark land value, plan makers, landowners, developers, infrastructure and affordable housing providers should engage and provide evidence to inform this iterative and collaborative process."

The PPG also states that the benchmark land value should be informed by market evidence (subject to this evidence being policy compliant). The EUV is the value of the land in its existing use. Existing use value is not the price paid and should disregard hope value. The premium should be based on professional judgement and must be based on the best available evidence.

There is also additional commentary in respect of a developer's profit, stating that 15% - 20% of GDV may be considered a suitable return for viability testing. A lower figure may be more appropriate in consideration of the delivery of affordable housing in certain circumstances, for example when a sale at a known value to a credible party is guaranteed.

The PPG recommends that an executive summary should be used to set out the key findings and inputs of a viability assessment, and placed in the public domain. This should state what assumptions have been made in respect of gross development value, benchmark land value, costs and developer's return.

3.3. Financial Viability in Planning: Conduct and Reporting (Professional Standards)

This RICS professional standards and guidance, Financial Viability in Planning Conduct and Reporting, 1st Edition, dated May 2019 states the following: "RICS members must comply with the NPPF and PPG as the primary policy and guidance on assessing viability."

It sets out a number of mandatory requirements where Financial Viability Assessments (FVAs) are carried out. We would summarise these as follows:

i. Reports must be signed off by the author and reviewer, and include confirmation of the absence of conflicts of interest, that no performance related fees have been agreed and that all practitioners have acted with objectivity and impartiality.

ii. All inputs into an appraisal must be reasonably justified with as much good quality information as possible. Where a reviewer disagrees with a submitted and/or elements in it, differences must be clearly set out with supporting and reasonable justification. Where possible, practitioners should always try to resolve differences of opinion.

iii. In respect of the benchmark land value RICS members must report the existing use value, premium, market evidence and all supporting considerations, assumptions and justifications adopted, as well as alternative use value (if appropriate).

iv. All FVAs must provide a sensitivity analysis.

v. RICS members should provide a non-technical summary of the report, which includes key figures and conclusions, so that non-specialists can better understand them.

vi. RICS members must advocate reasonable, transparent and appropriate engagement between the parties.

3.4. Assessing viability in planning under the National Planning Policy Framework 2021 England – Guidance Note

An assessment of viability for planning purposes is distinct and separate from a market valuation for secured lending or company accounts purposes in accordance with the RICS Valuation – Global Standards. This document effectively updates the two RICS guidance notes above and became effective 1 July 2021.

A viability appraisal for planning purposes is to assist in the delivery of local planning policy in accordance with the NPPF and PPG and this note provides guidance as to how an RICS qualified surveyor should assess viability. There remains a lot of ambiguity in terms of the approach but we have set out below the key points that we have assessed from the document.

3.4.1. Benchmark land value (BLV)

The value to be established on the basis of the existing use value (EUV) plus a premium for the landowner (PPG, paragraph 013) or the alternative use value (AUV) in which the premium is already included. PPG paragraph 014 is clear that there *'may be a divergence between benchmark land values and market evidence; and plan makers should be aware that this could be due to different assumptions and methodologies used by individual developers, site promoters and landowners.'*

The primary approach is EUV+ (or AUV where appropriate). The other two approaches are crosschecks to check the robustness of the results of the primary approach:

- Policy-compliant residual land value, found by applying the residual valuation approach set out in Valuation of development property, RICS guidance note.
- The market comparison approach can be used to provide a further cross-check. Where the evidence allows, land transactions adjusted for policy compliance can be used.

The normal valuation approach to the analysis of transactions is set out in the 'Comparable evidence in real estate valuation', RICS guidance note.

The assessment of the benchmark land value (BLV) is an important part of the FVA. The PPG identifies the existing use value (EUV) plus a premium as the primary approach for assessing the BLV, but recognises that an alternative use value (AUV) ignoring a premium can also be used in some circumstances.

The components that need assessing are:

- EUV
- Premium
- AUV, where appropriate
- Policy-compliant site value assessed by the residual method
- Policy-compliant site value assessed by the comparative method

3.4.2. Existing use value (EUV)

The EUV is the value of land in its existing use, with no expectation of that use changing in the foreseeable future (based on Valuation of development property). The EUV excludes hope value from any assessment of the existing use value.

The 'price paid for land is not a relevant justification for failing to accord with relevant policies in the plan'. Landowners and site purchasers 'should consider this when agreeing land transactions'.

Where applicants do not feel that policy-compliant obligation levels are viable, it is up to them to demonstrate whether there are any particular circumstances to justify the need for an FVA at the decision-taking stage.

3.4.3. Sensitivity Analysis

It is mandatory in the Financial viability in planning: conduct and reporting RICS professional statement that FVAs include sensitivity analysis to examine the effect of changes in key inputs. Where projection models are used, this is particularly important given the reliance on forecasting costs and values.

3.5. Adopted Methodology

As per the NPPF and RICS guidance, we have adopted the prescribed approach to the standardised inputs and will be assessing the residual value of the proposed development as follows:

GROSS DEVELOPMENT VALUE less COSTS less PROFIT = RESIDUAL VALUE

We will assess the appropriate Benchmark Land Value and compare this to the residual value associated with the development. Should the residual value fall below the Benchmark Land Value, this would deem the development unviable. We have therefore assessed what level of planning obligations can be provided whilst ensuring the Benchmark Land Value is achieved.

4. Market Commentary

4.1. National Residential Market Trends

The latest Savills UK Housing Market Update, dated November 2021, is attached at **Appendix 3**.

4.2. Local Market Trends

The average apartment price in Manchester city centre as recorded by Zoopla (based on Land Registry data) is currently £234,243, which is below national averages. They are also reporting that the average price paid over the last 12 months is £230,787. The average value and average price paid over the last 12 months per house type in the area is as follows:

Property Type	Average Value	Average £/sq ft	Average Beds	Average £ Paid
Flats	£235,643	£290	1.8	£209,596

Figure 7: Property Values in Manchester city centre, November 2021 (source: Zoopla)

There have been 282 sales in Manchester city centre over the last year, of which 245 sales were for flats. The most active price point is between £150,000 and £200,000 with 31% of sales occurring within this range. Additionally, 28% of sales are between £100,000 and £150,000 and 19% are between £200,000 and £250,000. Approximately 95% of transactions have been for values below £300,000, indicating a ceiling value in the area and a lack of available stock above this level.

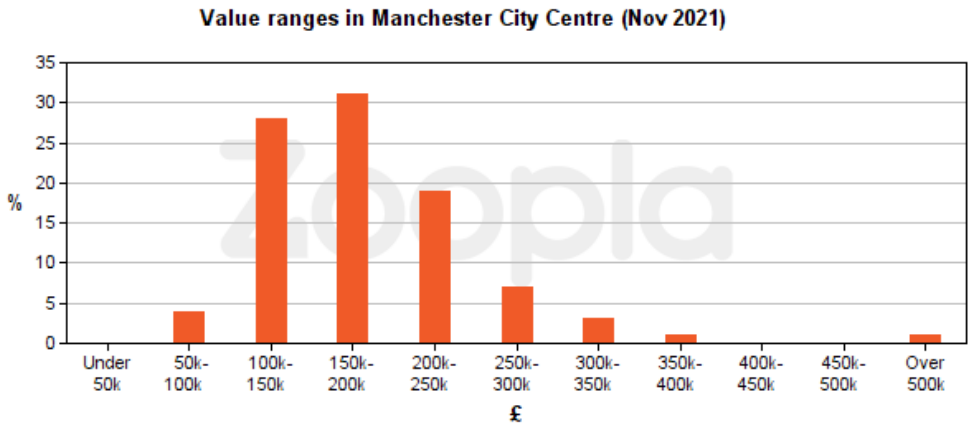


Figure 8: Value Ranges in Manchester city centre, November 2021 (source: Zoopla)

The recently ended stamp duty holiday (effective until 30th July 2021) which was established as a result of the COVID-19 pandemic raised the threshold for paying stamp duty from £125,000 to £500,000. It was well-received by the market and it is unknown what the short and long term impact will be now that the scheme has ended.

Help to Buy has been pivotal for the new homes market. Local agents are reporting strong levels of interest from buyers eligible for Help to Buy across most sites and it has been estimated to account for approximately 25% of new build sales across the North West since its introduction in 2013. The scheme changed in April 2021, with only first time buyers now being eligible and a regional price cap of £224,400. The scheme will finish in April 2023.

4.3. New Build Rental Market (BtR)

We have reviewed the new build schemes in the local area. BtR developments are new build properties that have been designed and built for the purpose of renting. There is a particular focus on service, with developments offering on-site management and amenities, shared spaces such as resident's lounges and gyms, which are typically provided inside the buildings along with the homes.

4.3.1. Kampus

This is a development by Capital & Centric, located approximately 0.5 miles to the west of the subject. It comprises 533 apartments across 5 distinctive buildings. Average rents achieved across the 1 and 2 bedroom apartments are as follows:

Beds	Range £pcm
1 bed	£1,413 - £1,516
2 bed	£1,886 - £2,175

The scheme is more centrally located than the proposed development and provides a wider range of amenities and we would therefore expect lower values at the subject.

4.3.2. The Astley

A 135 unit build to rent scheme delivered by Mulbury and funded by M&G. The site is located on the edge of the Northern Quarter fronting the inner city ring road which completed in late 2018. Amenities include a residents lounge and roof garden and there is ground floor commercial space. The scheme is 98% let with 3 units remaining (1 x 1-bed at £875pcm and 2 x 2-bed at £1,250pcm and £1,300pcm). Achieved rents on the completed units are as follows:

Beds	Range £pcm
Studio	£830 - £840
1 bed	£890 - £1,100
2 bed	£1,175 - £1,345
3 bed	£1,825

Across the scheme the average is in the order of £21.72/sq.ft but on a smaller average unit size of 622 sq.ft. This is inside the ring road, on the fringe of the established and popular Northern Quarter. We would expect similar rental values at the subject.

4.3.3. Anco & Co, Blossom Street

This is a development by Mulbury City in partnership with DTZ Investors. The scheme comprises 143 purpose built apartments and townhouses across two separate buildings and is located in the Ancoats area of Manchester, a popular destination for young professionals. The development includes extensive ground floor resident amenity space, reception and concierge areas, car parking and cycle spaces as well as a panoramic roof terrace incorporating a private dining room for residents. The development is now fully-let and achieved rents are as follows:

Beds	Range £pcm
1 bed	£930 - £1,100
2 bed	£1,270 - £1,500
3 bed	£2,130

The average lettings across the scheme are £23.24/sq.ft. Although located just outside of the ring road, the development is in a popular area of Manchester on the fringe of Ancoats and provides a large range of amenities.

4.3.4. Cottonfield Wharf

Another Manchester Life scheme in neighbouring New Islington, currently 98% let with 6 apartments remaining. Rents are detailed below:

Beds	Range £pcm
1 bed	£716 - £926
2 bed	£921 - £1,254
3 bed	£1,399 - £1,547

The rents are currently averaging £17.58/sq.ft, exclusive of parking which is rented separately. This is similar in proximity to the centre, but as with others more evolved as a residential neighbourhood, with greater amenities on the doorstep. It is also a canal fronting scheme.

4.3.5. Sawmill Court

Another recent Manchester Life development, in a prime Ancoats location, now effectively fully let with some modest operational vacancies. Current rents achieved at the scheme are as below.

Beds	Range £pcm
1 bed	£794 - £900
2 bed	£985 - £1,179
3 bed	£1,299 - £1,759

The achieved rental, equates to an average of £17.55/sq.ft across the building. These rents are relatively modest in the context of the location, but there was a high volume of units to let up with it effectively being released with Smiths Yard below.

4.3.6. Smith's Yard

Adjacent to Sawmill Court above, having been completed and let up at the same time. We understand the scheme is now 97% occupied, with rents as below.

Beds	Range £pcm
1 bed	£795 - £935
2 bed	£992 - £1,425
3 bed	£1,350 - £1,675

The average across the scheme is currently £17.25/sq.ft, exclusive of parking, rented separately at £95 per calendar month. The same comments as Sawmill Court above apply. The subjects ought to provide a higher level of specification and command higher rental values.

4.3.7. Weavers Quay

Another Manchester Life scheme, in nearby New Islington, completed in 2019, recently let up and now understood to be almost fully let with a few units remaining. Current rents are as follows:

Beds	Range £pcm
1 bed	£799 - £920
2 bed	£975 - £1,100
3 bed	£1,450 - £1,570

The average across the lettings to date is some £17.11/sq.ft. Car parking is let separately at £95 per calendar month. This is a fringe location, but part of a wider regeneration now approaching completion. The subjects are likely to be of a higher specification and therefore achieve higher rental values.

4.3.8. Angel Gardens

A new scheme currently being let up to the north west of the city centre in the NOMA district. We understand that rents achieved are currently in the order of:

Beds	Range £pcm
1 bed	£825
2 bed	£1,500 - £1,700
3 bed	£2,050 - £2,100

In broad terms, although just outside of the inner city ring road, it is a high specification scheme with a range of resident's facilities. We would expect the subject to achieve rents similar, albeit slightly lower than some of those achieved at Angle Gardens.

4.3.9. Burlington House, Tariff Street

Approximately 0.5 miles to the north west of the subject site this is a new scheme of 91 apartments completed in mid-2019, and fully occupied as at September 2019. Current rents are currently in the order of:

Beds	Range £pcm
1 bed	£985 - £1,095
2 bed	£1,095 - £1,825
3 bed	£1,775 - £1,935

The average across the scheme is some £20.17/sq.ft per annum. This scheme is also in an evolving location, and we would therefore expect similar rents at the subject.

4.4. Manchester Rental Market

We have also considered the secondary rental market within the local vicinity, focusing on stock that appears to be in a good condition and of a good specification so that a comparison can be made against potential new build prices:

Property	Beds	Rent (pcm)	Status	Date	Comments
Quantum	3	£1,300	Available		Located adjacent to the proposed site.
Cove, Minshull Street	2	£1,500	Available		
Islington Wharf	3	£1,895	Available		Top-floor duplex apartment
Islington Wharf	2	£1,195	Available		
Islington Wharf	2	£995	Available		
Islington Wharf	1	£750	Available		
Albion Works	2	£1,350	Available		Top-floor apartment.
Albion Works	2	£1,095	Available		Top-floor duplex apartment.
Albion Works	2	£850	Available		
Eastbank	1	£825	Available		
Vantage Quay	2	£950	Let	August 2021	
Islington Wharf	2	£875	Let	August 2021	
Home	2	£900	Let	May 2021	
Home	2	£775	Let	May 2021	
Home	2	£975	Let	April 2021	

Figure 9: Second Hand Rental Comparables

There has evidently been a range of achieved rents across 1 and 2 bedroom properties. Rental values achieved can depend on factors such as location, size, specification, house type, layout, location and parking provision.

The 1 bedroom flats are available to let for rents of £750 and £825 per calendar month. The 2 bedroom flats have let for values between £875 and £970 per calendar month and available 2 bedroom flats are between £850 and £1,500 per calendar month. The 3 bedroom flats in this sample let for £1,300 and £1,895 per calendar month, which includes the letting of a top-floor duplex apartment. Across the sample, the higher value rents were achieved on top-floor apartments which typically let for a premium.

We would expect to see some uplift above values for second hand stock to reflect the improved condition and specification that will be offered by new build property. It is however, important to maintain a relationship between the pricing of the new build property and existing stock to preserve affordability. Should the new build units be priced significantly above the second hand stock then the rate of sale will suffer as affordability and ceiling values in the area will affect ability to purchase.

4.5. Manchester Commercial Market

The subject site comprises two commercial units located at ground floor level. We have therefore reviewed comparable evidence of commercial units on new-build development schemes.

At Mansion House in New Islington, a development by Urban Splash, there will be three ground floor commercial units ranging from 947 – 1,895 sq ft. These units are currently being marketed at £25.00 per sq ft. These units will overlook New Islington Marina and Cotton Field Park and we would therefore expect the subject to achieve a lower rent per sq ft.
Oxygen is a development by Alliance that is located on Store Street, to the north of the subject site and on the opposite side of the Ashton Canal. At this development there is a 2,000 sq ft ground floor commercial unit that is being marketing at £20.00 per sq ft. The unit benefits from double height frontage onto the junction of Great Ancoats Street and Store Street and therefore is likely to achieve a higher rent per sq ft than the subject.

At the Islington Wharf development, a 5,111 sq ft commercial unit let in 2015 for £50,000 per annum which equates to £9.78 per sq ft. We would expect the subject to achieve a higher rent than that achieved here to reflect the uplift in rental tones in the market since 2015.

We are therefore of the opinion that the commercial units at the subject would achieve a rental value of £15.00 per sq ft.

4.6. Investment Market Evidence

We attach Savills latest UK Build to Rent Market Update at **Appendix 4**.

We are aware of the following relevant market evidence in Manchester and the North West:

Property	Units	Purchaser	Transaction	Price	Net Yield	Date
Tribe, Ancoats & New Islington	192	Grainger	Let investment	£26,000,000	5.25%	2017
The Rock, Bury	233	Grainger	Let investment	£22,100,000	4.8%	2017
Blossom Street, Ancoats	145	DTZ IM	Forward fund	£30,000,000	4.5%	2017
Lightbox, Media City	238	Atlas	Forward commit	£44,590,000	4.9%	2017
Deansgate Square, Manchester	350	L&G	Forward commit	£110,000,000	4.0%	2018
Middlewood Locks, Salford	277	Delancy	Forward commit	£55,800,000	4.35%	2018
Greengate, Salford	349	Atlas	Forward commit	£90,000,000	4.5%	2019
New Victoria, Manchester	520	PIC	Forward fund	£130,000,000	4.8%	2020
Skyline, Manchester	129	L1 Capital	Let investment	Undisclosed	4.5 – 4.75%	2020

Figure 10: Build-to-Rent Yield Comparables

Target yields vary depending on the type of investor and nature of the asset but we would expect net returns in the order of 4.5% - 5.25% for stabilised assets and 4.0% - 4.9% for non-stabilised assets. The subject is located within central Manchester and we therefore anticipate a yield of 4.75% at the subject.

4.7. Local Market Summary

We have reviewed the new build evidence in Manchester city centre where there is a range of Build-to-Rent comparables.

Across the comparables, 1-bed apartments have let for values between £716 - £1,516 per calendar month, 2-bed apartments have let for values between £921 - £2,175 per calendar month and 3-bed apartments have let for values between £1,299 - £2,130 per calendar month. Across these schemes, the higher rents have been achieved central, high specification developments in well-established neighbourhoods.

The second hand stock in the locality is achieving between £750 - £825 per calendar month for 1 bedroom apartments, £775 - £1,500 for 2 bedroom apartments and up to £1,895 for 3 bedroom apartments. As detailed in Section 4.4, a number of the rents achieved at the higher end of these values were for top-floor apartments that achieve a premium. We would expect the subject development to achieve some uplift above second hand values to reflect a new build premium for improved condition and specification. It is however important to maintain a relationship between the pricing of the new build property and existing stock to preserve affordability.

We would therefore expect 1 bedroom apartments at the subject to achieve base rents of £950 per calendar month, 2 bedroom apartments to achieve rents between £1,100 and £1,300 per calendar month and the 3 bedroom apartments to achieve rents of £1,750 per calendar month.

For the commercial units at the subject site, we would expect values in the order of £15.00 per sq ft.

We anticipate a yield of 4.75% on the Build-to-Rent Apartments which is in line with market evidence.

5. Benchmark Land Value

5.1. Overview

The Benchmark Land Value for developments, is calculated in accordance with the PPG and the latest RICS Guidance (2021) using the Existing Use Value Plus method.

The PPG states the following:

'A benchmark land value should be established on the basis of the Existing Use Value (EUV) of the land, plus a premium for the landowner. The premium for the landowner should reflect the minimum return at which it is considered a reasonable landowner would be willing to sell their land. The premium should provide a reasonable incentive, in comparison with other options available, for the landowner to sell the land for development while allowing a sufficient contribution to fully comply with policy requirements.'

Paragraph 013: Reference ID: 10-013-20190509

It goes on to say that:

'EUV is the value of the land in its existing use. Existing use value is not the price paid and should disregard hope value.'

Paragraph: 015 Reference ID: 10-015-20190509

It also states the following:

'Where a viability assessment is submitted to accompany a planning application this should be based upon and refer back to the viability assessment that informed the plan; and the applicant should provide evidence of what has changed since then.'

Paragraph: 008 Reference ID: 10-008-20190509

We have considered these definitions in our approach to Benchmark Land Value (BLV). We have reviewed market evidence to determine the existing use value. We have also reviewed evidence to inform the minimum premium, including the Local Authority evidence base and market evidence, with additional consideration to our professional judgement. The market evidence should be policy compliant and adjustments should be made depending on the site itself and market location.

5.2. Existing Use Value

There is a real challenge in valuing the existing use of this site. It sits in an area historically very industrial in nature but has no permission for such use. It is currently green space but is allocated for residential development up to 12 stories in the Piccadilly SRF. However as our appraisals in the next section demonstrates, a policy compliant affordable offer would deliver a negative land value hence adopting a residential land value for the EUV is difficult.

Given these questions and the difficulty in establishing a true EUV we are of the opinion that it may be most appropriate to align to other BLV's that have been adopted and accepted by the Council in recent viabilities. First, we outline comparable land transactions across the city centre in the table below to give a view as to the tone of value for residential sites in the City Centre:

Address	Developer	Area	Units	Planning	Price	Per Acre	Per plot	Date	Comments
Swan Street	Ridgeback	0.60	373	Yes	£10,000,000	£16,666,667	£26,810	February 21	
Long Acre Street	Packaged Living	0.7	350	Yes	£6,000,000	£8,571,429	£17,143	March 19	Unconditional
First Street	Downing	2.94	624	Yes	£18,000,000	£6,122,449	£28,846	March 19	Subject to Planning
Douglas House	United Living	0.3	86	Yes	£1,420,000	£4,733,333	£16,512	July 18	Subject to Planning
Victoria Riverside, Dantzic Street	FEC	2.05	344	Yes	£5,200,000	£2,536,585	£15,116	May 18	Auction
1 Lord Street	Fortis	0.57	192	Yes	£5,900,000	£10,341,053	£30,700	January 18	

Figure 12: Land Transaction Values

Transactions in Manchester city centre show that development sites have sold in the region of £10,000 to £31,000 per plot. Values will vary depending on factors such as scale, gross development values, abnormal development costs, net developable area and planning obligations. The most relevant comparables are the unconditional purchases of the former Pinnacle site, now Victoria Riverside on Dantzic Street by FEC and the Packaged Living acquisition on Long Acre Street (opposite this site) that equate to £15,000 - £17,000 per plot. It is also at this stage worth commenting that the subject site has been sold by TFGM to Capital and Centric for a value of £1.55m (£14,485 per plot). When compared to the Packaged Living deal this appears to reflect a sensible price for a similar asset.

We are conscious that these comparables are not really relevant for this viability but they help to provide a tone of value for this viability assessment. To help with assessing the BLV on this site we think it is fair to review recent viabilities assessments that have been reviewed and agreed by MCC as part of other similar applications to ensure that the BLV on this challenging site is aligned to other recent applications and ensure consistency in decision making.

The table below provides an overview of recent BLV's submitted and agreed by MCC.

Address	Developer	Area	Units	BLV	BLV Per Acre	BLV Per plot	Date	Comments
Eliza Yard	Manchester Life	0.59	118	£660,000	£1,118,644	£5,593	May 2021	Similar sized site in similar fringe location with similar units proposed
Bowlers Yard	Scarborough Group	0.22	64	£640,000	£2,909,091	£10,000	November 2019	Vacant cleared site close to the subject site
Crown Street Phase 2	Renaker	2.72	855	£8,882,275	£3,265,542	£10,389	April 2020	Site compound.
Victoria Riverside	FEC	2.05	634	£4,600,000	£2,243,902	£7,256	June 2020	Vacant part developed site
Addington Street	FEC	0.3	80	£1,200,000	£4,000,000	£15,000	September 2019	Public Car Park
Brunswick Place	Maryland Securities	2.06	277	£1,480,000	£718,447	£5,343	August 2021	Mill complex

Figure 13: Benchmark Land Values

If you exclude the Addington Street site the average BLV accepted by MCC in recent applications is £7,716 per plot.

5.3. Premium

In calculating the appropriate premium we have to consider the above positions and also reflect on the amount that would be appropriate. Establishing an EUV for the site is very difficult and as such we feel that the most appropriate approach is to assess comparable evidence from other BLV's agreed by MCC.

The minimum premium should reflect the minimum return at which a reasonable landowner would be willing to sell their land, to ensure that landowner are incentivised to release land for development. We have considered evidence from various sources to assess the minimum premium, including the local authority, market evidence, and applied our professional judgement based on the balance of this market evidence.

This is not an easy site to assess, the appraisal of a policy compliant scheme which is the sense check recommended in the RICS guidance does not drive a positive value for this development. Build cost inflation is making development viability in Manchester an increasing challenge despite the positive value growth we have seen in the market. Reviewing the land market seems to demonstrate that land values at the current expectations is unsustainable. However there does remain a need for housing and as such land owners need to be incentivised to sell land. It is our view that for the purpose of this assessment that reviewing BLV's from other similar sized site can provide a sensible BLV per plot for this site which is still about half the true market value of the site based on the deal agreed between CAPITAL AND CENTRIC and TFGM and other recent land transactions in the local area.

Adopting £7,716 per plot as a BLV would drive a land value of £825,612. Based on our EUV assessment this would in effect all be premium based on comparable evidence.

5.4. Benchmark Land Value

Based on the above we would suggest that the BLV for this site is **£825,612 say £825,000**. We will undertake residual appraisals of the scheme, and should the residual value fall below this level, the development would be unviable.

6. Gross Development Value

6.1. Overview

We have assessed the potential rental values that could be achieved for the proposed development based on the market commentary and comparable evidence in this report.

6.2. Built-to-Rent Apartments – Policy Compliant 20% Affordable Rent

Based on the market research and evidence in this report, we have valued the proposed private development at £349.26 per sq ft in line with our detailed assessment of the private rented market and a unit by unit pricing exercise of the whole scheme. We have adopted a policy compliant scheme assuming 15% shared ownership and 5% social rented. We have assumed £260 per sq ft for the Shared Ownership apartments and £180 per sq ft on the Social Rented apartments which aligns with assumptions made on similar developments and the current open market values in Manchester.

This produces a GDV of £24,002,626 across the 107 dwellings, which equates to a blended average of £327.54 per sq ft across the Build-to-Rent apartments.

6.3. Built-to-Rent Apartments – 100% Private Rent

We have also valued the scheme based on 100% Private Rent using the following rents per calendar month:

Accommodation Type	Sq M	Sq Ft	No. of Units	Rent (pcm)
Apartment 1A	53	570	21	£950
Apartment 1B	54	581	12	£950
Apartment 1C	52	560	1	£950
Apartment 2A	72	775	14	£1,300
Apartment 2B	67	721	14	£1,200
Apartment 2C	61	657	12	£1,100
Apartment 2D	71	764	9	£1,300
Apartment 2D	72	775	8	£1,300
Apartment 2E	62	667	6	£1,100
Apartment 2F	61	657	6	£1,100
Apartment 3A	91	980	4	£1,750
Total:			**107**	

Figure 14: Build-to-Rent Apartments

We have undertaken a unit by unit pricing exercise for the scheme using the above rents and adopting a £40 per calendar month increase every two floors (**Appendix 5**). This results in a Total Rent of £1,620,960 per annum. We have accounted for 25% operational costs on the Total Rent which results in a Net Rent of £1,215,720 per annum. We have then capitalised this rent at a yield of 4.75% which is reflective of the market. This results in an estimated GDV of £25,594,105 across the 107 dwellings, which equates to a blended average of £349.26 per sq ft across the Build-to-Rent apartments. This level of value is aligned with Savills view on the forward funding market in Manchester.

6.4. Built-to-Rent Commercial

Located within the Build-to-Rent Apartment block is 1,716 sq ft of commercial space. We have valued this at £15.00 per sq ft and capitalised this at a yield of 8% with a 3 month rent free assumption. This results in a capital value of **£315,619**. An additional 103 sq ft Pavilion will be used for pop up businesses, we have allowed a rent of £10.00 sq ft with an 8% yield giving a capital value of £12,875.

6.5. Total Gross Development Value

For the policy compliant 20% Affordable Rent scheme, this results in a Total Gross Development Value of **£24,331,102** for the whole scheme.

For the 100% Private Rent scheme, this results in a Total Gross Development Value of **£25,922,599**.

7. Appraisals

7.1. Overview

In order to assess the scheme viability we have undertaken a development appraisal, which is based on the following basic function:

GROSS DEVELOPMENT VALUE less COSTS less PROFIT = RESIDUAL VALUE

The calculation comprises many variables, most of which are based on estimates of cost or value. A residual appraisal is therefore significantly affected by small changes in its inputs. A change in any of the costs and values we have adopted here is likely to affect the value of the site as a development opportunity.

We have reviewed the Council's documentation and there is no relevant up to date viability assessment that has been undertaken. We have therefore relied upon our own market evidence and knowledge for the appraisal assumptions.

7.2. Appraisal Inputs – Policy Compliant 20% Affordable Rent

7.2.1. Gross Development Value

As outlined in section 6, we have assessed the GDV of the policy compliant scheme to be **£24,331,102.**

7.2.2. Build Costs

We have had reference to the cost plan provided and produced by Abacus, dated 18th October 2021. The cost plan (**Appendix 6**) has been produced in accordance with the outline plans drawn up for the scheme by BDP. The total build costs equate to £19,070,000, which equates to an average of approximately £201 per sq ft across the gross internal area of 95,091 sq ft. The costs are summarised as follows:

- Build-to-Rent: £17,790,000
- Pavilion: £100,000
- Site Preparation: £50,000
- External Works: £520,000
- Furniture, Fixtures & Equipment: £610,000

We are content that the above costs represent a realistic assumption for a development such as this. We have allowed for 5% contingency across the scheme.

7.2.3. Section 106 and other costs

We have not allowed for any Section 106 costs across the development. Any changes to these costs will affect our opinion of land value. We have included a cost of £40,000 for the stopping up of Fair Street by CAPITAL AND CENTRIC at the request of the Council, this cost was provided by CAPITAL AND CENTRIC

7.2.4. Fees and Finance

We have also made the following allowances within our appraisal:

- A finance rate of 4.75% - this allows for the cost of borrowing and opportunity cost of capital;
- Professional Fees of 8%;
- Letting Agent Fees of 10% for the commercial elements on the scheme;
- Letting Legal Fees of 5% for the commercial elements on the scheme;
- Sales Agent Fees of 1%;
- Legal Fees of 0.5%;
- Purchaser's Costs of 2.81%.

7.2.5. Timescales

We have allowed for phased construction over 20 months.

7.2.6. Profit

From our knowledge and experience of the development land market, it is usual for residential developers in the North West region to seek a minimum profit margin of 20% of revenue on residential developments. Additionally, 20% on GDV is typically required to secure development funding in the current market. This is also stated in the Viability Guidance as a suitable level of return:

'For the purpose of plan making an assumption of 15-20% of gross development value (GDV) may be considered a suitable return to developers in order to establish the viability of plan policies.'

Paragraph: 018 Reference ID: 10-018-20190509

A profit margin is a reflection of site specific development and sales risks as well as wider macro-economic / political risks.

In terms of site specific risks, the site is located in Manchester city centre where there is wide range of national / regional house builder activity.

There are also high levels of inflation that are being seen in the build cost market at the moment due to the shortage of materials and skilled labour, this increases construction risk for the developer.

In terms of macro-economic / political risks, there is uncertainty in the markets as a result of the UK withdrawal from the EU, with concerns over slowed market activity going forward. Interest rates have recently been cut to a historic low as a result of the impact of Covid-19 and it is likely that there will be increases over the short to medium term.

At the subject site, given that the assumption is that this will be a de-risked forward funding Build To Rent development we have agreed with the applicant that a profit margin of 12% on cost is appropriate for the viability assessment. This profit margin is in-line with standard assumptions for pre-let developments.

7.3. Appraisal Inputs – 100% Private Rent

For this appraisal, all inputs remain the same as above, apart from a change to the Gross Development Value to account for 100% Private Rent units.

7.3.1. Gross Development Value

As outlined in section 6, we have assessed the GDV of the 100% Private Rent scheme to be **£25,922,599.**

7.4. Appraisal Results

7.4.1. Appraisal Summary – 20% Affordable Rent

We have undertaken a residual appraisal using Argus Developer Software based on the above revenue, costs and timescales for the development.

This produces a negative residual value of £987,566, say **£988,000**. A copy of the appraisal summary is attached at **Appendix 7**. This demonstrates that a policy compliant scheme is clearly unviable.

7.4.2. Appraisal Summary – 100% Private Rent

We have also assessed the viability assuming a 100% Private Rent provision adjusting GDV of the scheme accordingly.

This produces a gross residual value of £306,816, say **£307,000**. This is well under our benchmark land value of £825,000 and would usually be considered to be unviable. However, the developers remain hopeful that either through value or cost engineering the scheme can be made to work. A copy of the appraisal summary is attached at **Appendix 8**.

7.5. Sensitivity Analysis

The RICS Professional Statement on Viability in planning requires us to produce a sensitivity analysis of the proposed development. The value of a property with development potential, by its nature, can be highly volatile and the residual approach adopted is sensitive to changes in its key variables. This being so, it is useful to provide a sensitivity analysis, giving context to the inter-relationship between key variables, these generally being developer's profit requirement, sales values and construction costs, as well as potential to add or lose value through planning outcomes.

We have kept all other inputs constant for the viable scheme and have varied the construction rate per sq ft and sales rate per sq ft in increments and decrements of 5%. This produces a range of residual land values from a negative land value of circa £3.75m to a positive land value of circa £4.3m.

	Construction: Gross Cost				
Sales: Gross Sales	-10.000%	-5.000%	0.000%	+5.000%	+10.000%
	16,011,000	16,900,500	17,790,000	18,679,500	19,569,000
-10.000%	(£163,736)	£805,127	£1,781,021	£2,760,709	£3,743,044
23,034,695	(£163,736)	£805,127	£1,781,021	£2,760,709	£3,743,044
-5.000%	(£1,197,999)	(£235,277)	£732,582	£1,707,950	£2,686,946
24,314,400	(£1,197,999)	(£235,277)	£732,582	£1,707,950	£2,686,946
0.000%	(£2,232,268)	(£1,269,541)	(£306,816)	£660,147	£1,634,879
25,594,105	(£2,232,268)	(£1,269,541)	(£306,816)	£660,147	£1,634,879
+5.000%	(£3,266,532)	(£2,303,811)	(£1,341,083)	(£378,354)	£588,003
26,873,810	(£3,266,532)	(£2,303,811)	(£1,341,083)	(£378,354)	£588,003
+10.000%	(£4,300,801)	(£3,338,074)	(£2,375,353)	(£1,412,625)	(£449,905)
28,153,516	(£4,300,801)	(£3,338,074)	(£2,375,353)	(£1,412,625)	(£449,905)

Figure 15: Sensitivity Analysis

8. Conclusions

8.1. Overview

This report has been prepared in accordance with the instructions received from Capital & Centric in respect of the site known as Ferrous, Manchester. We were instructed to undertake an assessment of site viability based on the proposed residential scheme. The development comprises 107 apartments over 14 storeys with additional commercial accommodation (1,858 sq ft) at ground floor level and a Pavilion to the east of the site. This viability report is required to respond to the Council's requirement that 20% of the residential units in the scheme need to be affordable.

In calculating the Benchmark Land Value (BLV) for the site, we considered the existing use value and comparable transactions and reflected on the amount of premium that would be appropriate. This is not an easy site to assess, the appraisal of a policy compliant scheme which is the sense check recommended in the RICS guidance does not drive a positive value for this development. Build cost inflation is making development viability in Manchester an increasing challenge despite the positive value growth we have seen in the market. Reviewing the land market seems to demonstrate that land values at the current expectations is unsustainable. However there does remain a need for housing and as such land owners need to be incentivised to sell land. It is our view that for the purpose of this assessment that reviewing BLV's from other similar sized site can provide a sensible BLV per plot for this site which is still about half the true market value of the site based on the deal agreed between CAPITAL AND CENTRIC and TFGM and other recent land transactions in the local area.

Adopting £7,716 per plot as a BLV would drive a land value of £825,612. Based on our EUV assessment this would in effect all be premium based on comparable evidence.

We have assessed the viability of the proposed scheme across two inputs: a scheme that includes 20% affordable units as per planning policy and another scheme that comprises 100% private rent.

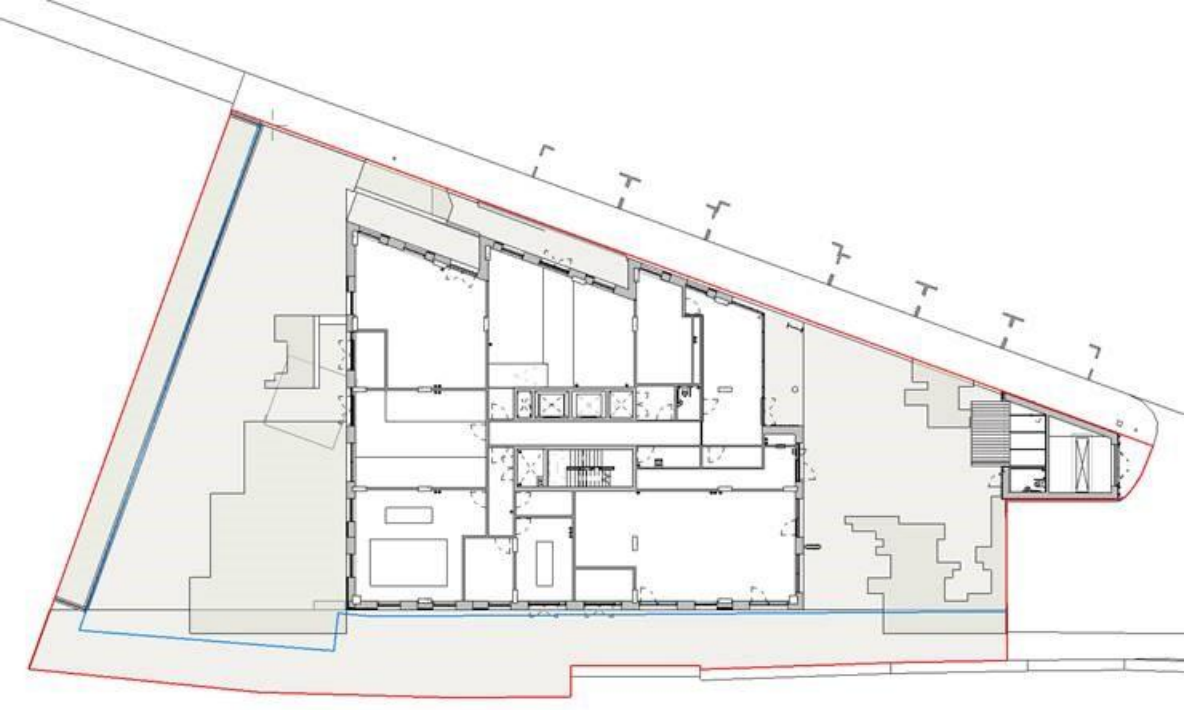
The 20% affordable rent scheme produces a GDV of **£24,331,102** across both the residential and commercial elements. Accounting for the appraisal inputs outlined in section 7.2 of this report, the 20% affordable rent appraisal produces a **negative** residual value of £987,566, say **£988,000**. This demonstrates that the development with policy compliant affordable is clearly unviable.

We therefore appraised the site based on a 100% private rent scheme. This produces a total GDV of **£25,922,599** All inputs remaining the same besides this GDV, the 100% private rent appraisal produces a residual value of £306,816, say **£307,000.** This value is below the BLV of £825,000 and therefore demonstrates that that a 100% private rent scheme produces a land value under the BLV and this would normally render the development unviable. The applicant however is working hard to bring costs down and increase its value so that the scheme can be delivered.

This will be another high quality development by Capital and Centric continuing the regeneration of this part of Manchester and building on the success of their previous for sales schemes at Crusader Mill and Phoenix Works. At this time cost inflation is causing real difficulties in the market and additional cost in the form of any affordable housing would have a real detrimental impact on the viability of this development. Capital and Centric are also being asked to pay for the stopping up of Fair Street and providing 2 pocket parks as part of the development proposals to further enhance to local amenity. Capital and Centric are very happy to agree to a review mechanism so that if they agree a deal that betters the GDV and or that the costs are lower than currently projected then there is another opportunity for the Council to generate an affordable housing contribution that at this stage is proven to be unviable.

Appendices

Appendix 1 – Site Plan



Appendix 2 – Schedule of Accommodation

BDP. CAPITAL&CENTRIC

Ferrous - Areas & Apartment Schedule

Name	Area & Accomodation Schedules
Number	BDP-FRS-XX-XX-SH-A-200001
Revision	P10
Date of Issue	30.11.2021

BDP. CAPITAL&CENTRIC

Ferrous - GIA, NIA, Apartment Mix

	Commercial Area		Residential Area			Apartments				
Level	**Gross Internal Area**	**Net Internal Area**	**Gross Internal Aea**	**Net Internal Area**	**Net as Percentage of Gross**	**1 Bed, 2 Person**	**2 Bed, 3 Person**	**2 Bed, 4 Person**	**3 Bed, 5 Person**	**Apartments Total**
0	192.1	192.1	428.4	0	0.0	0	0	0	0	0
1	0	0	595	493	82.9	2	5	1	0	8
2	0	0	604.6	502	83.0	1	6	1	0	8
3	0	0	604.6	502	83.0	1	6	1	0	8
4	0	0	604.6	502	83.0	3	2	3	0	8
5	0	0	604.6	502	83.0	3	2	3	0	8
6	0	0	604.6	502	83.0	3	2	3	0	8
7	0	0	604.6	502	83.0	3	2	3	0	8
8	0	0	604.6	502	83.0	3	2	3	0	8
9	0	0	604.6	502	83.0	3	2	3	0	8
10	0	0	604.6	502	83.0	3	2	3	0	8
11	0	0	604.6	502	83.0	3	2	3	0	8
12	0	0	582.2	489.1	84.0	2	2	1	2	7
13	0	0	582.2	489.1	84.0	2	2	1	2	7
14	0	0	395.5	316.4	80.0	2	0	3	0	5
15	0	0	12.8	0	0.0	0	0	0	0	0
Totals	**192.1**	**192.1**	**8642.1**	**6807.6**	**72.6**	**34**	**37**	**32**	**4**	**107**
Mix %						31.8	34.6	29.9	3.7	100
								64.5		

Building Total GIA (m2)	**8834.2**	m2
Building Total NIA (m2)	**6999.7**	m2
Typical Floor Net to Gross (%)	**83.0**	%
Total Building Net to Gross (%)	**72.6**	%

Measurement Notes:
GIA, NIA Apartment areas include internal window reveals
GIA includes structural columns in external walls
NIA excludes structural columns, party walls & core / circulation

BDP. CAPITAL&CENTRIC

Ferrous - Apartment Schedule

Level	Name	Occupancy	Area
Level 1	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 1	Apartment Type 1C	1 Bed, 2 Person	52 m²
Level 1	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 1	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 1	Apartment Type 2E	2 Bed, 3 Person	62 m²
Level 1	Apartment Type 2E	2 Bed, 3 Person	62 m²
Level 1	Apartment Type 2F	2 Bed, 3 Person	61 m²
Level 1	Apartment Type 2F	2 Bed, 3 Person	61 m²
Level 2	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 2	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 2	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 2	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 2	Apartment Type 2E	2 Bed, 3 Person	62 m²
Level 2	Apartment Type 2E	2 Bed, 3 Person	62 m²
Level 2	Apartment Type 2F	2 Bed, 3 Person	61 m²
Level 2	Apartment Type 2F	2 Bed, 3 Person	61 m²
Level 3	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 3	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 3	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 3	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 3	Apartment Type 2E	2 Bed, 3 Person	62 m²
Level 3	Apartment Type 2E	2 Bed, 3 Person	62 m²
Level 3	Apartment Type 2F	2 Bed, 3 Person	61 m²
Level 3	Apartment Type 2F	2 Bed, 3 Person	61 m²
Level 4	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 4	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 4	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 4	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 4	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 4	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 4	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 4	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 5	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 5	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 5	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 5	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 5	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 5	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 5	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 5	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 6	Apartment Type 1A	1 Bed, 2 Person	53 m²

BDP. CAPITAL&CENTRIC

Ferrous - Apartment Schedule

Level 6	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 6	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 6	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 6	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 6	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 6	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 6	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 7	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 7	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 7	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 7	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 7	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 7	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 7	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 7	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 8	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 8	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 8	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 8	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 8	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 8	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 8	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 8	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 9	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 9	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 9	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 9	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 9	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 9	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 9	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 9	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 10	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 10	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 10	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 10	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 10	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 10	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 10	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 10	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 11	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 11	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 11	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 11	Apartment Type 2A	2 Bed, 4 Person	72 m²

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Ferrous - Apartment Schedule

Level 11	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 11	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 11	Apartment Type 2D	2 Bed, 4 Person	72 m²
Level 11	Apartment Type 2D	2 Bed, 4 Person	71 m²
Level 12	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 12	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 12	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 12	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 12	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 12	Apartment Type 3A	3 Bed, 5 Person	91 m²
Level 12	Apartment Type 3A	3 Bed, 5 Person	91 m²
Level 13	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 13	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 13	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 13	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 13	Apartment Type 2C	2 Bed, 3 Person	61 m²
Level 13	Apartment Type 3A	3 Bed, 5 Person	91 m²
Level 13	Apartment Type 3A	3 Bed, 5 Person	91 m²
Level 14	Apartment Type 1A	1 Bed, 2 Person	53 m²
Level 14	Apartment Type 1B	1 Bed, 2 Person	54 m²
Level 14	Apartment Type 2A	2 Bed, 4 Person	72 m²
Level 14	Apartment Type 2B	2 Bed, 3 Person	67 m²
Level 14	Apartment Type 2D	2 Bed, 4 Person	71 m²
Grand total: 107			6799 m²

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Ferrous - Commercial Schedule

Level	Name	Department	Area
Level 0			
Level 0	Commercial Bin Store	Commercial	8.2 m²
Level 0	Commercial Bin Store	Commercial	7.4 m²
Level 0	Commercial Unit 01	Commercial	94.4 m²
Level 0	Commercial Unit 02	Commercial	65 m²
Level 0: 4			175.1 m²
Level 0 Kiosk			
Level 0 Kiosk	Events Kiosk	Commercial	9.5 m²
Level 0 Kiosk	WC	Commercial	3.7 m²
Level 0 Kiosk: 2			13.2 m²
Grand total: 6			188.2 m²

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Ferrous - Façade Measure

Ele Ref	Elevation	Façade Area Total (not plant)	Area Brick	Area Rainscreen	Area Glazing	Area Plant Screen
1	East	863.7	368.3	199.3	296.1	28.5
2	North	1325.5	673.4	180	472.1	47.3
3	West	1159.2	564.9	273.5	320.8	50
4	South	1321.7	566.4	319.2	436.1	46.9
5	Return 1	108.1	108.1	0	0	5.2
6	Return 2	85.5	85.5	0	0	0
		4863.7	2366.6	972	1525.1	177.9
	Façade Total			4863.7		
	Glazing Total			1525.1		
	Glazing as % of Façade Total			31.4%		
	GIA Total			8834.2		
	Façade Area as % of GIA			55.1%		

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Email Brief

17 storeys
Ground floor commercial/BtR amenity with circa 120 apartments above
Net to Gross: 80%
Wall to Floor Ratio: 0.55 - 0.65
Glazing to Solid Elevation Ratio: Less than 0.4
Apartment Depth to Width Ratio: 0.6 - 0.8
No. of Units Per Core: No less than 8
Floor to Floor Heights: No greater than 3m

Accommodation mix:	**Type**	**Brief**	**NDSS**	**Manchest**	**Storage**
1 beds / 33% mix / target 525 sq ft	1b2p	48m2	50m2	50m2	1.5m2
2 bed 1 bath / 30% mix / target 675 sq ft	2b3p	62m2	61m2	61m2	2.0m2
2 bed 2 bath / 30% mix / target 725 sq ft	2b4p	67m2	70m2	70m2	2.0m2
3 beds / 7% mix / target 950 sq ft	3b5p	88m2	86m2	86m2	2.5m2
At least an 8m distance from Phoenix					
Avoiding the HS2 critical dimensions shown in pink on the attached Shedkm study					

Appendix 3 – Savills UK Housing Market Update

SAVILLS RESEARCH

UK Housing Market Update

savills

House prices hold steady, while rents increase strongly

House price growth slowed to 0.1% in September according to Nationwide, down from last month's rise of 2.1%. This puts annual UK house price growth at 10.0%. Wales was the fastest growing country again this quarter, with annual price growth of 15.3%. The majority of English regions recorded slowing growth, including London, which also saw the lowest regional price growth at 4.2% in the year to Q3. So price growth is slowing but remains strong and for the first time since the Global Financial Crisis (GFC) no local authority saw house price falls during the year to June.

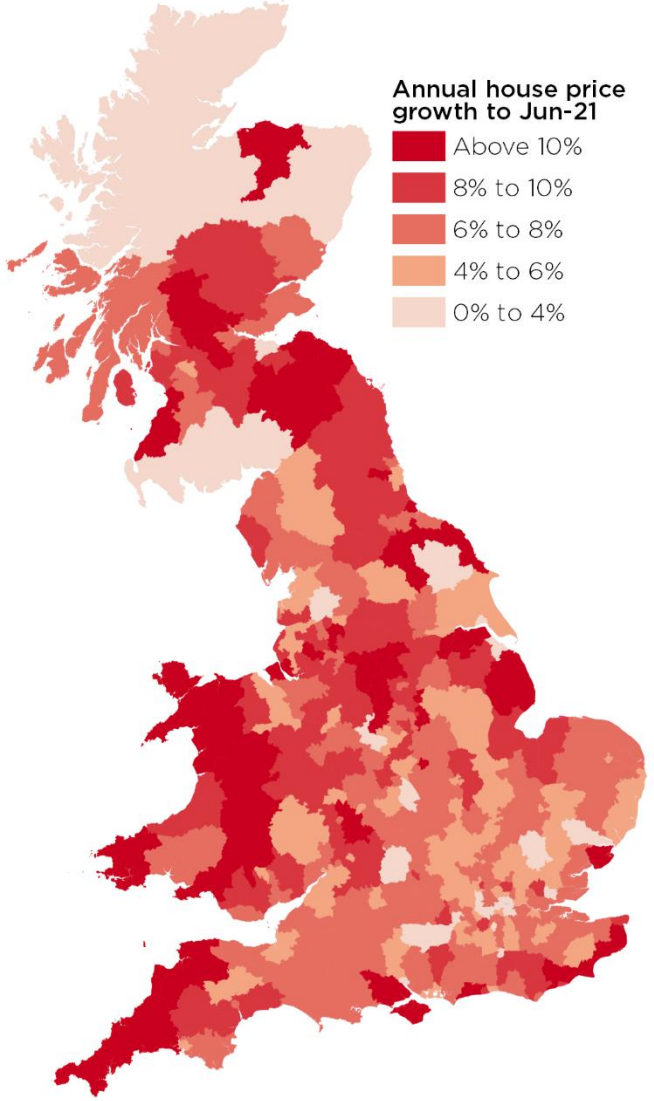
Activity in the housing market also remains strong and sales agreed were still 23% above the 2017-19 average in September. Over 1 million home sales had been recorded in 2021 by the end of August, a milestone we usually don't reach until October. And we expect there to be more transactions in 2021 than in any year since the GFC.

But the housing market will not be immune to the wider economic conditions. What will happen to mortgage interest rates is key and it is hard to predict when the first rise may be or what would be the cause. Supply problems, such as the recent petrol crisis, may delay the recovery in GDP and so the Bank of England may hold its base rate lower for longer. But if the current high levels of inflation prove persistent, then the Bank has said that the base rate will be raised. This would have a knock-on effect on the affordability of mortgage payments.

The average UK rent increased 2.1% in the year to August, according to Zoopla. Rents have increased most in the South West (7.7%) and East Midlands (6.7%), and coastal locations were strongest with Folkestone and Cornwall up 15.5% and 12.4% respectively.

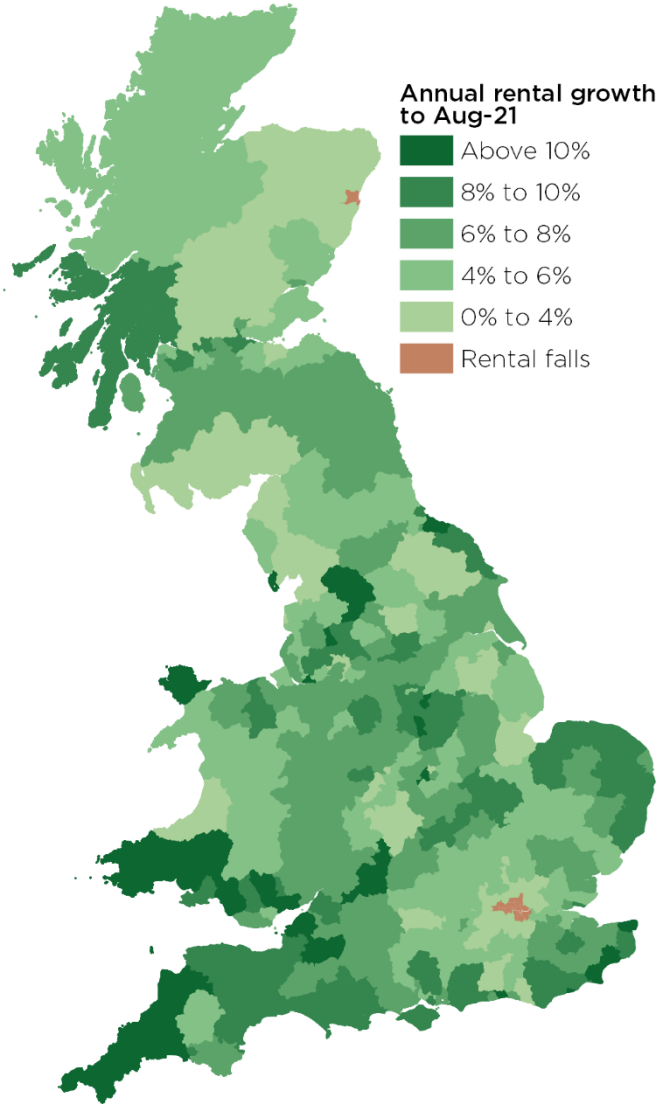
The rental market across major cities is also bouncing back, driven by the return of students, graduates and corporate re-locations. Over the last year, rents were up most in Sheffield (7.6%) and Bristol (6.9%). The fastest monthly growth was in London, at 1.6% in August. It remains the only major city with lower rents than a year ago, down -5.9%, but the supply/demand mismatch was at its highest level for over a decade in August, according to the RICS survey. Across the country there is a lack of supply of homes to rent, 60% lower than this time last year, according to TwentyCI. So rents are therefore likely continue to increase over coming months.

Figure 1 Annual house price growth to Jun-21



Source Savills using HM Land Registry and Registers of Scotland (6 month smoothed)*

Figure 2 Annual rental growth to Aug-21

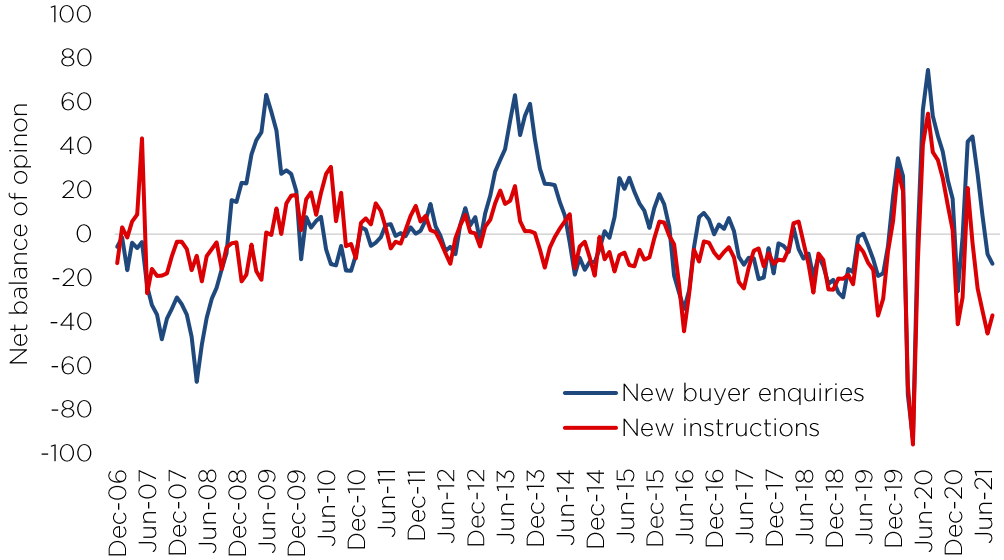


Source Zoopla Rental Index – Powered by Hometrack

The RICS survey for August showed the majority of surveyors were reporting falling numbers of new buyer enquiries for a second consecutive month.

The shortage of supply of new homes for sale is likely to remain the more significant issue for the market. A large majority of surveyors is still reporting falling numbers of new instructions.

Figure 3 First reduction in the gap between supply and demand since March



Source RICS (seasonally adjusted)

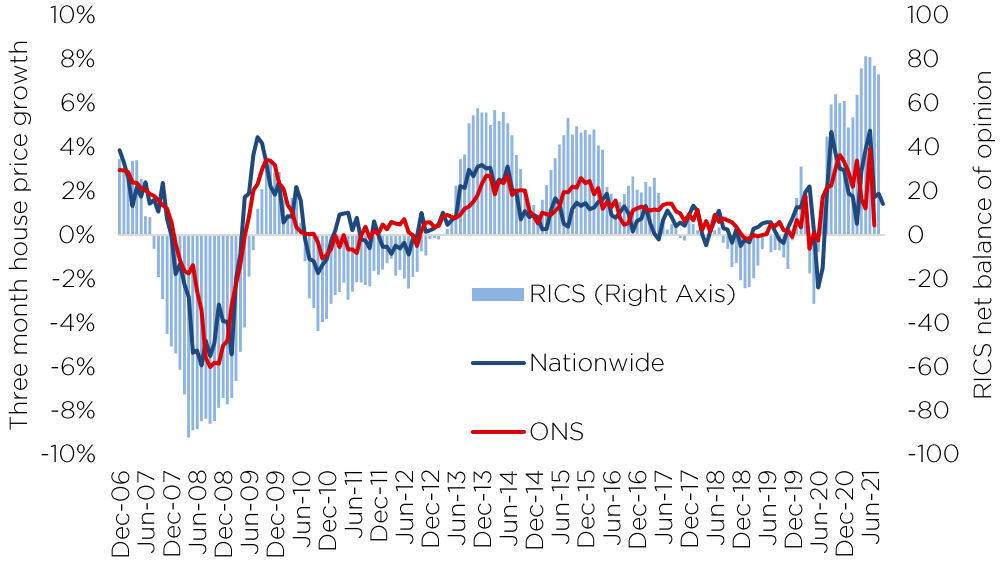
The RICS survey can be a good early indicator of house price movements, which are later picked up by other indices.

The vast majority of surveyors continued to agree on rising house prices in August. The majority was only slightly smaller than its peak in May.

House prices increased by 1.4% over the three months to September, according to Nationwide, similar to the previous month.

The ONS index has been very volatile in recent months and recorded three month house price growth of 0.4% to July, much lower than the 3.9% reported in June.

Figure 4 Price growth has eased but remains strong



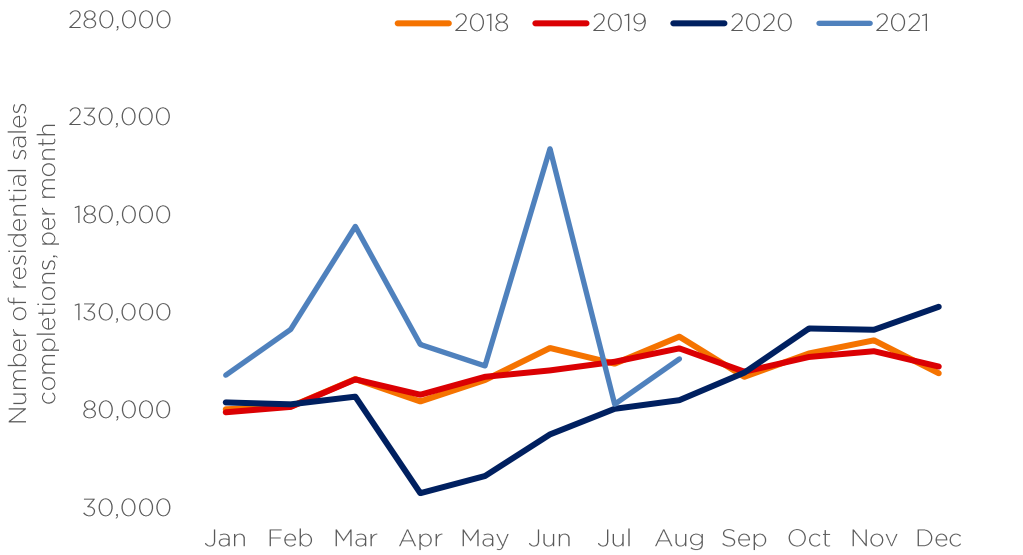
Source RICS, Nationwide, ONS (seasonally adjusted)

106,150 transactions were recorded in August, very slightly below normal levels for the month. This follows higher than average levels of transactions during the first six months of the year as buyers sought to take advantage of the stamp duty holiday.

Over 1 million transactions took place during the first eight months of the year, something that hasn't happened since 2007.

We expect another uptick in transactions in September, as the final stage of the stamp duty holiday comes to a close. This is likely to be followed by another dip in activity before a return to more normal pre-pandemic levels.

Figure 5 Transaction activity slightly lower than usual for August



Source HMRC

Table 1 Recent house price growth

	Nationwide (Regions to Q3 2021, UK to September-21)			ONS (to July-21)			Savills (to June-21)		
	m/m	q/q	y/y	m/m	q/q	y/y	m/m	q/q	y/y
UK	0.1%	1.8%	10.3%	-4.4%	0.2%	8.1%	0.2%	1.3%	7.2%
London	-	-1.1%	4.2%	-3.3%	-2.3%	2.3%	-0.4%	-0.2%	5.1%
South East	-	1.6%	9.8%	-1.8%	1.6%	8.9%	0.1%	1.1%	6.1%
East of England	-	1.5%	8.8%	-4.6%	-0.8%	6.9%	0.3%	1.1%	5.8%
South West	-	2.1%	9.8%	-6.6%	-2.4%	5.3%	0.3%	1.3%	7.1%
East Midlands	-	1.4%	10.6%	-5.9%	-0.5%	6.9%	0.2%	1.4%	6.9%
West Midlands	-	1.0%	10.0%	-5.3%	0.7%	8.5%	0.3%	1.2%	6.8%
North East	-	2.5%	10.8%	-3.9%	2.1%	10.9%	0.4%	1.4%	7.1%
Yorks & Humber	-	2.0%	12.3%	-7.2%	-1.3%	6.9%	0.0%	1.1%	7.9%
North West	-	1.6%	11.5%	-8.4%	-1.1%	8.2%	0.5%	1.6%	8.0%
Wales	-	3.7%	15.3%	-4.3%	1.4%	11.7%	0.6%	2.3%	8.7%
Scotland	-	3.0%	11.6%	1.2%	7.0%	14.9%	0.3%	1.1%	7.7%

Source Savills using HM Land Registry and Registers of Scotland (6 month smoothed)*, Nationwide (seasonally adjusted), ONS (seasonally adjusted)

Table 2 House price forecasts (published July 2021)

Region	2021	2022	2023	2024	2025	5 years to 2025
UK	9.0%	3.5%	3.0%	2.5%	2.0%	21.5%
London	7.0%	2.0%	1.5%	1.0%	0.5%	12.4%
South East	9.0%	3.0%	2.5%	2.0%	1.5%	19.1%
East of England	8.0%	3.0%	2.5%	2.0%	1.5%	18.0%
South West	8.5%	3.5%	3.0%	2.5%	2.0%	20.9%
East Midlands	9.0%	4.0%	3.5%	3.0%	2.5%	23.9%
West Midlands	9.0%	4.0%	3.5%	3.0%	2.5%	23.9%
North East	8.0%	4.0%	3.5%	3.5%	3.0%	23.9%
Yorks & Humber	10.5%	4.5%	4.0%	3.5%	3.0%	28.0%
North West	10.5%	4.5%	4.0%	3.5%	3.0%	28.0%
Wales	10.0%	4.0%	4.0%	3.5%	3.0%	26.8%
Scotland	9.5%	4.0%	3.5%	3.0%	2.5%	24.4%

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*Savills index is an unadjusted repeat sales index based on HM Land Registry and Registers of Scotland price paid data. Note that Savills national index (labelled UK) is for Great Britain, not including Northern Ireland.

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Appendix 4 – Savills Build-to-Rent Market Update

SAVILLS RESEARCH

UK Build to Rent Market Update

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City centre demand has returned but hybrid working has boosted 'quality of life' commuter locations

The experience of the various Covid-19 lockdowns caused tenants to make lifestyle and relocation moves. A shorter commuting week allowed workers to prioritise locations that offered a better quality of life and afforded more space. An influx of urban workers with higher spending power pushed up rents in many markets. Now, with the return of students and a young, mobile workforce, city centre demand has returned and transport hubs are once again a priority.

Lifestyle markets buoyed by shift to hybrid working

Shifting work patterns and lifestyle choices meant a number of cities performed exceptionally well during the pandemic. Bristol and Glasgow, already home to well-established rental markets, saw rental growth of 6.7% and 6.5% respectively since March 2020, due to heightened interest from London and Edinburgh lifestyle relocators

The potential to work from home has expanded commuter belts and there is more choice than ever for those working in the UK's largest cities. This has supported let up rates for Build to Rent schemes. Bristol schemes have received huge interest from London relocators while Grainger's Gatehouse Apartments in Southampton leased up 8 months ahead of schedule and may have also benefited from the arrival of London relocators.

Proximity to transport hubs is once again a priority

More recently, with the return of students and young workers, city centre demand has recovered and rental growth has returned. London and Edinburgh are leading with growth of 3.4% in the 3 months to August - the fastest rate of any core city.

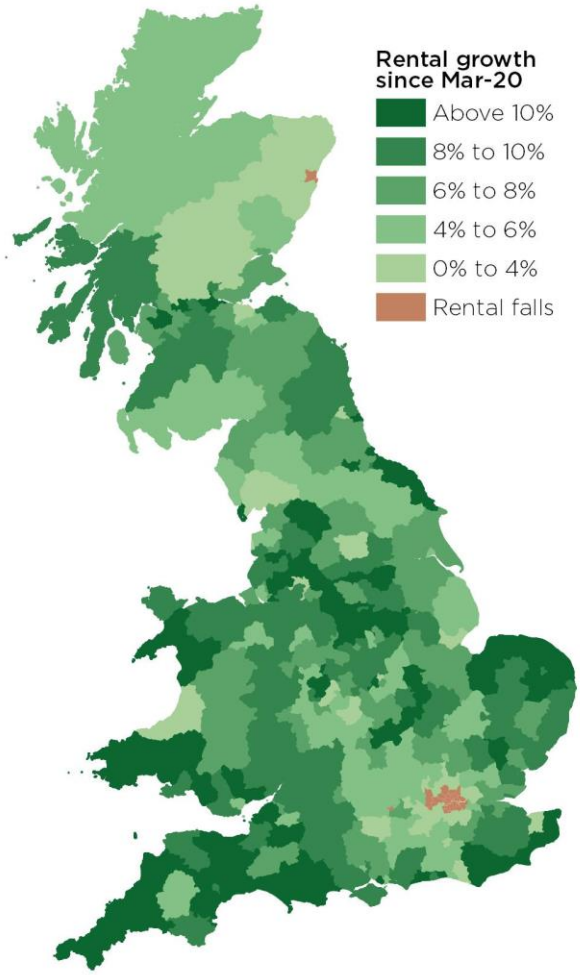
Once again, this places proximity to transport near the top of many tenant's wish lists. Our latest Q3 Savills agents survey shows that half of tenants now rank it as their number one priority. This should continue to be a key consideration for urban BtR investors.

Supply-demand imbalance to drive rents further

The relative imbalance between tenant demand and new instructions has widened and is at an all-time high according to RICS surveyors. This will support growth in short-term with stock levels remaining low across the UK.

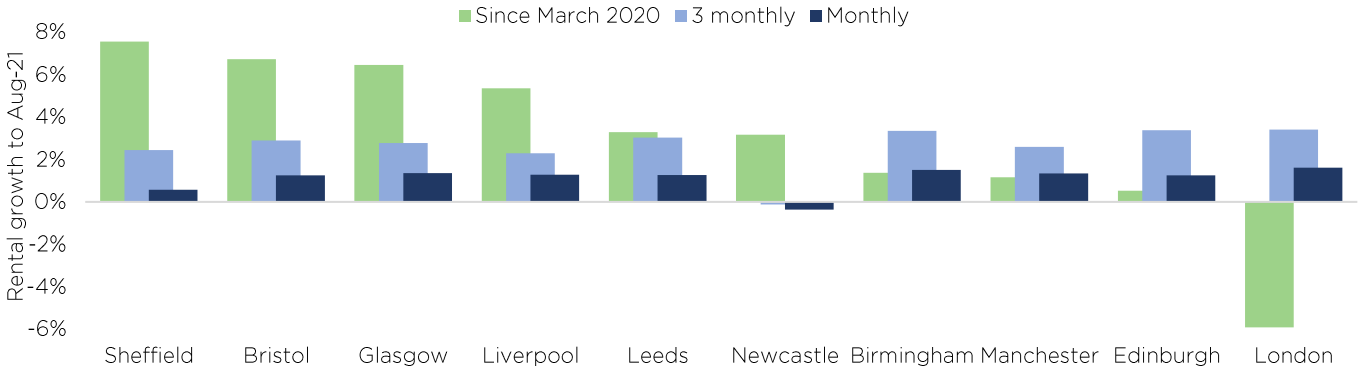
Our Mainstream Rental Forecasts are due to be published in Q4 and will set out our view on rents for the next five years.

Figure 1 UK experiences strong rental growth in nearly all locations over the course of the pandemic



Source: Zoopla powered by Hometrack

Figure 2 Mixed picture for rental growth in core UK cities since the onset of the pandemic



Source: Zoopla powered by Hometrack

UK Build to Rent Investment

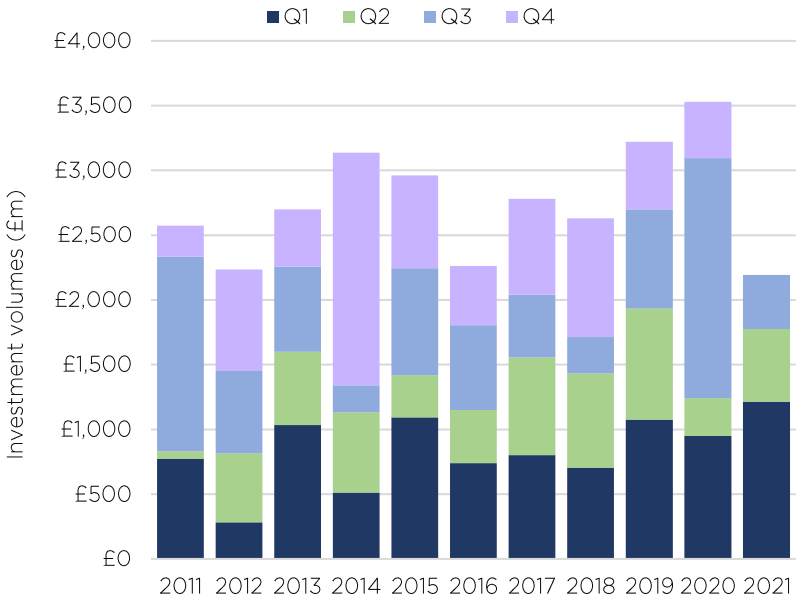
Nearly £420 million was invested into UK Build to Rent during Q3 2021. Forward fund deals made up 64% of investment flowing into the sector which is in line with the three year average.

Recently, we have seen investors in suburban or single family Build to Rent helping to support new homes delivery. They are doing this by forming partnerships with developers and housebuilders to deliver and acquire Build to Rent homes over a number of years.

TPG capital recently launched their £500 million Joint Venture with Gatehouse Bank Plc which will deliver and acquire 2,500 suburban, purpose-built family rental homes across the Midlands and the North of England. The initiative launched this quarter with an initial seed portfolio of 321 homes across four sites.

Further funding deals occurred in Manchester, Brighton and Liverpool during Q3 highlighting sustained investor appetite for the UK's largest cities.

Figure 3 Nearly £420m invested into UK Build to Rent during Q3



Source Savills

UK Build to Rent Development

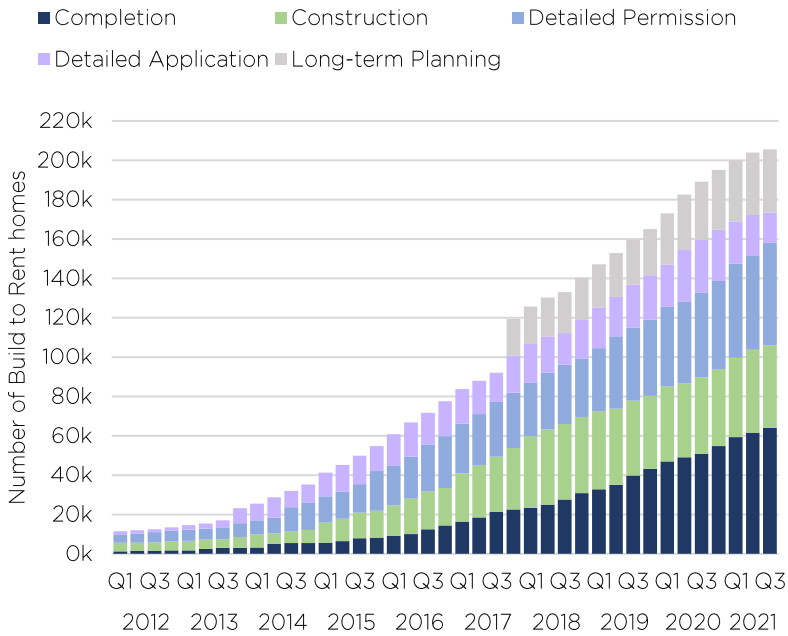
The UK's BtR stock now stands at 63,950 completed homes with a further 42,000 homes under construction. The future pipeline currently stands at 99,500 homes, including those in the pre-application stage. This brings the total size of the sector to 205,500 homes completed or in development.

New home starts outside of London have continued to drive the construction pipeline. In the year to Q3 2021 nearly 12,000 homes have started construction in the regions. This is a new peak, overtaking the 11,500 homes starting in the year to Q4 2018.

Starts within London remain subdued. In the year to Q3 2021 more than twice as many schemes started construction outside of the capital (43) than within (19). Not only are more sites starting outside London, they are also larger. An average site starting construction during the last 12 months delivered 260 homes compared to 205 in the capital.

With London starts faltering, the construction pipeline has shrunk by -9% over the past 12 months in the capital while the regions have seen their construction pipeline rise by 22%. The sector continues to rebalance and shift towards regional towns and cities with strong fundamentals.

Figure 4 Starts outside of London reach highest annual total and continue to drive construction pipeline



Source Savills, British Property Federation, Molior

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Appendix 5 – Abacus Cost Estimates

FERROUS, MANCHESTER

Residential Development
for
Capital & Centric

COST PLAN NO. 2
REV 2

18 October 2021

ACM0408

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8.00 COST PLAN - APARTMENT BLOCK

9.00 COST PLAN - EXTERNAL WORKS

10.00 INFORMATION USED TO PREPARE THIS REPORT

11.00 DRAWINGS

1.0 INTRODUCTION

1.1 The purpose of this report is to provide a Cost Plan based on the current design information as listed in Section 10 and attached at Section 11 of this report.

1.2 The Cost Plan is based on WML's frame & upper floors Option 3 (additional internal and perimeter columns with 250mm upper floors).

1.3 The scheme comprises the construction of a 15-storey residential block and associated external works to provide 107 apartments, as follows:
1 bed - 40nr
2 bed - 63nr
3 bed - 4nr
As instructed, we have included an allowance below the line on the 'Executive Summary' for loose FF&E.

1.4 A list of assumptions and exclusions is included in Section 3 of this report.

1.5 This Cost Plan assumes that the scheme is delivered under a competitive Design & Build basis with the construction works being undertaken within a single phase, under one main building contract.

1.6 The estimated costs within this report reflect current market conditions and assume competitive market returns are achieved.

1.7 The Schedule of Areas has been prepared by ourselves from the drawings listed in Section 10 of this report, measured in accordance with RICS Code of Measuring Practice 6th edn (2015).

1.8 Given the uncertainty/volatility in the marketplace at this current time around the impacts of Covid-19, Brexit and the shortage of both labour and materials there are wide variances in the forecasts for tender price inflation. The current demand for key materials is outpacing supply and as such this is likely to cause inflationary pressures on Tender prices in the short to medium term. Conversely these inflationary pressures could affect viability and therefore delay projects starting on site. At this time, although pandemic issues and the sourcing of materials remain highly prevalent, we have applied a 2% allowance for inflation based on the assumption the market will respond to inflationary pressures affecting viability. This inflation allowance represents a risk to the project which should be periodically reviewed as the design/cost updates progress through the RIBA Plan of Work Stages.

2.0 EXECUTIVE SUMMARY

Construction Costs	£	£ / m²	£ / ft²	*Change since last Report (£)*
Site Preparation	50,000	6 / m²	1 / ft²	*+ 30,000*
Apartment Block (Excl. Loose FF&E package)	17,790,000	2,014 / m²	187 / ft²	*+ 570,000*
Pavilion (Provisional Sum) Excl. Sub Station Equipment	100,000	11 / m²	1 / ft²	*(50,000)*
External Works	520,000	59 / m²	5 / ft²	*+ 0*
ESTIMATED CONSTRUCTION COST CURRENT @ OCTOBER 2021	**£ 18,460,000**	**2,090 / m²**	**194 / ft²**	*+ 550,000*
Allowance for Inflation - 2%	369,200	42 / m²	4 / ft²	*+ 11,000*
Design Development Contingency	**EXCLUDED**			
ESTIMATED CONSTRUCTION COST AT COMPLETION - OCTOBER 2023 (Excl. Loose FF&E Package)	**18,829,200**	**2,131 / m²**	**198 / ft²**	*+ 561,000*
Loose FF&E Package	610,000	69 / m²	6 / ft²	*+ 10,000*
ESTIMATED CONSTRUCTION COST AT COMPLETION - OCTOBER 2023 (Incl. Loose FF&E Package)	**19,440,000**	**2,200 / m²**	**204 / ft²**	*+ 570,000*

Programme Assumptions

Construction start date	26 Aug 2022
Construction period	80 wks
Completion Date	08 Mar 2024

Area Summary

Functional Areas:		
Nett Lettable Resi	6,783 m²	73,006 ft²
Landlord's Areas	1,287 m²	13,848 ft²
Total Functional Areas	8,069 m²	86,854 ft²
Gross Internal Floor Area	8,834 m²	95,091 ft²
Efficiency (Nett Resi/GIFA)	76.8%	

Notes

1. This Summary must be read in conjunction with the attached Assumptions and Exclusions.

3.0 ASSUMPTIONS AND EXCLUSIONS

This Report is based on the following assumptions and exclusions:

1. Assumptions

1.01 Costs are based at 4Q21
1.02 80wk construction programme
1.03 Floor to Floor height of 2.85m; Level 00 4.05m
1.04 600 dia CFA piles; 15m deep
1.05 Frame and upper floors based on WLM's Option 3 - 250mm upper floors
1.06 600x600 & 1200x300 columns (in-situ frame)
1.07 250mm ground bearing slab
1.08 300mm roof deck
1.09 Reinforcement allowances:
Slabs: 100kg/m3
Pile caps: 115kg/m3
Ground beams: 220kg/m3
Columns: 300kg/m3
Core walls: 100kg/m3
1.10 Façade priced as traditional masonry. Abacus are currently undertaking an exercise to understand whether greater efficiencies can be achieved with brick slips or precast panels.
1.11 Exposed soffits to apartments, excluding bathrooms/en-suites
1.12 Cantilever option 1 priced
1.13 Brickwork support allowed for to perimeter of every other floor
1.14 Davit façade maintenance type system
1.15 Commercial units are shell & core
1.16 Bathroom pods in lieu of traditional construction; £5,500 allowance per pod
1.17 Allowance of £4,500 per unit for loose FF&E/blinds incl. on Exec Sum
1.18 Allowance of 2nr potted trees to roof terrace, paving to perimeter, soft
1.19 landscaping and planters to centre
1.20 Site accommodation can be accommodated within site boundary
1.21 Assumed regupol floor layer will satisfy acoustic requirements
1.22 Please refer to the detailed cost sections for further assumptions
1.23 One and half brick reveal to glazing; Half brick reveal to cladding
1.24 Provisional sum allowance of £100,000 for saw tooth structure

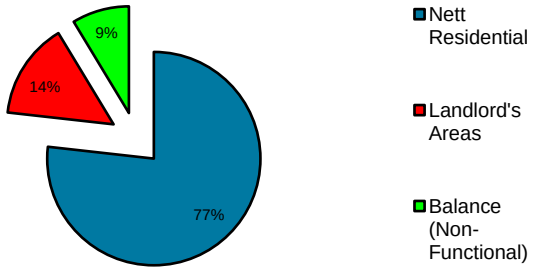
2. Exclusions

2.01 Lowering / diverting existing services
2.02 Planning/Design team fees/Novated fees
2.03 VAT
2.04 Survey fees
2.05 Phasing requirements
2.06 Ground abnormals
2.07 Ground dewatering
2.08 Site acquisition
2.09 Planning costs
2.10 Planning gain costs (e.g. S106 / S278)
2.11 Legal fees
2.12 Finance costs & insurances
2.13 Invasive species (e.g. Japanese Knotweed)
2.14 Archaeology
2.15 Works outside of the site boundary
2.16 Contaminated / hazardous materials
2.17 Demolition works
2.18 Gas supply
2.19 Beneficial use of lifts during construction
2.20 Ecology issues
2.21 Cost of obtaining building guarantees i.e. NHBC, LABC, PG, etc
2.22 Temporary accommodation
2.23 Local Authority charges, i.e. road closures & TROs
2.24 Monitoring of adjacent / adjoining building and / or works to existing buildings
2.25 Site Acquisition Fees / Costs, Air Rights, Party Wall Awards,
Rights to Light (and all other Third Party compensations)
2.26 Works outside of normal working hours
2.27 Constraints / impositions on working due to metrolink line proximity
2.28 Grubbing up existing crane foundations from Phoenix, assumed these can remain as they are not within the footprint of the building
2.29 Design development contingency
2.30 Sheet piling
2.31 Acoustic raised timber batten floor
2.32 Anodised finish to window units
2.33 External loose FF&E
2.34 M&E allowance excludes potential additional costs for new legislation

4.0 SCHEDULE OF AREAS

Gross Internal (GIFA)

Floor/Level	Totals	
Level 00 Main Building	588 m²	6,334 ft²
Level 00 Pavilion	32 m²	345 ft²
Level 01	595 m²	6,405 ft²
Level 02	605 m²	6,508 ft²
Level 03	605 m²	6,508 ft²
Level 04	605 m²	6,508 ft²
Level 05	605 m²	6,508 ft²
Level 06	605 m²	6,508 ft²
Level 07	605 m²	6,508 ft²
Level 08	605 m²	6,508 ft²
Level 09	605 m²	6,508 ft²
Level 10	605 m²	6,508 ft²
Level 11	605 m²	6,508 ft²
Level 12	582 m²	6,267 ft²
Level 13	582 m²	6,267 ft²
Level 14	396 m²	4,257 ft²
Level 15	13 m²	138 ft²
Total GIFA	**8,834 m²**	**95,093 ft²**



Nett Areas

Nett Residential			Efficiency
Level 00 Main Building	0 m²	0 ft²	0%
Level 00 Pavilion	0 m²	0 ft²	0%
Level 01	491 m²	5,288 ft²	83%
Level 02	500 m²	5,385 ft²	83%
Level 03	500 m²	5,385 ft²	83%
Level 04	500 m²	5,385 ft²	83%
Level 05	500 m²	5,385 ft²	83%
Level 06	500 m²	5,385 ft²	83%
Level 07	500 m²	5,385 ft²	83%
Level 08	500 m²	5,385 ft²	83%
Level 09	500 m²	5,385 ft²	83%
Level 10	500 m²	5,385 ft²	83%
Level 11	500 m²	5,385 ft²	83%
Level 12	486 m²	5,230 ft²	83%
Level 13	486 m²	5,230 ft²	83%
Level 14	316 m²	3,406 ft²	80%
Level 15	0 m²	0 ft²	0%
Total	6,783 m²	73,006 ft²	77%
Landlord's Areas			
Commercial Space	176 m²	1,891 ft²	2%
Common Areas/Circulation	810 m²	8,713 ft²	9%
Amenity Space	26 m²	282 ft²	0%
Cycle/Refuse	127 m²	1,365 ft²	1%
Back of House	23 m²	252 ft²	0%
Plantrooms	93 m²	1,000 ft²	1%
Pavilion	32 m²	345 ft²	0%
Total	1,287 m²	13,848 ft²	15%
Totals			
Nett Residential	6,783 m²	73,006 ft²	77%
Landlord's Areas	1,287 m²	13,848 ft²	15%
Total Functional	8,069 m²	86,855 ft²	91%
Balance (Non-Functional)	765 m²	8,236 ft²	9%
GIFA	**8,834 m²**	**95,091 ft²**	**100%**

Notes:

Measured in accordance with RICS Code of Measuring Practice 6th edn (2015).
Non-Functional area includes service risers, lift shafts, and the floor area taken by internal walls.
The Schedule of Areas has been prepared by ourselves from the drawings provided by BDP.

5.0 SCHEDULE OF UNITS

Floor	One Bed Apt	Two Bed, One Bath Apt	Two Bed, Two Bath Apt	Three Bed Two Bath Apt	Totals
	Nr.	Nr.	Nr.	Nr.	Nr.
Level 00	0	0	0	0	**0**
Level 01	4	0	4	0	**8**
Level 02	3	1	4	0	**8**
Level 03	3	1	4	0	**8**
Level 04	3	1	4	0	**8**
Level 05	3	1	4	0	**8**
Level 06	3	1	4	0	**8**
Level 07	3	1	4	0	**8**
Level 08	3	1	4	0	**8**
Level 09	3	1	4	0	**8**
Level 10	3	1	4	0	**8**
Level 11	3	1	4	0	**8**
Level 12	2	1	2	2	**7**
Level 13	2	1	2	2	**7**
Level 14	2	0	3	0	**5**
Level 15	0	0	0	0	**0**
	40	12	51	4	**107**

37%	11%	48%	4%	**100%**

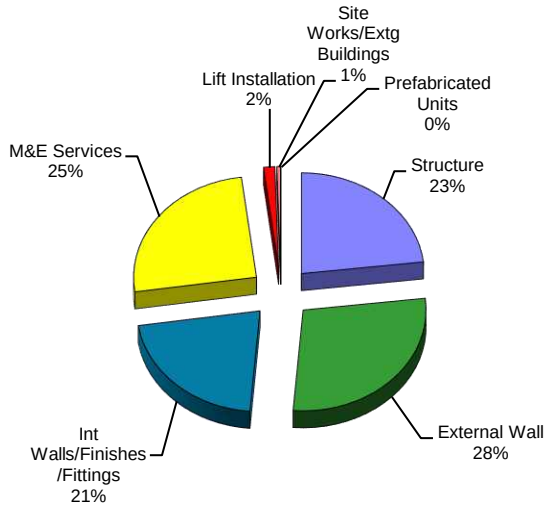
6.0 COST PLAN - SITE PREPARATION

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
			£	£	£		
1	**SITE PREPARATION**				**47,730**		
1.01	**Asbestos Removal**						
	No works	Excl					
1.02	**Demolition**						
	No works	Excl					
1.03	**Clearance**						
	General site clearance	1 item	3,500	3,500			
	Excavation and removal off site to achieve formation level	880 m³	35	30,790		As per WML advice	*+ 21,130*
	Sub-Contract preliminaries	15%	34,290	5,140			*+ 3,170*
1.04	**Sheet Piling**						
	Interlocking steel sheet piling; incl. extraction on completion	Excl					
1.05	**On Costs**						
	Preliminaries						
	General allowance for preliminaries	13.0%	39,430	5,130			*+ 3,160*
	Overheads and profit						
	General allowance for overheads & profit	5.0%	44,560	2,230			*+ 1,370*
	Contingency						
	Construction risk allowance	2.0%	46,790	940			*+ 580*

7.0 COST PLAN SUMMARY - APARTMENT BLOCK

Elemental Summary			Cost £	£/m²	£/ft²	% Value	*Change since last Report*
1	**SUBSTRUCTURE**		**526,220**	**59.78**	**5.55**	**2.96**	*+ 76,310*
2	**SUPERSTRUCTURE**		**8,669,610**	**984.94**	**91.50**	**48.73**	*+ 396,550*
2.01	Frame		1,303,440	148.08	13.76	7.33	*(16,500)*
2.02	Upper floors		1,351,600	153.55	14.27	7.60	*+ 117,980*
2.03	Roof		454,380	51.62	4.80	2.55	*+ 137,000*
2.04	Stairs and ramps		170,400	19.36	1.80	0.96	*+ 0*
2.05	External walls		3,087,520	350.77	32.59	17.36	*(39,820)*
2.06	Windows and external doors		904,230	102.73	9.54	5.08	*+ 136,750*
2.07	Internal walls and partitions		922,490	104.80	9.74	5.19	*+ 57,190*
2.08	Internal doors		475,550	54.03	5.02	2.67	*+ 3,950*
3	**INTERNAL FINISHES**		**954,860**	**108.48**	**10.08**	**5.37**	*(107,960)*
3.01	Wall finishes		197,470	22.43	2.08	1.11	*+ 22,990*
3.02	Floor finishes		629,330	71.50	6.64	3.54	*+ 7,100*
3.03	Ceiling finishes		128,060	14.55	1.35	0.72	*(138,050)*
4	**FITTINGS AND FURNISHINGS**		**674,750**	**76.66**	**7.12**	**3.79**	*+ 67,650*
5	**M&E INSTALLATION**		**3,804,830**	**432.26**	**40.16**	**21.39**	*+ 109,190*
5.01	Sanitary appliances		893,200	101.48	9.43	5.02	*+ 84,000*
5.02	Services equipment		2,461,000	279.59	25.97	13.83	*+ 23,000*
5.03	Disposal installations		0	0.00	0.00	0.00	*+ 0*
5.04	Water installations		0	0.00	0.00	0.00	*+ 0*
5.5/6/7	Heating, air conditioning and ventilation		0	0.00	0.00	0.00	*+ 0*
5.08	Electrical installations		0	0.00	0.00	0.00	*+ 0*
5.09	Gas and other fuel installations		0	0.00	0.00	0.00	*+ 0*
5.10	Lifts and conveyor installations		210,000	23.86	2.22	1.18	*+ 0*
5.11	Fire and lightning protection		0	0.00	0.00	0.00	*+ 0*
5.12	Communications, security, control systems		0	0.00	0.00	0.00	*+ 0*
5.13	Specialist installations		160,500	18.23	1.69	0.90	*+ 1,500*
5.14	Builders work in connection with services		80,130	9.10	0.85	0.45	*+ 690*
5.15	Testing and commissioning of services		0	0.00	0.00	0.00	*+ 0*
6	**PREFABRICATED UNITS**		0	0.00	0.00	0.00	*+ 0*
7	**WORK TO EXISTING BUILDINGS**		0	0.00	0.00	0.00	*+ 0*
TOTAL BUILDING WORKS			**14,630,270**	**1,662.12**	**154.42**	**82.24**	*+ 541,740*
8	**EXTERNAL WORKS**		69,035	7.84	0.73	0.39	*(63,836)*
9	**FACILITATING WORKS**		0	0.00	0.00	0.00	*+ 0*
TOTAL BUILDING AND SITE WORKS			**14,699,305**	**1,669.97**	**155.14**	**82.63**	*+ 477,905*
10	**ON COSTS**		**3,090,234**	**351.08**	**32.62**	**17.37**	*+ 100,468*
10.01	Preliminaries	13.0%	1,910,910	217.10	20.17	10.74	*+ 62,128*
10.02	Overheads and profit	5.0%	830,510	94.35	8.77	4.67	*+ 27,000*
10.03	Main Contractor Risk	2.0%	348,814	39.63	3.68	1.96	*+ 11,341*
ESTIMATED CONSTRUCTION COST			**17,789,539**	**2,021.04**	**187.76**	**100.00**	*+ 578,373*
	Rounding Adjustment (up only)	4	461	0.05	0.00	0.00	*(8,373)*
TOTAL CURRENT			**17,790,000**	**2,021.09**	**187.77**	**100.00**	*+ 570,000*
(AT BASE DATE - 18 OCT 2021)							

Cost Analysis (incl. on-costs)



Key Unit Rates, etc.

Frame & Upper Floors	£ 322 / m² of Upper Floors
Roof	£ 752 / m² of Roof
External Walls	£ 803 / m² of External Walls
M&E	£ 381 / m² GIFA
	(excl. lifts, specialist inst, BWIC)
Wall to floor ratio	0.57

Notes

Gross Internal Floor Area: 8,834m² / 95,091ft²
See Executive Summary for Inflation Allowances

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty	/ Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
				£	£	£		
1	**SUBSTRUCTURE**					**526,220**		
1.01	**Foundations**							
.1	Standard foundations							
	No works							
.2	Piled foundations							
	Establishment of piling mat; including disposal	307	m³	55	16,870		Assumed 500mm thick	*+ 270*
	Setting up over pile positions/pile co-ordinates	96	nr	25	2,400		WML design, plus 2nr additional piles to cantilever	*+ 50*
	Mobilisation and demobilisation of piling rig	1	item	10,000	10,000			
	Piles; 600mm diameter; CFA	96	nr	900	86,400		Assumed upto 15m deep	*+ 39,400*
	Testing of piles	1	item	3,500	3,500			
	Standing time and obstructions	1	item	10,000	10,000		Allowance	
	Disposal of pile arisings; assumed inert	407	m³	35	14,250			*+ 300*
	Cutting top of piles; including disposal	96	nr	100	9,600			*+ 200*
	Pile Caps							
	Type 1 Pile Cap; 1250mm deep	11	nr	2,276	25,030		115kg/m^3; assumed Type 1 pile cap to cantilever	*+ 2,600*
	Type 2 Pile Cap; 1250mm deep	12	nr	3,345	40,140		115kg/m^3	*+ 680*
	Type 3 Pile Cap; 1250mm deep	4	nr	4,893	19,570		115kg/m^3	*+ 350*
	Core Pile Cap	1	nr	62,464	62,460		115kg/m^3	*+ 1,450*
	Tower crane base		Incl.				Assumed core substructure will be used as a base	
	Lift pits	2	nr	7,500	15,000			
	Ground beams							
	600mm x 1000mm	101	m	558	56,410		220kg/m^3	*+ 6,060*
	Sheet Piling							
	Interlocking steel sheet piling; incl. extraction on completion		Excl					
	Retaining Wall							
	RC retaining wall / upstand	32	m	120	3,840		100kg/m^3 reinforcement; 200mm x 500	

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
				£	£	£		
	Allowance for sub contract preliminaries		15%	375,470	56,320			+ 7,700
.3	Underpinning							
	No works							
1.02	**Basement excavation**							
	No works							
1.03	**Basement retaining walls**							
.1	Standard retaining walls							
	No works							
.2	Embedded retaining walls							
	No works							
1.04	**Ground floor construction**							
	Ground slab 250mm	488						
	Reinforced in situ concrete slab		122 m³	145	17,710			(4,170)
	Formwork to edges of slab		86 m	20	1,720			(490)
	Reinforcement in slab		12 t	1,250	15,260		100kg/m³	(3,600)
	Insulation to slab		488 m²	20	9,770			(2,300)
	MOT Type 1 and blinding below slab		73 m³	45	3,300		150mm	(770)
	Worked finishes to surfaces of slab		488 m²	5	2,440			(580)
	Ground slab 300mm	100					To water tank room	
	Reinforced in situ concrete slab		30 m³	145	4,350			+ 4,350
	Formwork to edges of slab		25 m	25	630			+ 630
	Reinforcement in slab		3 t	1,250	3,750		100kg/m³	+ 3,750
	Insulation to slab		100 m²	20	2,000			+ 2,000
	MOT Type 1 and blinding below slab		15 m³	45	680		150mm	+ 680
	Worked finishes to surfaces of slab		100 m²	5	500			+ 500
	Allowance for movement joints		1 item	5,000	5,000			

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
			£	£	£		
	Allowance for steps in ground floor slab	1 item	10,000	10,000			*+ 10,000*
	Allowance for screed ramp to bin store	1 item	5,000	5,000			*+ 5,000*
	Allowance for sub-contract preliminaries	15%	82,110	12,320			*+ 2,250*
2	**SUPERSTRUCTURE**						
2.01	**Frame**				**1,303,440**		
.1	Steel frames						
	CHS columns to cantilever; 406.4x10x97.8	2 nr	5,000	10,000		c.2T steel; incl. connections, thermal breaks and the like	*+ 10,000*
.2	Space frames and decks						
	No works						
.3	Concrete casings to steel frames						
	No works						
.4	Concrete frames						
	Columns; Reinforced concrete						
	600 x 600 RC Columns	44 nr	1,021	44,920		300kg/m^3	*+ 4,830*
	1000 x 250 RC Columns	338 nr	843	285,010		300kg/m^3	*+ 29,850*
	Core walls						
	Reinforced in situ concrete core walls	566 m³	165	93,360			*(20,670)*
	Formwork to walls; basic finish	4,526 m²	45	203,690			*(17,020)*
	Reinforcement to core walls	57 t	1,335	75,530		100kg/m^3	*(16,430)*
	Wall kickers	720 m	35	25,200			*(2,310)*
	Perimeter downstand	Excl.					
	Parapet construction	130 m	170	22,020			*(1,290)*
	Sundries						
	Tower crane	50 wks	7,500	375,000			

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
				£	£	£		
	RC frame sub-Contract preliminaries		15%	1,124,730	168,710			(3,460)
	.5 Timber frames							
	No works							
	.6 Specialist frames							
	No works							
2.02	**Upper floors**					**1,351,600**		
	.1 Insitu concrete floors							
	250mm thick (internal)	8,214	8,214 m²					
	Reinforced in situ concrete floors		2,053 m³	165	338,820			+ 29,280
	Formwork to soffit of floors; basic finish		8,214 m²	45	369,620			(1,830)
	Formwork to edge of slab		1,524 m	35	53,330			+ 15,210
	Reinforcement in slab		205 T	1,335	274,130		100kg/m³	+ 16,180
	Worked finishes to surfaces of slab		8,214 m²	5	41,070			(200)
	250mm thick (private terraces)	44	44 m²					
	Reinforced in situ concrete floors		11 m³	165	1,820			+ 1,820
	Formwork to soffit of floors; basic finish		44 m²	45	1,980			+ 1,980
	Formwork to edge of slab		29 m	35	1,000			+ 1,000
	Reinforcement in slab		1 T	1,335	1,470		100kg/m³	+ 1,470
	Worked finishes to surfaces of slab		44 m²	5	220			+ 220
	E/O enhanced concrete finish; exposed ceiling to apartments		6,123 m²	15	91,840			+ 37,460
	Sub-Contract preliminaries		15%	1,175,300	176,300			+ 15,390
	.2 Precast/composite decking systems							
	No works							
	Timber floors							
	No works							
	Structural screeds							

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty	/ Unit	Rate	Sub Total	Group Total	Notes	Change since last report
					£	£	£		
	No works								
	Balconies								
	No works								
	Drainage to balconies								
	No works								
	Total Area of Upper Floors:	8,258							
2.03	**Roof**						**454,380**		
.1	Roof Structure								
	Reinforced in situ concrete roof	605	181	m³	165	29,930		300mm thick	*+ 7,300*
	Formwork to soffit; basic finish		605	m²	45	27,210			*+ 50*
	Formwork to perimeter of slab		111	m	35	3,890			*+ 1,130*
	Reinforcement to slab		18	T	1,335	24,210		100kg/m³	*+ 5,350*
.2	Roof Coverings								
	Roof covering including insulation, ballast, drainage, etc.		605	m²	150	90,690			*+ 160*
	Paved walkways to roof plant/PV; assumed 75% of roof area		297	m²	125	37,080			*+ 210*
	Roof terrace; paving to perimeter		94	m²	125	11,750			*+ 1,250*
	Roof terrace; soft landscaping, planters and furnishings		1	item	25,000	25,000		Provisional allowance	
	Trees in planters to roof terrace		2	nr	5,000	10,000		Assumed tower crane still available for use	
	Allowance for forming steps / ramp to terrace		1	item	10,000	10,000			*+ 10,000*
	Finish to private terraces		44	m²	150	6,600			*+ 6,600*
.3	Glazed roofs								
	No works								
.4	Roof drainage								
	Rainwater goods		605	m²	25	15,120			*+ 30*
.5	Rooflights, skylights and openings								
	No works								
.6	Roof features								

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
				£	£	£		
	Saw tooth structure and cladding		1 item	100,000	100,000		**Provisional Sum**	*+ 100,000*
	Total Area of Roof:	605						
	.7 Sundries							
	Perimeter flashing and parapet cappings		111 m	150	16,680			*+ 100*
	Allowance for sub-contract preliminaries		15%	308,160	46,220		Excl. saw tooth Provisional Sum	*+ 4,820*
2.04	**Stairs and ramps**					**170,400**		
	.1 Stair/ramp structures							
	Stair core 1							
	Staircase		16 storeys	6,500	104,000			
	Balustrade		112 m	450	50,400			
	Handrail		160 m	100	16,000			
	.2 Stair/ramp finishes							
	No works							
	.3 Balustrades and handrails							
	No works							
	.4 Ladders/chutes/slides							
	No works							
2.05	**External walls**					**3,087,520**		
	.1 Walls above ground floor level							
	150mm SFS; 140mm insulation and water vapour board; measured blind across openings		4,974 m²	120	596,840			*+ 13,550*
	Standard brickwork; £600/1000; inclusive of insulation, cavity, ties, fire barriers and the like	2,441	2,441 m²	375	915,230			*(267,020)*
	One and half brick reveal; to window jamb		900 m	120	108,000			*(14,720)*
	Half brick reveal; to cladding jamb		900 m	60	54,000			*+ 54,000*
	Aluminium to heads and sills of windows		1,575 m	50	78,750			*+ 7,190*

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty	/ Unit	Rate	Sub Total	Group Total	Notes	Change since last report
					£	£	£		
	Projecting window surrounds			Excl	1,500				*(264,000)*
	Cladding to parapet; inside face only		117	m²	200	23,500			*(1,690)*
	Allowance for finish to external columns to private roof terrace; brick finish		4	nr	4,500	18,000			*+ 18,000*
	Sundries								
	Allowance for lintels/support above windows		788	m	30	23,630		Assumed required with brickwork support at every other level	*+ 3,670*
	Brickwork support system; assumed every other level		751	m	335	251,450		Wincro budget estimate provided - refer email from Chris Allott Fri 09/07/2021 07:59; rate increased due to cavity depth increasing	*(7,670)*
	Scaffolding / Access		4,974	m²	50	248,680			*(660)*
	Mock up		1	Item	25,000	25,000			
	Balconies		2	nr	7,500	15,000			*+ 15,000*
.2	Walls below ground floor level								
	No works								
.3	Solar/rainscreen cladding								
	Main building; flat panel aluminium rainscreen cladding; standard colour anodised; carrier system	894	894	m²	400	357,710			*+ 135,840*
	Aluminium rainscreen flashings		900	m	50	45,000			*+ 4,400*
	Architectural vertical brise soleil in front of rainscreen		858	m²	250	214,380			*+ 214,380*
.4	External soffits								
	Brick cladding to soffit of private terraces		44	m²	400	17,600		Assumed brickslip	*+ 17,600*
	Soffit insulation and brick cladding to ground floor overhang		21	m²	450	9,450		Assumed brickslip	*+ 9,450*
.5	Subsidiary walls, balustrades and proprietary balconies								
	Balustrade to roof terrace; metal railing		42	m	500	20,800			*(200)*
	Balustrade to private terraces; glazed; fire rated		29	m	800	22,800			*+ 22,800*

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty	/ Unit	Rate	Sub Total	Group Total	Notes	Change since last report
					£	£	£		
	.6 Façade access/cleaning systems								
	Maintenance system (davit)		111	m	375	41,700			+ 260
2.06	**Windows and external doors**						**904,230**		
	.1 Windows								
	Aluminium windows; non-opening	129	129	m²	525	67,730			(100,410)
	Aluminium windows; opening	1,423	1,423	m²	550	782,670			+ 255,310
	Curtain walling; ground floor	41	41	m²	650	26,330			(10,400)
	Doors								
	External door; single; steel		3	nr	1,500	4,500			(4,750)
	External door; double; steel		5	nr	1,750	8,750			(2,250)
	External door; double louvred door			nr	5,000				(15,000)
	External door; single; glazed		7	nr	1,750	12,250			+ 12,250
	External door; double; glazed		1	nr	2,000	2,000			+ 2,000
	Total Area of Ext Envelope:	4,974							
2.07	**Internal walls and partitions**						**922,490**		
	.1 Walls and partitions								
	Internal apartment partitions		1,576	m	150	236,330			+ 42,710
	Landlord walls		1,129	m	250	282,300			(29,880)
	Riser/shaft walls			Incl				Included in frame	
	Lining to internal face of external wall		4,856	m²	40	194,250			+ 2,520
	Lining to core walls		2,593	m²	30	77,780		Including inside face of staircore	+ 7,190
	Lining to outside face of bathroom pod		1,977	m²	30	59,310			(16,670)
	Allowance for pattressing to apartments		107	nr	200	21,400		10m2 per unit outside of pod	+ 200
	Blockwork to ground floor; single skin; 60 minutes fire protection		284	m²	50	14,180			+ 14,180
	Blockwork to ground floor; double skin; 120 minutes fire protection		243	m²	100	24,300			+ 24,300
	Lining ground floor blockwork		421	m²	30	12,640		All blockwork excl. plant, bin/bike, and commercial areas	+ 12,640
	.2 Balustrades and handrails								
	No works								

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty	/ Unit	Rate	Sub Total	Group Total	Notes	Change since last report
					£	£	£		
	.3 Moveable room dividers								
	No works								
	.4 Cubicles								
	No works								
2.08	**Internal doors**						**475,550**		
	Single doors to corridors and communal areas		27	nr	600	16,200			*(9,600)*
	Single doors to corridors and communal areas; glazed		1	nr	1,250	1,250			*+ 1,250*
	Single entrance doors to dwellings		107	nr	1,000	107,000			*+ 1,000*
	Single doors within dwellings		436	nr	600	261,600			*+ 1,800*
	Riser doors; single		15	nr	600	9,000			*+ 9,000*
	Riser doors; double		30	nr	900	27,000			
	Access panels		214	nr	250	53,500		2nr per unit	*+ 500*
3	**INTERNAL FINISHES**								
3.01	**Wall finishes**						**197,470**		
	Decoration to internal walls; 1nr mist coat, 2nr emulsion		25,896	m²	6	155,370			*+ 22,690*
	Wall tiling to bathrooms			Incl				Included in pod allowance	
	Tiling/splash backs to kitchens		107	nr	300	32,100			*+ 300*
	Enhanced finishes to reception areas		1	item	10,000	10,000			
3.02	**Floor finishes**						**629,330**		
	.1 Finishes to floors								
	Floor finishes to apartments; timber	6,123	6,123	m²	60	367,360			*(18,010)*
	Carpet to bedrooms			Excl					
	Tiling to bathrooms; fitting only - tiles supply in pod cost	660	162	nr	250	40,500			*+ 3,750*
	Carpet tiles to circulation areas	810	810	m²	45	36,430			*+ 1,540*
	Acoustic raised timber batten floor			Excl					
	Regupol acoustic layer		6,783	m²	10	67,830			*(3,000)*

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element		Qty	/ Unit	Rate	Sub Total	Group Total	Notes	Change since last report
					£	£	£		
	Floor paint to plant areas	220	220	m²	10	2,200			*(260)*
	Commercial unit; dust sealer	176	176	m²	10	1,760			*+ 340*
	Back of house	23	23	m²	35	820			*(1,070)*
	Ceramic tiling to amenity	26	26	m²	60	1,570			*+ 1,570*
	Enhanced finishes to reception area		1	item	15,000	15,000			
	Allowance for matwells to entrance areas		2	nr	2,500	5,000			
	Skirtings		9,086	m	10	90,860			*+ 22,240*
.2	Raised access floors								
	No works								
	Total area of floor finishes	8,037							
3.03	**Ceiling finishes**						**128,060**		
.1	Finishes to ceilings								
	Suspended ceilings to circulation, amenity and back of house	859	859	m²	45	38,660			*(142,700)*
	Dust sealer to exposed ceilings; to residential areas only	6,123	6,123	m²	10	61,230			*+ 24,980*
	Allowance for bulkheads; generally		1	item	10,000	10,000			*(21,800)*
	Soffit insulation to Commercial unit and amenity space	176	202	m²	90	18,170			*+ 1,470*
	Ceiling to plant	93	93	Excl				Assumed exposed; no dust sealer	
	Ceiling to bin / bike store	127	127	Excl				Assumed exposed; no dust sealer	
	Ceiling to bathrooms	660	660	Excl				Included within pod cost	
.2	False ceilings								
	No works								
.3	Demountable suspended ceilings								
	No works								
	Total area of ceiling finishes	8,037							
4	**FITTINGS AND FURNISHINGS**						**674,750**		
4.01	**General fittings, furnishings & equipment**								
.1	General fittings, etc								

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit		Rate	Sub Total	Group Total	Notes	Change since last report
				£	£	£		
	Secure letter boxes	107	nr	100	10,700			*+ 100*
	Allowance for loose FF&E and blinds		Excl.				Refer to 'Executive Summary' for costs	
	General fittings for coat hooks		Incl				Included in pod allowance	
	Internal signage	107	nr	100	10,700			*+ 100*
	C&C signage	1	item	30,000	30,000			
	Allowance for concierge area, desk and facilities	1	item	10,000	10,000			
	Bike storage	107	nr	150	16,050			*+ 150*
	Vanity units/built in WC cistern		Incl				Included in pod allowance	
	Fitted wardrobe doors	178	nr	350	62,300			*+ 62,300*
.2	Domestic kitchen fittings and equipment							
	Kitchen fittings	107	nr	5,000	535,000			*+ 5,000*
.3	Signs/notices							
	No works							
.4	Works of Art							
	No works							
.5	Equipment							
	No works							
4.02	**Special fittings, furnishings & equipment**							
	No works							
4.03	**Internal planting**							
	No works							
4.04	**Bird and vermin control**							
	No works							
5	**M&E INSTALLATION**							
5.01	**Sanitary appliances**					**893,200**		
.1	Sanitary appliances							
	Bathrooms		Incl				Included in pod allowance	
	En suites		Incl				Included in pod allowance	

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
			£	£	£		
	Cleaners sink	1 nr	700	700			
	Ground floor WC; Doc M pack incl. WHB	1 nr	1,500	1,500			+ 1,500
.2	Pods						
	Bathroom pods	162 nr	5,500	891,000			+ 82,500
.3	Sanitary fittings						
	No works						
5.02	**Services equipment**				**2,461,000**		
	M&E allowance per unit - excluding sanitaryware, lifts, BWIC and exposed M&E	107 nr	23,000	2,461,000		**As discussed with JHP. NOTE - allowance excludes potential additional costs for new legislation regarding overheating**	+ 23,000
5.03	**Disposal installations**						
.1	Foul drainage above ground						
	Waste pipes	Incl					
	Soil/ventilation stacks	Incl					
.2	Laboratory and industrial liquid waste drainage						
	No works						
.3	Refuse disposal						
	No works						
5.04	**Water installations**						
.1	Mains water supply						
	Tank and booster set	Incl					
	Hot and cold water installation	Incl					
	Meters	Incl					
	Boosted water distribution	Incl					
.2	Cold water distribution						
	No works						
.3	Hot water distribution						
	No works						
.4	Local hot water distribution						
	No works						

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
			£	£	£		
	.5 Steam and condensate distribution						
	No works						
5.5/6/7	**Heating, air conditioning and ventilation**						
	.1 Central heating						
	Electric panel heating	Incl					
	Electric air curtain to entrance	Incl					
	.2 Central cooling/heating and ventilation systems						
	MHVR installation in apartments	Incl					
	.3 Local heating and cooling						
	Heating to plantroom						
	.4 Local and special ventilation						
	Kitchen extract	Incl					
	.5 Smoke extract/control						
	Smoke vent	Incl					
5.08	**Electrical installations**						
	.1 Mains and sub-mains distribution						
	LV connection	Incl					
	Primary distribution - landlord areas	Incl					
	Small power installation - apartments	Incl					
	Lighting installations - landlord areas	Incl					
	Lighting installations - apartments	Incl					
	Emergency lighting installations	Incl					
	External lighting	Excl				Refer to External Works	
	Lighting to terrace	Incl					
	PV; 50KvA	Incl					
	.2 Power installations						
	Small power installation	Incl.					
	.3 Lighting installations						
	Lighting installations	Incl.					
	.4 Specialist lighting installations						
	No works						
	.5 Local electricity generation systems						

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
			£	£	£		
	Standby generator	Incl					
.6	Transformation devices						
	No works						
.7	Earthing and bonding						
	Earthing and bonding	Incl.					
5.09	**Gas and other fuel installations**						
.1	Gas distribution						
	No works						
.2	Fuel storage and piped systems						
	No works						
5.10	**Lifts and conveyor installations**				**210,000**		
.1	Lifts						
	Lifts	2 nr	105,000	210,000			
.2	Escalators						
	No items						
.3	Dock levellers and scissor lifts						
	No items						
.4	Other lift, hoist and conveyor installations						
	No items						
5.11	**Fire and lightning protection**						
.1	Fire fighting systems						
	Fire alarm installations	Incl.					
	Dry riser installation	Incl.					
	Sprinkler installation	Incl.					
.2	Lightning protection						
	Lightning protection	Incl.					
5.12	**Communications, security, control systems**						
.1	Communications systems						
	Data installations	Incl.					
	CCTV	Incl.					

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
			£	£	£		
	Access control & intruder alarm	Incl.					
	.2 Security systems						
	No works						
	.3 Central control/building management systems						
	No works						
5.13	**Specialist installations**				**160,500**		
	.1 Specialist piped supply systems						
	No works						
	.2 Radio and television studios						
	No works						
	.3 Specialist refrigeration systems						
	No works						
	.4 Water features						
	No works						
	.5 Other specialist installations						
	E/O for exposed M&E within living areas	107 nr	1,500	160,500			*+ 1,500*
5.14	**Builders work in connection with services**				**80,130**		
	BWIC with services	3%	2,671,000	80,130			*+ 690*
5.15	**Testing and commissioning of services**						
	T&C	2% Incl				Included in unit rate	
	Allowance for sub contract preliminaries	10% Incl				Included in unit rate	
6	**PREFABRICATED UNITS**						
7	**WORK TO EXISTING BUILDINGS**						

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
			£	£	£		
8	**EXTERNAL WORKS**				**69,035**		
8.06	**External Drainage**						
.1	Surface and foul water drainage						
	Below ground drainage						*(132,870)*
	Excavate, lay & joint SW pipes; 300mm dia, depth not exceeding 2500mm	11 m	250	2,750			*+ 2,750*
	Excavate, lay & joint SW pipes; 225mm dia, depth not exceeding 750mm	97 m	90	8,730			*+ 8,730*
	Excavate, lay & joint SW pipes; 225mm dia, depth not exceeding 2000mm	97 m	200	19,400			*+ 19,400*
	Excavate, lay & joint SW pipes; 100mm dia, depth not exceeding 750mm	5 m	70	350			*+ 350*
	Excavate, lay & joint FW pipes; 150mm dia, depth not exceeding 1000mm	145 m	80	11,600			*+ 11,600*
	Excavate, lay & joint FW pipes; 150mm dia, depth not exceeding 2500mm	10 m	220	2,200			*+ 2,200*
	Allowance for diamond drilling and sleeving through pile caps	1 item	1,500	1,500			*+ 1,500*
	FW inspection chamber	4 nr	500	2,000			*+ 2,000*
	SW manhole; 1200 dia	2 nr	2,000	4,000			*+ 4,000*
	SW manhole; 1200 dia hyrdro-brake	1 nr	5,000	5,000			*+ 5,000*
	Combined manhole; 1200 dia	1 nr	2,500	2,500			*+ 2,500*
	SW attenuation; Provisional allowance	Incl				Incl. in externals	
	Aco drainage	Incl				Incl. in externals	
	Allowance for connections, rodding eyes and the like	15 %	60,030	9,005			*+ 9,005*
.2	Ancillary drainage systems						
	No works						

8.0 COST PLAN - APARTMENT BLOCK

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
			£	£	£		
	Laboratory and industrial liquid drainage						
	No works						
	Land drainage						
	No works						
	Testing and commissioning of drainage						
	Testing and commissioning						
9	**FACILITATING WORKS**						
10	**ON COSTS**						
10.01	Preliminaries				**1,910,910**		
	General allowance for preliminaries	13.0%	14,699,305	1,910,910			*+ 62,128*
10.02	Overheads and profit				**830,510**		
	General allowance for overheads & profit	5.0%	16,610,214	830,510			*+ 27,000*
10.03	Main Contractor Risk				**348,814**		
	Construction risk allowance	2.0%	17,440,724	348,814			*+ 11,341*

9.0 COST PLAN - EXTERNAL WORKS

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	Change since last report
			£	£	£		
1	**EXTERNAL WORKS**				**519,410**		
1.01	**Roads, paths and pavings**						
	Block paving; 'Dutch' style	274 m²	120	32,880			*(30,560)*
	Concrete block paving; aggregate finish	274 m²	140	38,360			*+ 38,360*
	E/O allowance for grass paving system	1 item	7,500	7,500			*(7,500)*
1.02	**Planting**						
	Allowance for external soft landscaping generally; topsoil, turfing, planting, etc.	336 m²	40	13,450			*+ 5,130*
	Trees	19 nr	1,000	19,000		Assumed pots not required	*(6,000)*
1.03	**Fencing, railings and walls**						
	Retaining / dwarf walls	1 item	7,000	7,000		Assumed 1m high; reinforced concrete	*+ 2,000*
	Site steps / stairs	1 item	2,500	2,500			
	Allowance for site ramp	1 item	5,000	5,000			*+ 5,000*
1.04	**Site/street furniture and equipment**						
	Allowance for fixed site furniture	1 item	20,000	20,000			
	Visitor's cycle parking	1 item	3,500	3,500			*+ 3,500*
1.05	**Site drainage**						
	SW attenuation	1 item	35,000	35,000		$70m^3$ - based on WML advice	
	Allowance for aco drainage	55 m	200	11,000			*(6,500)*
1.06	**External Lighting**						
	Allowance	1 item	20,000	20,000			
1.07	**External services**						
	Incoming services (including trenching, etc.)	107 nr	2,000	214,000			*+ 2,000*

9.0 COST PLAN - EXTERNAL WORKS

Ref	Element	Qty / Unit	Rate	Sub Total	Group Total	Notes	*Change since last report*
			£	£	£		
1.08	**On Costs**						
	Preliminaries						
	General allowance for preliminaries	13.0%	429,190	55,790			*+ 700*
	Overheads and profit						
	General allowance for overheads & profit	5.0%	484,980	24,250			*+ 310*
	Contingency						
	Construction risk allowance	2.0%	509,230	10,180			*+ 120*

10.0 INFORMATION USED TO PREPARE THIS REPORT

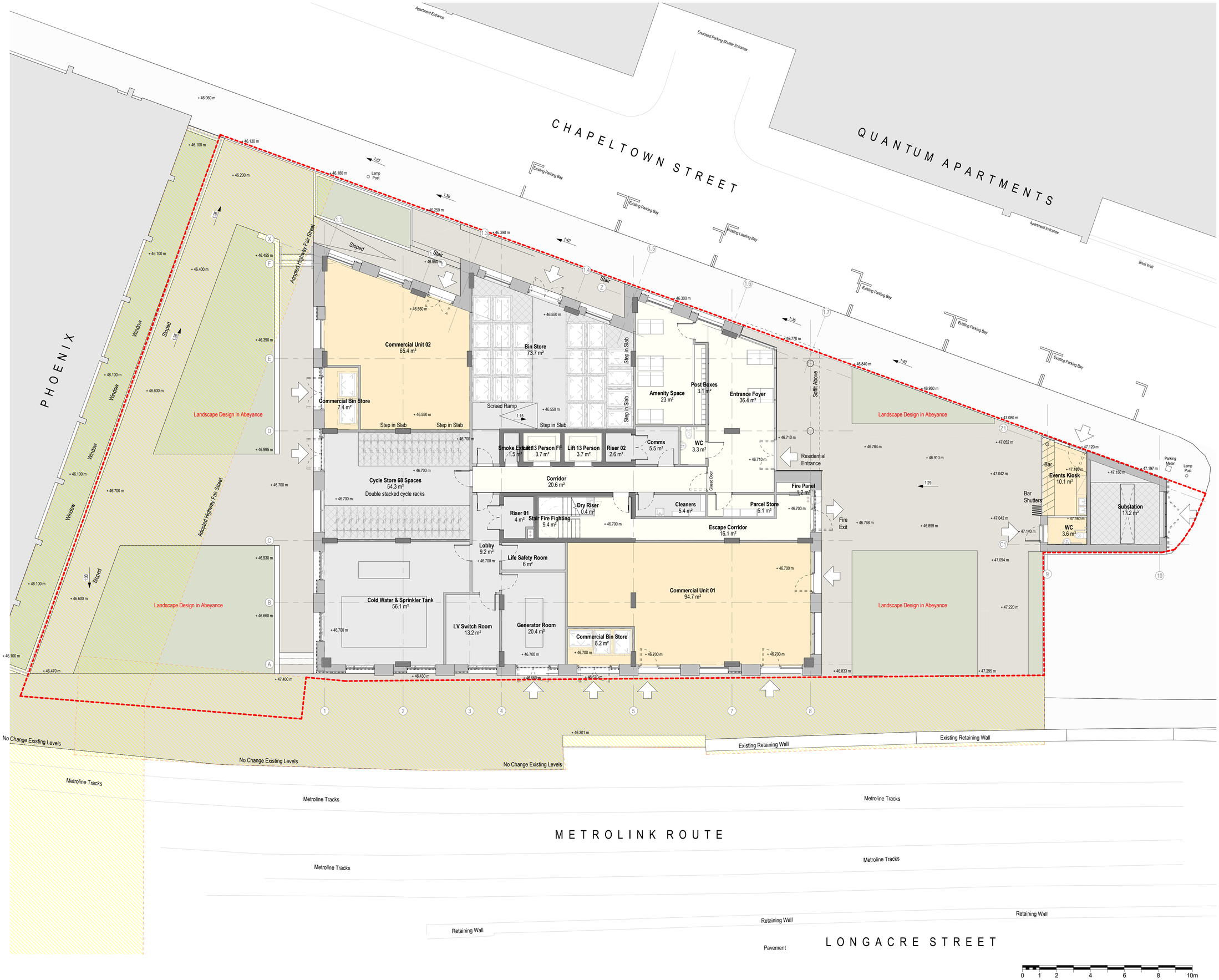
We list below the key design information used to prepare this report:

1.0 Architect Drawings
1.01 BDP-FRS-XX-XX-DR-A-220301
1.02 BDP-FRS-XX-XX-DR-A-220301
1.03 BDP-FRS-XX-ZZ-DR-A-020001
1.04 BDP-FRS-XX-ZZ-DR-A-020003
1.05 BDP-FRS-XX-ZZ-DR-A-020002
1.06 BDP-FRS-XX-XX-DR-A-201114
1.07 BDP-FRS-XX-XX-DR-A-201112
1.08 BDP-FRS-XX-XX-DR-A-201111
1.09 BDP-FRS-XX-XX-DR-A-201113
1.10 BDP-FRS-XX-00-DR-A-200211
1.11 BDP-FRS-XX-01-DR-A-200211
1.12 BDP-FRS-XX-02-DR-A-200211
1.13 BDP-FRS-XX-12-DR-A-200211
1.14 BDP-FRS-XX-13-DR-A-200211
1.15 BDP-FRS-XX-14-DR-A-200211
1.16 BDP-FRS-XX-15-DR-A-200211
1.17 BDP-FRS-XX-XX-DR-A-202101
1.18 BDP-FRS-XX-XX-DR-A-202102
1.19 BDP-FRS-XX-00-DR-A-200201
1.20 BDP-FRS-XX-15-DR-A-912101

2.0 Structural & Civil Engineer
2.01 9861 SK02 Floor Plate Options
2.02 9861 SK03 Preliminary Foundation Scheme
2.03 9861-WML-XX-ZZ-RP-S-001 Rev 0 Stage 2 Report
2.04 9861-WML-00-XX-DR-C-1001 P01
2.05 9861 SK07 Prelim Roof Frames Rev A

3.0 Landscape Architect
3.01 0883-RFM-XX-00-SK-L-0002

11.0 DRAWINGS



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ANY DRAWING ERRORS OR DIVERGENCIES SHOULD BE BROUGHT TO THE ATTENTION OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW.

DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING BEFORE WORK COMMENCES:
- THE CDM DESIGN ISSUES REGISTER
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Total Building Measure

Commercial Total

Gross Internal Area *inc event kiosk*	= 192m²

Residential Total

Gross Internal Area	= 8555m² *(not inc commercial)*
Net Internal Area	= 6909m² *(not inc commercial)*
Core Non Net Area	= 1646m²
Net to Gross Efficiency	= 80.8%

Building Heights

Building Height	= 15 storeys overall, *(grnd plus 14)*
Floor to Floor Height Ground	= 4050mm
Floor to Floor Height Upper	= 2850mm

Facade Total

Brick Masonry Wall	= 2344m² *(not inc win returns)*
Metal Panel Rainscreen	= 924m²
Metal Panel Sawtooth	= 215m²
Total Solid	= 3483m²
Windows & Curtain Walling	= 1593m²
Solid to Glazed Ratio	= 0.46
Wall to GIA Floor Ratio	= 0.58

Typical Apartment Floor Measure

Typical Gross Internal Area	= 598m²
Typical Net Internal Area	= 510m²
Typical Core Non Net Area	= 88.4m²
Typical Net to Gross Efficiency	= 85.2%

Apartment Unit Count

One Bed	= 40 units (37.4%)
Two Bed, One Bath	= 12 units (11.2%)
Two Bed, Two Bath	= 51 units (47.7%)
Three Bed, Two Bath	= 4 units (3.7%)
Total	**= 107 units**

Typical Apartment Areas

One Bed	= 52m² , 53m²
Two Bed, One Bath	= 58.9m²
Two Bed, Two Bath	= 70.7m² , 66m²
Three Bed, Two Bath	= 90.5m²

**Note: Drawn areas may differ slightly to suit plan layout*

Seperation to Adjacent Buildings

Seperation to Phoenix Windows

Distance Min	= 9.9m Approx
Distance Max	= 18m Approx

Seperation to Quantum Windows

Distance Min	= 14m Approx
Distance Max	= 18.5m Approx

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P06	GA Plans: Planning Report Issue	JS/MB	23.09.21
P05	GA Plans, Apartment Types update, building footprint moved	JS/MB	02.09.21
P04	GA Plans update: apartment & kitchens	JS/MB	24.08.21
P03	GA Plans update: core & spot levels	JS/MB	16.08.21
P02	GA Plans update, building footprint adjusted	JS/MB	09.07.21
P01	GA Plans update	JS/MB	17.06.21

KEYPLAN

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www.bdp.com

PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 00 Ground Floor

SCALE @ A1
1 : 100

DATE FIRST ISSUED
28.04.21

DRAWING No.
BDP-FRS-XX-00-DR-A-200211

REVISION
P06

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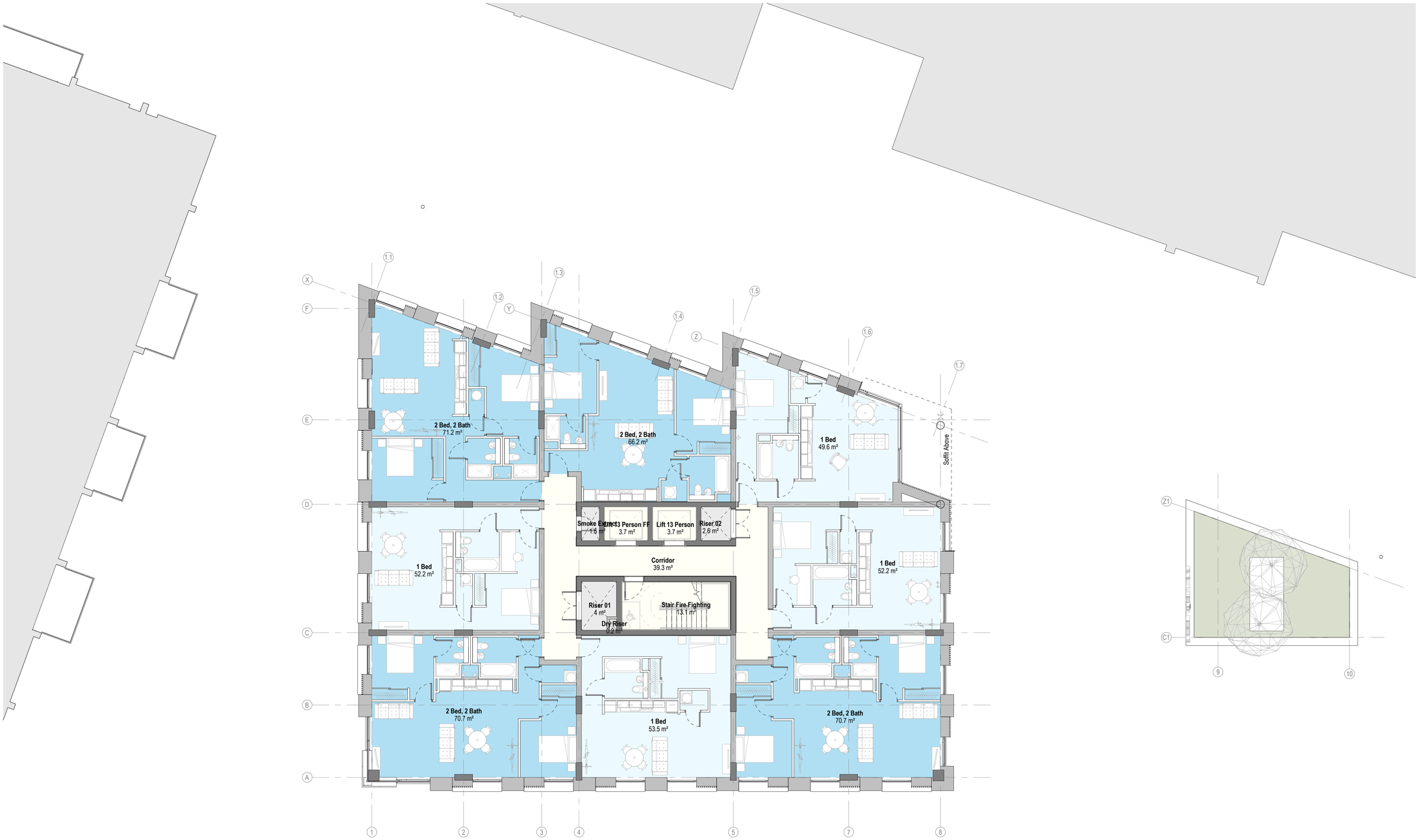

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- THE CDM DESIGN ISSUES REGISTER
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Total Building Measure

Commercial Total

Gross Internal Area *inc event kiosk*	= 192m²

Residential Total

Gross Internal Area	= 8555m² *(not inc commercial)*
Net Internal Area	= 6909m² *(not inc commercial)*
Core Non Net Area	= 1646m²
Net to Gross Efficiency	= 80.8%

Building Heights

Building Height	= 15 storeys overall, *(grnd plus 14)*
Floor to Floor Height Ground	= 4050mm
Floor to Floor Height Upper	= 2850mm

Facade Total

Brick Masonry Wall	= 2344m² *(not inc win returns)*
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Metal Panel Sawtooth	= 215m²
Total Solid	= 3483m²
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Solid to Glazed Ratio	= 0.46
Wall to GIA Floor Ratio	= 0.58

Typical Apartment Floor Measure

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Typical Net Internal Area	= 510m²
Typical Core Non Net Area	= 88.4m²
Typical Net to Gross Efficiency	= 85.2%

Apartment Unit Count

One Bed	= 40 units (37.4%)
Two Bed, One Bath	= 12 units (11.2%)
Two Bed, Two Bath	= 51 units (47.7%)
Three Bed, Two Bath	= 4 units (3.7%)
Total	**= 107 units**

Typical Apartment Areas

One Bed	= 52m² , 53m²
Two Bed, One Bath	= 58.9m²
Two Bed, Two Bath	= 70.7m² , 66m²
Three Bed, Two Bath	= 90.5m²

**Note: Drawn areas may differ slightly to suit plan layout*

Seperation to Adjacent Buildings

Seperation to Phoenix Windows

Distance Min	= 9.9m Approx
Distance Max	= 18m Approx

Seperation to Quantum Windows

Distance Min	= 14m Approx
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P01	GA Plans update	JS/MB	17.06.21

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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 01

SCALE @ A1
1 : 100

DATE FIRST ISSUED
21.04.21

DRAWING No.
BDP-FRS-XX-01-DR-A-200211

REVISION
P06

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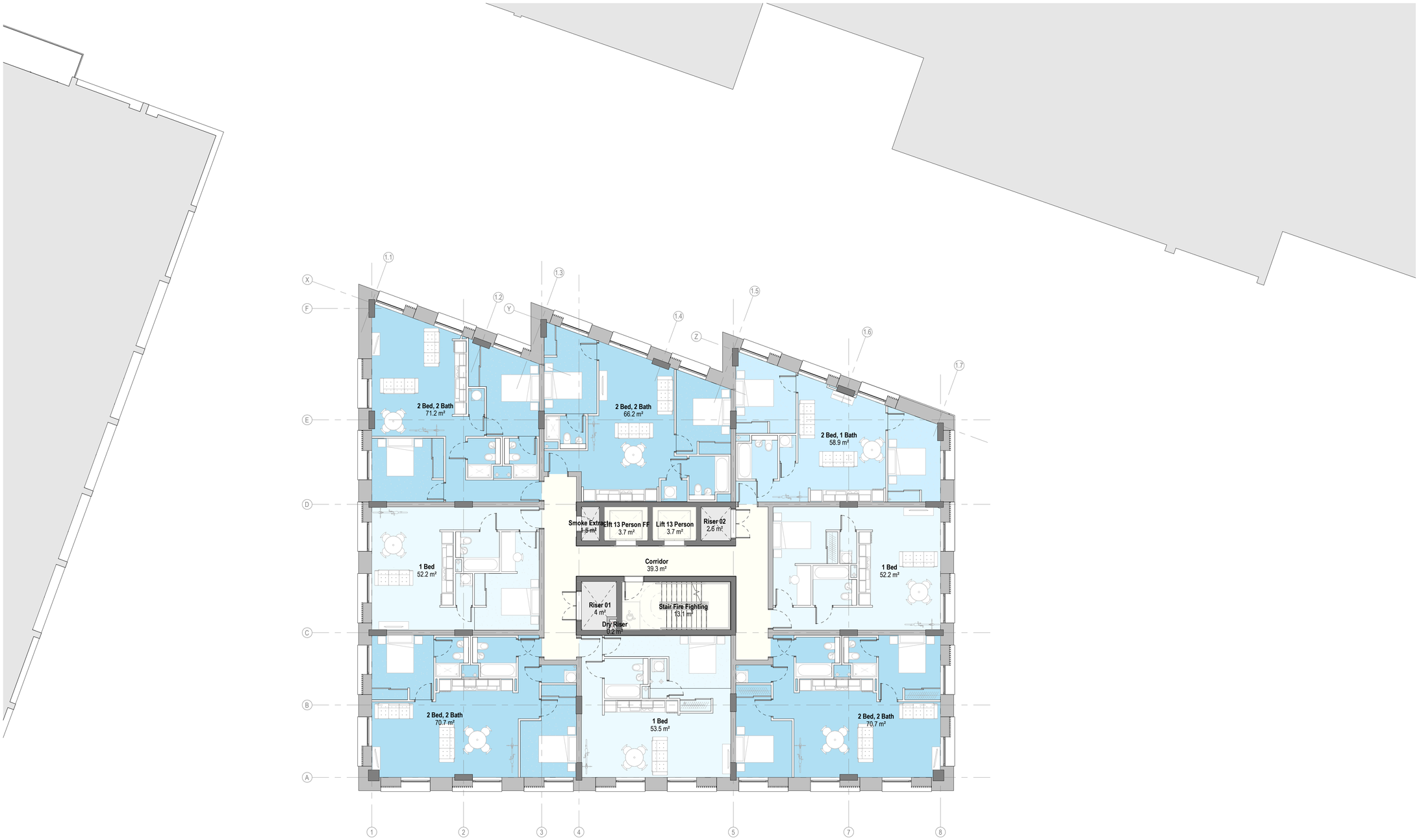

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- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Total Building Measure

Commercial Total

Gross Internal Area *inc event kiosk*	= 192m²

Residential Total

Gross Internal Area	= 8555m² *(not inc commercial)*
Net Internal Area	= 6909m² *(not inc commercial)*
Core Non Net Area	= 1646m²
Net to Gross Efficiency	= 80.8%

Building Heights

Building Height	= 15 storeys overall, *(grnd plus 14)*
Floor to Floor Height Ground	= 4050mm
Floor to Floor Height Upper	= 2850mm

Facade Total

Brick Masonry Wall	= 2344m² *(not inc win returns)*
Metal Panel Rainscreen	= 924m²
Metal Panel Sawtooth	= 215m²
Total Solid	= 3483m²
Windows & Curtain Walling	= 1593m²
Solid to Glazed Ratio	= 0.46
Wall to GIA Floor Ratio	= 0.58

Typical Apartment Floor Measure

Typical Gross Internal Area	= 598m²
Typical Net Internal Area	= 510m²
Typical Core Non Net Area	= 88.4m²
Typical Net to Gross Efficiency	= 85.2%

Apartment Unit Count

One Bed	= 40 units (37.4%)
Two Bed, One Bath	= 12 units (11.2%)
Two Bed, Two Bath	= 51 units (47.7%)
Three Bed, Two Bath	= 4 units (3.7%)
Total	**= 107 units**

Typical Apartment Areas

One Bed	= 52m² , 53m²
Two Bed, One Bath	= 58.9m²
Two Bed, Two Bath	= 70.7m² , 66m²
Three Bed, Two Bath	= 90.5m²

**Note: Drawn areas may differ slightly to suit plan layout*

Seperation to Adjacent Buildings

Seperation to Phoenix Windows

Distance Min	= 9.9m Approx
Distance Max	= 18m Approx

Seperation to Quantum Windows

Distance Min	= 14m Approx
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P01	GA Plans update	JS/MB	17.06.21

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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 02

SCALE @ A1
1 : 100

DATE FIRST ISSUED
21.04.21

DRAWING No.
BDP-FRS-XX-02-DR-A-200211

REVISION
P06

0 1 2 4 6 8 10m

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- THE CDM DESIGN ISSUES REGISTER
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Total Building Measure

Commercial Total
Gross Internal Area *inc event kiosk* = 192m²

Residential Total
Gross Internal Area = 8555m² *(not inc commercial)*
Net Internal Area = 6909m² *(not inc commercial)*
Core Non Net Area = 1646m²
Net to Gross Efficiency = 80.8%

Building Heights
Building Height = 15 storeys overall, *(grnd plus 14)*
Floor to Floor Height Ground = 4050mm
Floor to Floor Height Upper = 2850mm

Facade Total
Brick Masonry Wall = 2344m² *(not inc win returns)*
Metal Panel Rainscreen = 924m²
Metal Panel Sawtooth = 215m²
Total Solid = 3483m²
Windows & Curtain Walling = 1593m²
Solid to Glazed Ratio = 0.46
Wall to GIA Floor Ratio = 0.58

Typical Apartment Floor Measure

Typical Gross Internal Area = 598m²
Typical Net Internal Area = 510m²
Typical Core Non Net Area = 88.4m²
Typical Net to Gross Efficiency = 85.2%

Apartment Unit Count

One Bed = 40 units (37.4%)
Two Bed, One Bath = 12 units (11.2%)
Two Bed, Two Bath = 51 units (47.7%)
Three Bed, Two Bath = 4 units (3.7%)
Total = 107 units

Typical Apartment Areas

One Bed = 52m² , 53m²
Two Bed, One Bath = 58.9m²
Two Bed, Two Bath = 70.7m² , 66m²
Three Bed, Two Bath = 90.5m²
**Note: Drawn areas may differ slightly to suit plan layout*

Seperation to Adjacent Buildings

Seperation to Phoenix Windows
Distance Min = 9.9m Approx
Distance Max = 18m Approx

Seperation to Quantum Windows
Distance Min = 14m Approx
Distance Max = 18.5m Approx

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P06	GA Plans: Planning Report Issue	JS/MB	23.09.21
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P01	GA Plans update	JS/MB	17.06.21

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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 12

SCALE @ A1
1 : 100

DATE FIRST ISSUED
06/03/21

DRAWING No.
BDP-FRS-XX-12-DR-A-200211

REVISION
P06

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- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Total Building Measure

Commercial Total

Gross Internal Area *inc event kiosk*	= 192m²

Residential Total

Gross Internal Area	= 8555m² *(not inc commercial)*
Net Internal Area	= 6909m² *(not inc commercial)*
Core Non Net Area	= 1646m²
Net to Gross Efficiency	= 80.8%

Building Heights

Building Height	= 15 storeys overall, *(grnd plus 14)*
Floor to Floor Height Ground	= 4050mm
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Facade Total

Brick Masonry Wall	= 2344m² *(not inc win returns)*
Metal Panel Rainscreen	= 924m²
Metal Panel Sawtooth	= 215m²
Total Solid	= 3483m²
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Solid to Glazed Ratio	= 0.46
Wall to GIA Floor Ratio	= 0.58

Typical Apartment Floor Measure

Typical Gross Internal Area	= 598m²
Typical Net Internal Area	= 510m²
Typical Core Non Net Area	= 88.4m²
Typical Net to Gross Efficiency	= 85.2%

Apartment Unit Count

One Bed	= 40 units (37.4%)
Two Bed, One Bath	= 12 units (11.2%)
Two Bed, Two Bath	= 51 units (47.7%)
Three Bed, Two Bath	= 4 units (3.7%)
Total	**= 107 units**

Typical Apartment Areas

One Bed	= 52m² , 53m²
Two Bed, One Bath	= 58.9m²
Two Bed, Two Bath	= 70.7m² , 66m²
Three Bed, Two Bath	= 90.5m²

**Note: Drawn areas may differ slightly to suit plan layout*

Seperation to Adjacent Buildings

Seperation to Phoenix Windows

Distance Min	= 9.9m Approx
Distance Max	= 18m Approx

Seperation to Quantum Windows

Distance Min	= 14m Approx
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REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
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P05	GA Plans, Apartment Types update, building footprint moved	JS/MB	02.09.21
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P02	GA Plans update, building footprint adjusted	JS/MB	08.07.21
P01	GA Plans update	JS/MB	17.06.21

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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 13

SCALE @ A1
1 : 100

DATE FIRST ISSUED
21.04.21

DRAWING No.
BDP-FRS-XX-13-DR-A-200211

REVISION
P06

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- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Total Building Measure

Commercial Total
Gross Internal Area *inc event kiosk* = 192m²

Residential Total
Gross Internal Area = 8555m² *(not inc commercial)*
Net Internal Area = 6909m² *(not inc commercial)*
Core Non Net Area = 1646m²
Net to Gross Efficiency = 80.8%

Building Heights
Building Height = 15 storeys overall, *(grnd plus 14)*
Floor to Floor Height Ground = 4050mm
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Facade Total
Brick Masonry Wall = 2344m² *(not inc win returns)*
Metal Panel Rainscreen = 924m²
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Windows & Curtain Walling = 1593m²
Solid to Glazed Ratio = 0.46
Wall to GIA Floor Ratio = 0.58

Typical Apartment Floor Measure

Typical Gross Internal Area = 598m²
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Typical Core Non Net Area = 88.4m²
Typical Net to Gross Efficiency = 85.2%

Apartment Unit Count

One Bed = 40 units (37.4%)
Two Bed, One Bath = 12 units (11.2%)
Two Bed, Two Bath = 51 units (47.7%)
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Total = 107 units

Typical Apartment Areas

One Bed = 52m² , 53m²
Two Bed, One Bath = 58.9m²
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**Note: Drawn areas may differ slightly to suit plan layout*

Seperation to Adjacent Buildings

Seperation to Phoenix Windows
Distance Min = 9.9m Approx
Distance Max = 18m Approx

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Distance Min = 14m Approx
Distance Max = 18.5m Approx

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P06	GA Plans: Planning Report Issue	JS/MB	23.09.21
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P02	GA Plans update, building footprint adjusted	JS/MB	08.07.21
P01	GA Plans update	JS/MB	17.06.21

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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 14

SCALE @ A1
1 : 100

DATE FIRST ISSUED
21.04.21

DRAWING No.
BDP-FRS-XX-14-DR-A-200211

REVISION
P06

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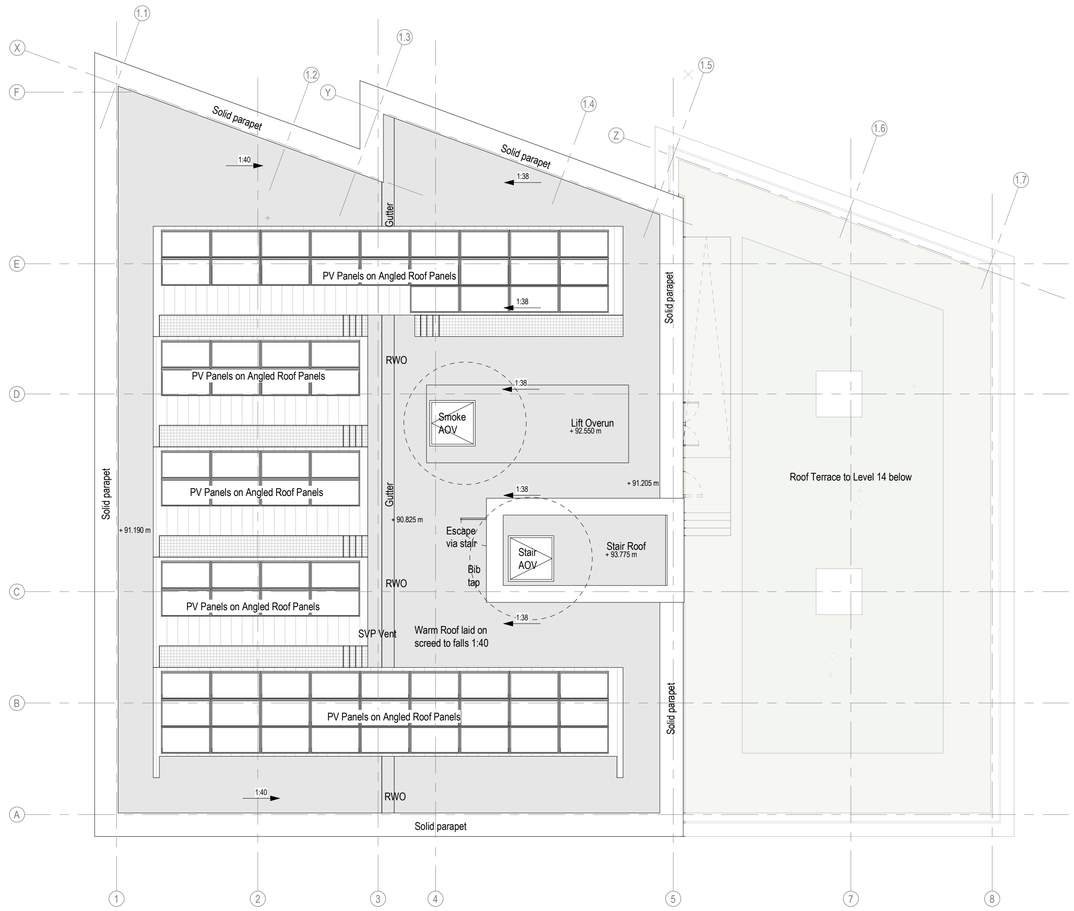

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NOTES

Total Building Measure

Commercial Total

Gross Internal Area *inc event kiosk*	= 192m²

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Distance Min	= 14m Approx
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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Plan - Level 15

SCALE @ A1
1 : 100

DATE FIRST ISSUED
21.04.21

DRAWING No.
BDP-FRS-XX-15-DR-A-200211

REVISION
P06

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01 GA Elevation - North
1 : 100

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- THE PROJECT CDM RISK REGISTER

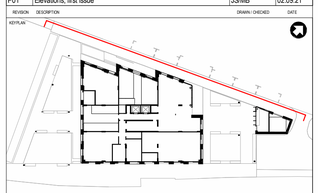
NOTES

Material Key

1. Brick wall light grey
2. Metal rainscreen panel dark grey
3. Metal windows with top hung opening light dark grey
4. Metal window soffit dark grey
5. Metal window cill dark grey
6. Metal framed glazed door dark grey
7. Metal solid door dark grey
8. Metal vertical railing in front of rainscreen panel
9. Curtain walling capped dark grey
10. Curtain walling with metal louvres dark grey
11. Curtain walling opaque glazing
12. Curtain walling metal spandrel panel dark grey
13. Projecting balcony with glass balustrade
14. Recessed balcony with glass balustrade
15. Signage location size and syle to be agreed
16. Precast concrete cladding panel to event kiosk

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P01	Elevations, first issue	JS/MB	02.09.21

KEYPLAN:



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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Elevation - North

SCALE
@ A1
As indicated

DATE FIRST ISSUED
06/03/21

DRAWING No.
BDP-FRS-XX-XX-DR-A-201111

REVISION
P01

WIP

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02 GA Elevation - East
1 : 100

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- THE CDM DESIGN ISSUES REGISTER
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

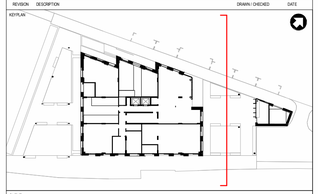
NOTES

Material Key

1. Brick wall light grey
2. Metal rainscreen panel dark grey
3. Metal windows with top hung opening light dark grey
4. Metal window soffit dark grey
5. Metal window cill dark grey
6. Metal framed glazed door dark grey
7. Metal solid door dark grey
8. Metal vertical railing in front of rainscreen panel
9. Curtain walling capped dark grey
10. Curtain walling with metal louvres dark grey
11. Curtain walling opaque glazing
12. Curtain walling metal spandrel panel dark grey
13. Projecting balcony with glass balustrade
14. Recessed balcony with glass balustrade
15. Signage location size and syle to be agreed
16. Precast concrete cladding panel to event kiosk

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P01	Elevations, first issue	JS/MB	02.09.21

KEYPLAN



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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Elevation - East

SCALE @ A1
As indicated

DATE FIRST ISSUED
06/03/21

DRAWING No.
BDP-FRS-XX-XX-DR-A-201112

REVISION
P01

WIP

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03 GA Elevation - South
1 : 100

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NOTES

Material Key

1. Brick wall light grey
2. Metal rainscreen panel dark grey
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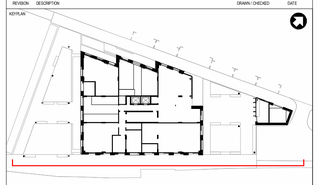
16. Precast concrete cladding panel to event kiosk

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P01	Elevations, first issue	JS/MB	02.09.21

KEYPLAN



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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Elevation - South

SCALE @ A1
As indicated

DATE FIRST ISSUED
06/03/21

DRAWING No.
BDP-FRS-XX-XX-DR-A-201113

REVISION
P01

WIP

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04 GA Elevation - West
1 : 100

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NOTES

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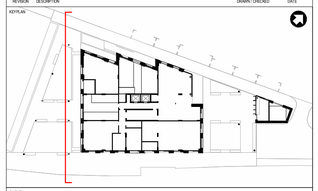
REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P01	Elevations, first issue	JS/MB	02.09.21

KEYPLAN



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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Elevation - West

SCALE
@ A1
As indicated

DATE FIRST ISSUED
06/03/21

DRAWING No.
BDP-FRS-XX-XX-DR-A-201114

REVISION
P01

WIP

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01 GA Section - 01
1 : 100

0 1 2 4 6 8 10m

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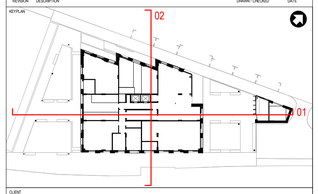
NOTES

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P02	GA Sections, update	JS/MB	02.09.21
P01	GA Section First Issue	JS/MB	16.08.21

KEYPLAN



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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Section - 01

SCALE
@ A1
As indicated

DATE FIRST ISSUED
16.08.21

DRAWING NO.
BDP-FRS-XX-XX-DR-A-202101

REVISION
P02

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02 GA Section - 02
1 : 100

0 1 2 4 6 8 10m

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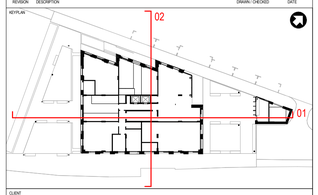
NOTES

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P02	GA Sections, update	JS/MB	02.09.21
P01	GA Section First Issue	JS/MB	16.08.21

KEYPLAN



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PROJECT TITLE
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BDP JOB NUMBER
P3001911

DRAWING TITLE
GA Section - 02

SCALE @ A1
As indicated

DATE FIRST ISSUED
16.08.21

DRAWING No.
BDP-FRS-XX-XX-DR-A-202102

REVISION
P02

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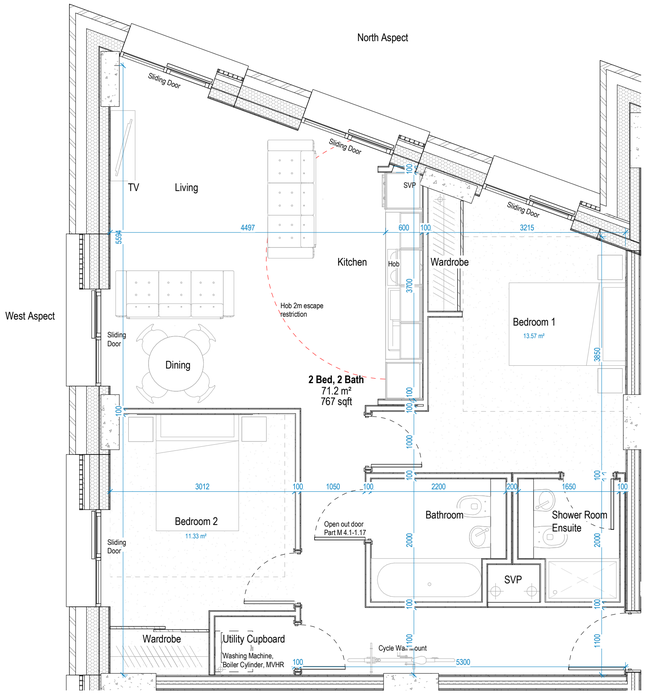
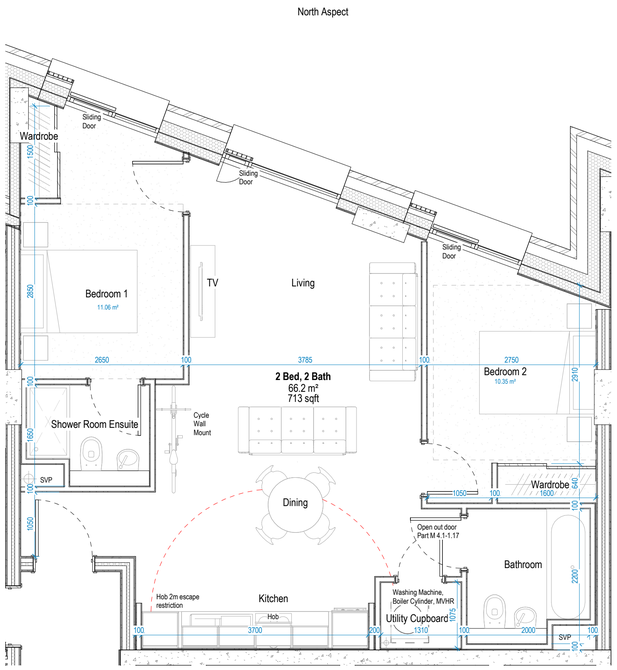


2A Apartment Type 2A
1 : 50

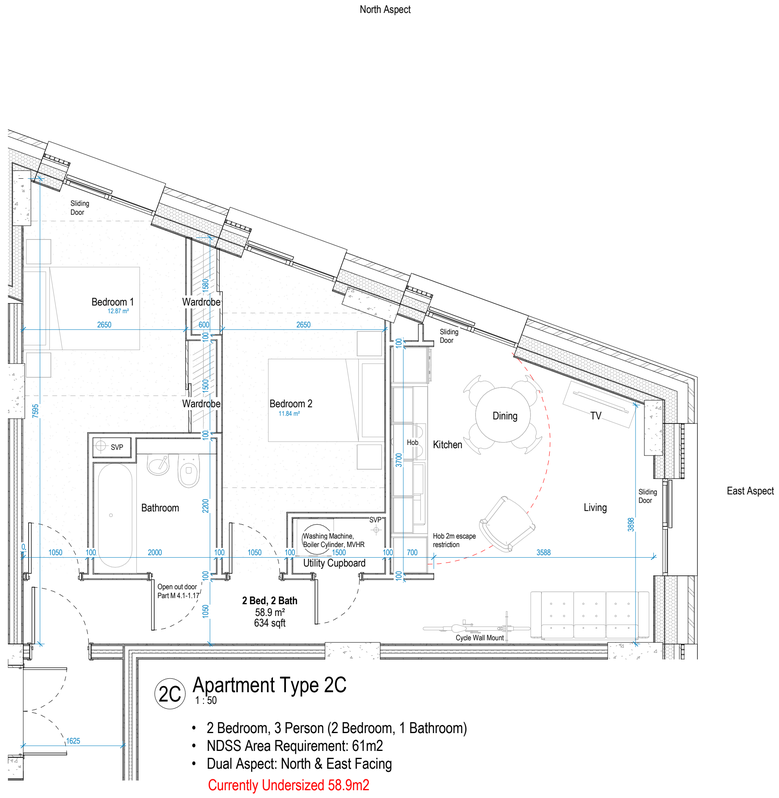
- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Dual Aspect: North & West Facing



2B Apartment Type 2B
1 : 50

- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Single Aspect: North Facing

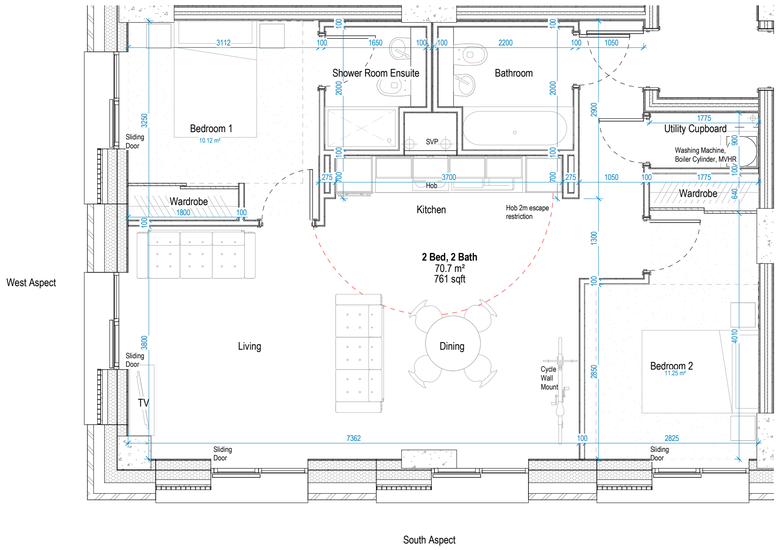
Currently Undersized 65.2m2



2C Apartment Type 2C
1 : 50

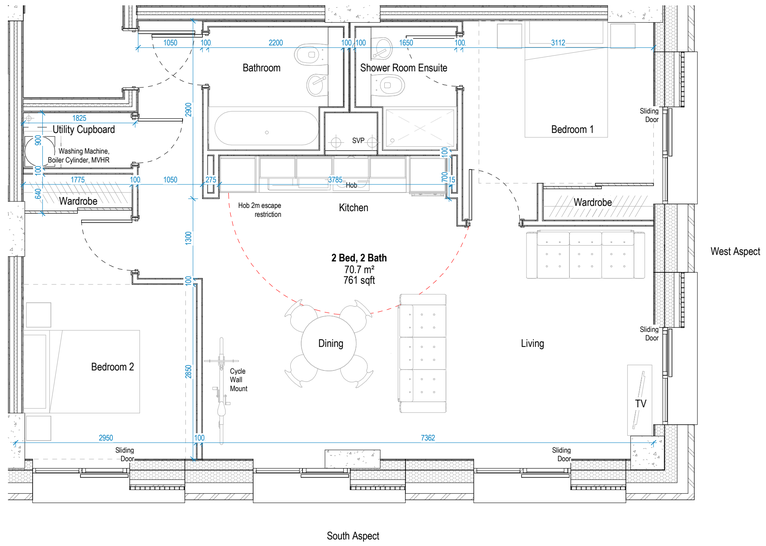
- 2 Bedroom, 3 Person (2 Bedroom, 1 Bathroom)
- NDSS Area Requirement: 61m2
- Dual Aspect: North & East Facing

Currently Undersized 58.9m2



2D Apartment Type 2D
1 : 50

- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Dual Aspect: South & West Facing



2Dh Apartment Type 2D East Handed
1 : 50

- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Dual Aspect: South & East Facing

0 1 2 3 4 5m

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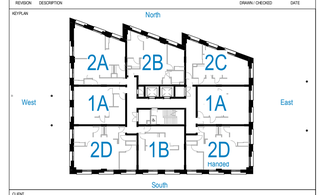
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P03	GA Plans, Apartment Types update, building footprint moved	JS/MB	02.09.21
P02	Apartment Types update, kitchens, 2baths	JS/MB	24.08.21
P01	First Issue Apartment Types	JS/MB	04.08.21

KEYPLAN



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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
Apartment Types - Sheet 1

SCALE @ A1
As indicated

DATE FIRST ISSUED
08/04/21

DRAWING No.
BDP-FRS-XX-XX-DR-A-220301

REVISION
P03

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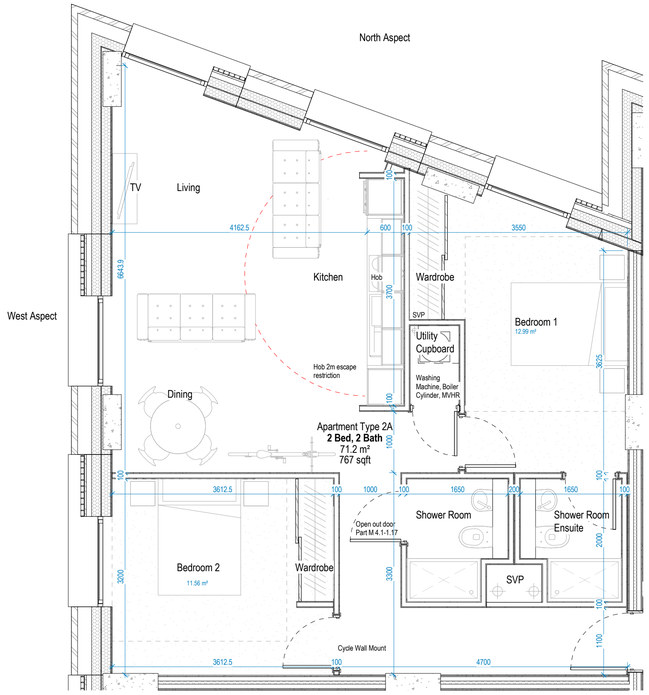
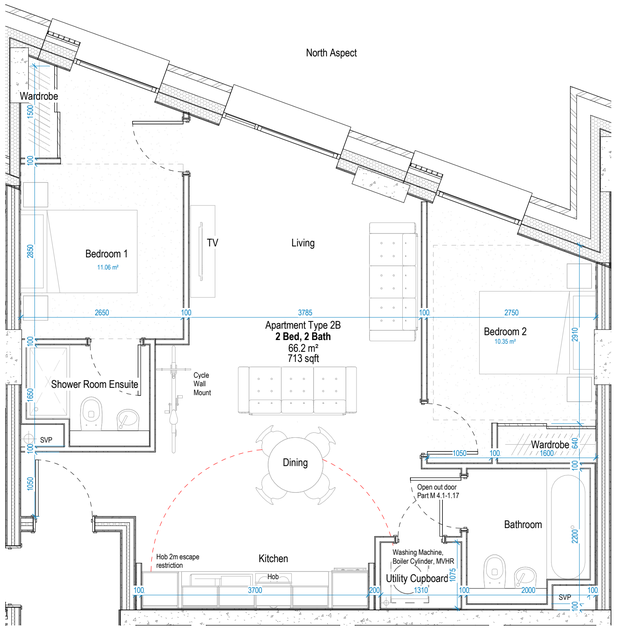


2A Apartment Type 2A
1 : 50

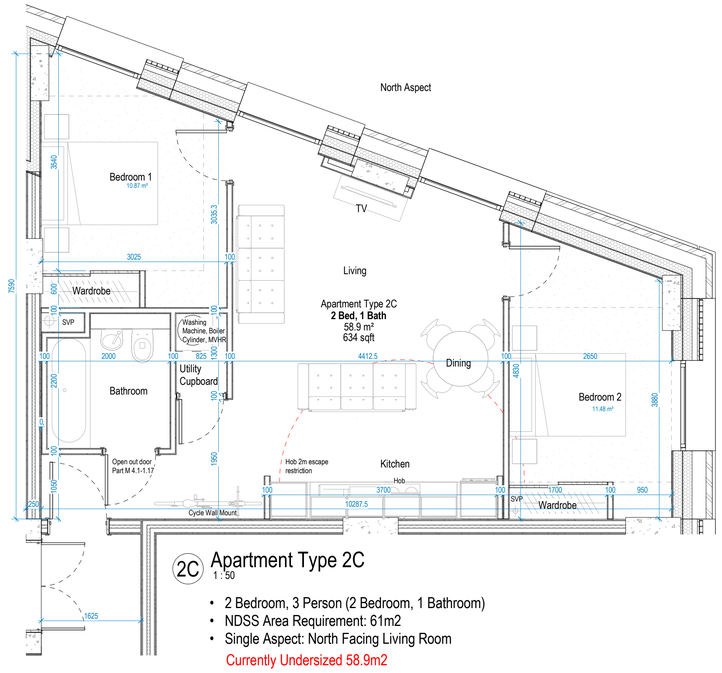
- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Dual Aspect: North & West Facing



2B Apartment Type 2B
1 : 50

- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Single Aspect: North Facing

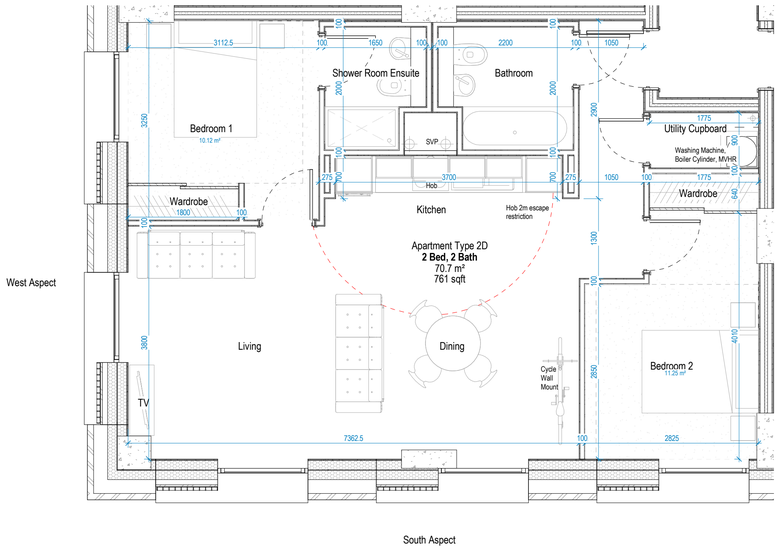
Currently Undersized 65.2m2



2C Apartment Type 2C
1 : 50

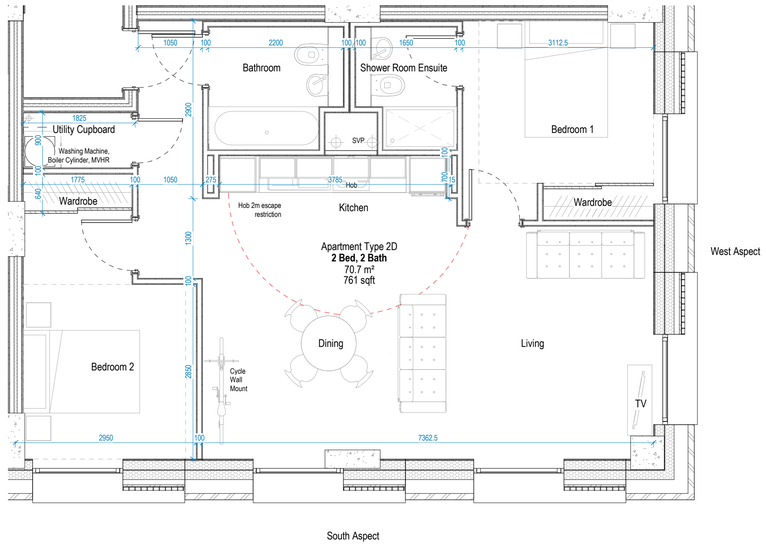
- 2 Bedroom, 3 Person (2 Bedroom, 1 Bathroom)
- NDSS Area Requirement: 61m2
- Single Aspect: North Facing Living Room

Currently Undersized 58.9m2



2D Apartment Type 2D
1 : 50

- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Dual Aspect: South & West Facing



2Dh Apartment Type 2D East Handed
1 : 50

- 2 Bedroom, 4 Person (2 Bedroom, 2 Bathroom)
- NDSS Area Requirement: 70m2
- Dual Aspect: South & East Facing

0 1 2 3 4 5m

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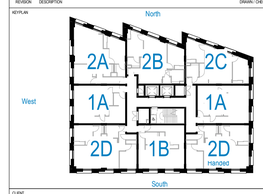
NOTES

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P05	Apartment Types - 2A bathpod changed to showerpod	JS/MB	22.09.21
P04	Apartment Types - 2A, 2C updated	JS/MB	22.09.21
P03	GA Plans, Apartment Types update, building footprint moved	JS/MB	02.09.21
P02	Apartment Types update, kitchens, 2baths	JS/MB	24.08.21
P01	First Issue Apartment Types	JS/MB	04.08.21

KEYPLAN



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PROJECT TITLE
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BDP JOB NUMBER
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DRAWING TITLE
Apartment Types - Sheet 1

SCALE @ A1
As indicated

DATE FIRST ISSUED
08/04/21

DRAWING No.
BDP-FRS-XX-XX-DR-A-220301

REVISION
P05

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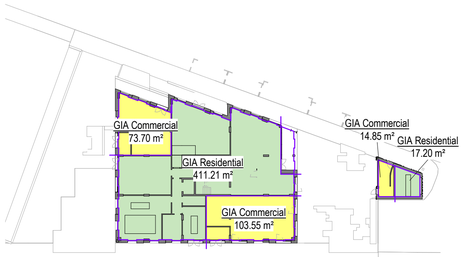
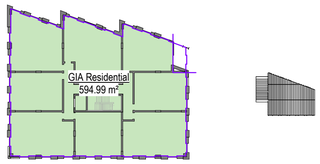


00 Area Plan GIA - Level 00
1 : 500



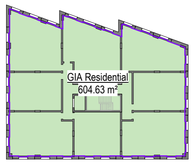
01 Area Plan GIA - Level 01
1 : 500

02 Area Plan GIA - Level 02
1 : 500

03 Area Plan GIA - Level 03
1 : 500

04 Area Plan GIA - Level 04
1 : 500

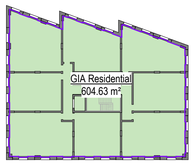
05 Area Plan GIA - Level 05
1 : 500



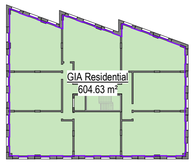
06 Area Plan GIA - Level 06
1 : 500

07 Area Plan GIA - Level 07
1 : 500

08 Area Plan GIA - Level 08
1 : 500



09 Area Plan GIA - Level 09
1 : 500



10 Area Plan GIA - Level 10
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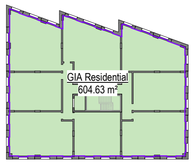

11 Area Plan GIA - Level 11
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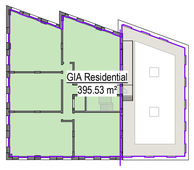
12 Area Plan GIA - Level 12
1 : 500

13 Area Plan GIA - Level 13
1 : 500



14 Area Plan GIA - Level 14
1 : 500

15 Area Plan GIA - Level 15
1 : 500

Area Schedule GIA

Area Schedule GIA		
Level	**Name**	**Area**
Level 0	GIA Commercial	192.1 m²
GIA Commercial		192.1 m²
Level 0	GIA Residential	428.4 m²
Level 1	GIA Residential	595 m²
Level 2	GIA Residential	604.6 m²
Level 3	GIA Residential	604.6 m²
Level 4	GIA Residential	604.6 m²
Level 5	GIA Residential	604.6 m²
Level 6	GIA Residential	604.6 m²
Level 7	GIA Residential	604.6 m²
Level 8	GIA Residential	604.6 m²
Level 9	GIA Residential	604.6 m²
Level 10	GIA Residential	604.6 m²
Level 11	GIA Residential	604.6 m²
Level 12	GIA Residential	582.2 m²
Level 13	GIA Residential	582.2 m²
Level 14	GIA Residential	395.5 m²
Level 15	GIA Residential	12.8 m²
GIA Residential		8642.4 m²
GIA Residential & Commercial Total		8834.5 m²

Area Schedule NIA

Area Schedule NIA		
Level	**Name**	**Area**
Level 0	NIA Commercial	192.1 m²
NIA Commercial		192.1 m²
Level 1	NIA Residential	491.3 m²
Level 2	NIA Residential	500.3 m²
Level 3	NIA Residential	500.3 m²
Level 4	NIA Residential	500.3 m²
Level 5	NIA Residential	500.3 m²
Level 6	NIA Residential	500.3 m²
Level 7	NIA Residential	500.3 m²
Level 8	NIA Residential	500.3 m²
Level 9	NIA Residential	500.3 m²
Level 10	NIA Residential	500.3 m²
Level 11	NIA Residential	500.3 m²
Level 12	NIA Residential	485.9 m²
Level 13	NIA Residential	485.9 m²
Level 14	NIA Residential	316.4 m²
NIA Residential		6782.6 m²
NIA Residential & Commercial Total		6974.7 m²

Area Schedule Core Non Net

Area Schedule Core		
Level	**Name**	**Area**
Level 0	Core	428.4 m²
Level 1	Core	102.8 m²
Level 2	Core	102.8 m²
Level 3	Core	102.8 m²
Level 4	Core	102.8 m²
Level 5	Core	102.8 m²
Level 6	Core	102.8 m²
Level 7	Core	102.8 m²
Level 8	Core	102.8 m²
Level 9	Core	102.8 m²
Level 10	Core	102.8 m²
Level 11	Core	102.8 m²
Level 12	Core	95.1 m²
Level 13	Core	95.1 m²
Level 14	Core	78.2 m²
Level 15	Core	13.4 m²
Core		1840.7 m²

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- THE CDM DESIGN ISSUES REGISTER
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

Total Building Measure

Commercial Total
Commercial Gross Internal Area = 192.1m² (*inc pavilion*)

Residential Total
Residential Gross Internal Area = 8642.1m²
Residential Net Internal Area = 6782.5m²

Building Total
Building Gross Internal Area = 8834.5m²
Building Net Internal Area = 6974.7m²
Building Core Non Net Area = 1840.7m²
Total Net to Gross = 72.3%
Measuring Notes:
GIA, NIA Apartment areas include internal window reveals
NIA excludes structural columns, party walls & core / circulation

Building Heights
Building Height = 15 storeys overall, *(gmd plus 14)*
Floor to Floor Height Ground = 4050mm
Floor to Floor Height Upper = 2850mm

Facade Total
Brick Masonry Wall = 2366.6m² *(not inc win returns)*
Metal Panel Rainscreen = 972m²
Windows & Curtain Walling = 1525.1m²
Sawtooth Plant Screen = 177.9m²
Total Facade (not inc plant screen) = 4863.7m²
Glazing as % of Façade Total = 31.4%
Façade Area as % of GIA = 55.1%

Typical Apartment Floor Measure

Typical Gross Internal Area = 604.6m²
Typical Net Internal Area = 500.3m²
Typical Core Non Net Area = 102.8m²
Typical Net to Gross Efficiency = 82.7%

Apartment Unit Count

One Bed = 40 units (37.4%)
Two Bed, One Bath = 12 units (11.2%)
Two Bed, Two Bath = 51 units (47.7%)
Three Bed, Two Bath = 4 units (3.7%)
Total = 107 units

Seperation to Adjacent Buildings

Seperation to Phoenix Windows
Distance Min = 9.9m Approx
Distance Max = 18m Approx
Seperation to Quantum Windows
Distance Min = 14m Approx
Distance Max = 18.5m Approx

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P07	Area Schedules - update	JS/MB	18.10.21
P06	Area Schedules - update	JS/MB	14.10.21
P05	Area Schedules - GIA update, Facade measure update	JS/MB	12.10.21
P04	Area Schedules - GIA N/A window reveals included, NIA cols & party walls excluded	JS/MB	08.10.21
P03	Area Schedules update: building footprint	JS/MB	13.09.21

KEYPLAN

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PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
Area Schedule Plans - GIA

SCALE @ A1
1 : 500

DATE FIRST ISSUED
05/11/21

DRAWING No.
BDP-FRS-XX-ZZ-DR-A-020001

REVISION
P07

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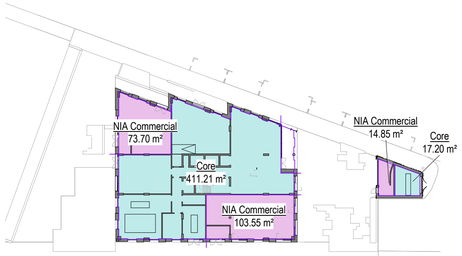

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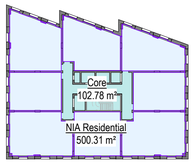
1 : 500



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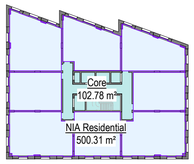

10 Area Plan NIA - Level 10
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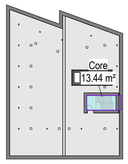

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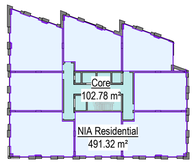

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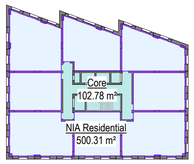

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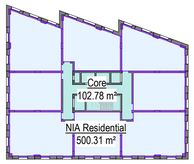

11 Area Plan NIA - Level 11
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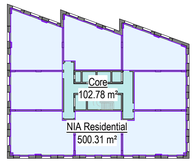

02 Area Plan NIA - Level 02
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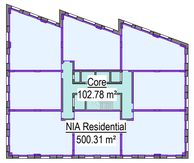

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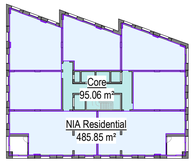

12 Area Plan NIA - Level 12
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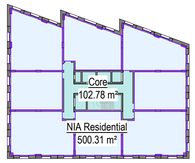

03 Area Plan NIA - Level 03
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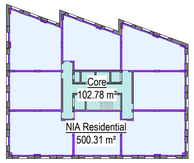

08 Area Plan NIA - Level 08
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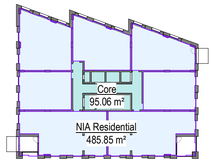

13 Area Plan NIA - Level 13
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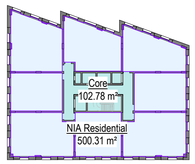

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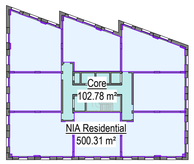

09 Area Plan NIA - Level 09
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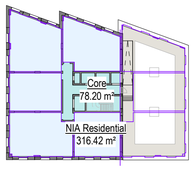

14 Area Plan NIA - Level 14
1 : 500

Area Schedule GIA

Area Schedule GIA		
Level	**Name**	**Area**
Level 0	GIA Commercial	192.1 m²
GIA Commercial		192.1 m²
Level 0	GIA Residential	428.4 m²
Level 1	GIA Residential	595 m²
Level 2	GIA Residential	604.6 m²
Level 3	GIA Residential	604.6 m²
Level 4	GIA Residential	604.6 m²
Level 5	GIA Residential	604.6 m²
Level 6	GIA Residential	604.6 m²
Level 7	GIA Residential	604.6 m²
Level 8	GIA Residential	604.6 m²
Level 9	GIA Residential	604.6 m²
Level 10	GIA Residential	604.6 m²
Level 11	GIA Residential	604.6 m²
Level 12	GIA Residential	582.2 m²
Level 13	GIA Residential	582.2 m²
Level 14	GIA Residential	395.5 m²
Level 15	GIA Residential	12.8 m²
GIA Residential		8642.4 m²
GIA Residential & Commercial Total		8834.5 m²

Area Schedule NIA

Area Schedule NIA		
Level	**Name**	**Area**
Level 0	NIA Commercial	192.1 m²
NIA Commercial		192.1 m²
Level 1	NIA Residential	491.3 m²
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Level 3	NIA Residential	500.3 m²
Level 4	NIA Residential	500.3 m²
Level 5	NIA Residential	500.3 m²
Level 6	NIA Residential	500.3 m²
Level 7	NIA Residential	500.3 m²
Level 8	NIA Residential	500.3 m²
Level 9	NIA Residential	500.3 m²
Level 10	NIA Residential	500.3 m²
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Level 13	NIA Residential	485.9 m²
Level 14	NIA Residential	316.4 m²
NIA Residential		6782.6 m²
NIA Residential & Commercial Total		6974.7 m²

Area Schedule Core Non Net

Area Schedule Core		
Level	**Name**	**Area**
Level 0	Core	428.4 m²
Level 1	Core	102.8 m²
Level 2	Core	102.8 m²
Level 3	Core	102.8 m²
Level 4	Core	102.8 m²
Level 5	Core	102.8 m²
Level 6	Core	102.8 m²
Level 7	Core	102.8 m²
Level 8	Core	102.8 m²
Level 9	Core	102.8 m²
Level 10	Core	102.8 m²
Level 11	Core	102.8 m²
Level 12	Core	95.1 m²
Level 13	Core	95.1 m²
Level 14	Core	78.2 m²
Level 15	Core	13.4 m²
Core		1840.7 m²

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- THE PROJECT CDM RISK REGISTER

Total Building Measure

Commercial Total
Commercial Gross Internal Area = 192.1m² (*inc pavilion*)

Residential Total
Residential Gross Internal Area = 8642.1m²
Residential Net Internal Area = 6782.5m²

Building Total
Building Gross Internal Area = 8834.5m²
Building Net Internal Area = 6974.7m²
Building Core Non Net Area = 1840.7m²
Total Net to Gross = 72.3%
Measuring Notes:
GIA, NIA Apartment areas include internal window reveals
NIA excludes structural columns, party walls & core / circulation

Building Heights
Building Height = 15 storeys overall, *(gmd plus 14)*
Floor to Floor Height Ground = 4050mm
Floor to Floor Height Upper = 2850mm

Facade Total
Brick Masonry Wall = 2366.6m² *(not inc win returns)*
Metal Panel Rainscreen = 972m²
Windows & Curtain Walling = 1525.1m²
Sawtooth Plant Screen = 177.9m²
Total Facade (not inc plant screen) = 4863.7m²
Glazing as % of Façade Total = 31.4%
Façade Area as % of GIA = 55.1%

Typical Apartment Floor Measure

Typical Gross Internal Area = 604.6m²
Typical Net Internal Area = 500.3m²
Typical Core Non Net Area = 102.8m²
Typical Net to Gross Efficiency = 82.7%

Apartment Unit Count

One Bed = 40 units (37.4%)
Two Bed, One Bath = 12 units (11.2%)
Two Bed, Two Bath = 51 units (47.7%)
Three Bed, Two Bath = 4 units (3.7%)
Total = 107 units

Seperation to Adjacent Buildings

Seperation to Phoenix Windows
Distance Min = 9.9m Approx
Distance Max = 18m Approx
Seperation to Quantum Windows
Distance Min = 14m Approx
Distance Max = 18.5m Approx

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P07	Area Schedules - update	JS/MB	18.10.21
P06	Area Schedules - update	JS/MB	14.10.21
P05	Area Schedules - GIA update, Facade measure update	JS/MB	12.10.21
P04	Area Schedules - GIA N/A window reveals included, NIA cols & party walls excluded	JS/MB	08.10.21
P03	Area Schedules update: building footprint	JS/MB	13.09.21

KEYPLAN

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M60 3JA
United Kingdom

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www.bdp.com

PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
Area Schedule Plans - NIA

SCALE @ A1
1 : 500

DATE FIRST ISSUED
05/25/21

DRAWING No.
BDP-FRS-XX-ZZ-DR-A-020002

REVISION
P07

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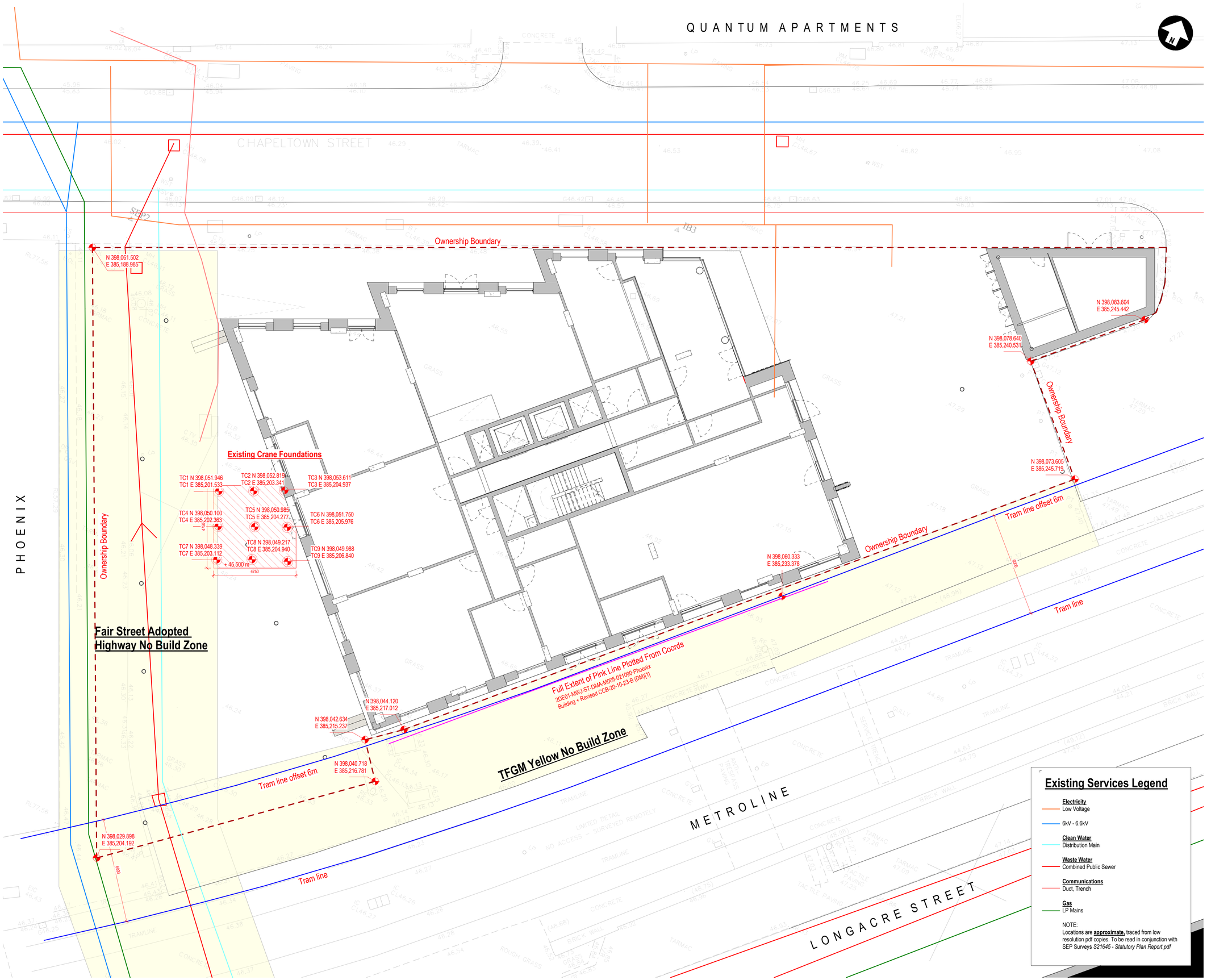

Existing Services Legend

Electricity
Low Voltage

6kV - 6.6kV

Clean Water
Distribution Main

Waste Water
Combined Public Sewer

Communications
Duct, Trench

Gas
LP Mains

NOTE:
Locations are **approximate,** traced from low resolution pdf copies. To be read in conjunction with SEP Surveys *S21645 - Statutory Plan Report.pdf*

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- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

Site Constraints Legend

Ownership Boundary
- BDP has traced the Redline Ownership Boundary from the Shed KM pdf drawing "*Demise plan(98983473.1) / CW B4 SKM (00) 004b*"
- No CAD / DWG version has been supplied to BDP for verification of boundary coordinates.
- Redline Coordinates have been plotted by BDP from the traced for verification purposes only.

No Build TfGM Tramline Servicing Zone
- No buildings to be erected within yellow zone, but ground landscaping is allowed.
- This restriction is to allow TfGM to service the tramline.
- BDP has traced the Yellow Area from the Shed KM pdf drawing "*Demise plan(98983473.1) / CW B4 SKM (00) 004b*"
- No CAD / DWG version has been supplied to BDP for verification of yellow area coordinates.

HS2 Working Area to re-align Metrolink
- HS2 Ltd have advised that both the above ground structure and the below ground foundations cannot crossover the pink line.
- Works are required to the Metrolink due to the lowering of the alignment to allow for new Metrolink station under the HS2 station.
- HS2 Ltd need to undertake piling works which will require a working area and the HS2 propose to utilise TWAO area to carry out these works.
- BDP has plotted the "Pink Line" from the coordinates on pdf drawing "*2DE01-MWJ-ST-DMA-M005-021090-Phoenix Building + Revised CCB-20-10-23-B (DM)[1]*".
- No CAD / DWG version has been supplied to BDP for verification of coordinates.

Metroline Offset 6m
- Metro Tram line has been plotted from SEP Survey dwg drawing "*S21645-T*"
- 6m offset from nearest tramline to proposed building shown.
- NOTE: Required offset distance to be confirmed by client

Existing Crane Foundation Piles
- Existing crane base and piles have been plotted from coordinates supplied via email from Eric Wright Construction 10.08.2020
- Extent of pile cap to be verified by site survey as pile coordinates do not match design diimension setting out.

47.29 **Survey Existing Levels**
- Existing Levels are shown.
- Levels plotted from SEP Survey dwg drawing "*S21645-T*"

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P03	Site Constraints: existing services added	JS/MB	15.09.21
P02	Site Constraints, adopted highway overlay	JS/MB	27.08.21
P01	First Issue Site Constraints	JS/MB	03.06.21

KEYPLAN

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United Kingdom

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www.bdp.com

PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
Site Constraints Plan

SCALE @ A1
1 : 100

DATE FIRST ISSUED
06/01/21

DRAWING No.
BDP-FRS-XX-00-DR-A-200201

REVISION
P03

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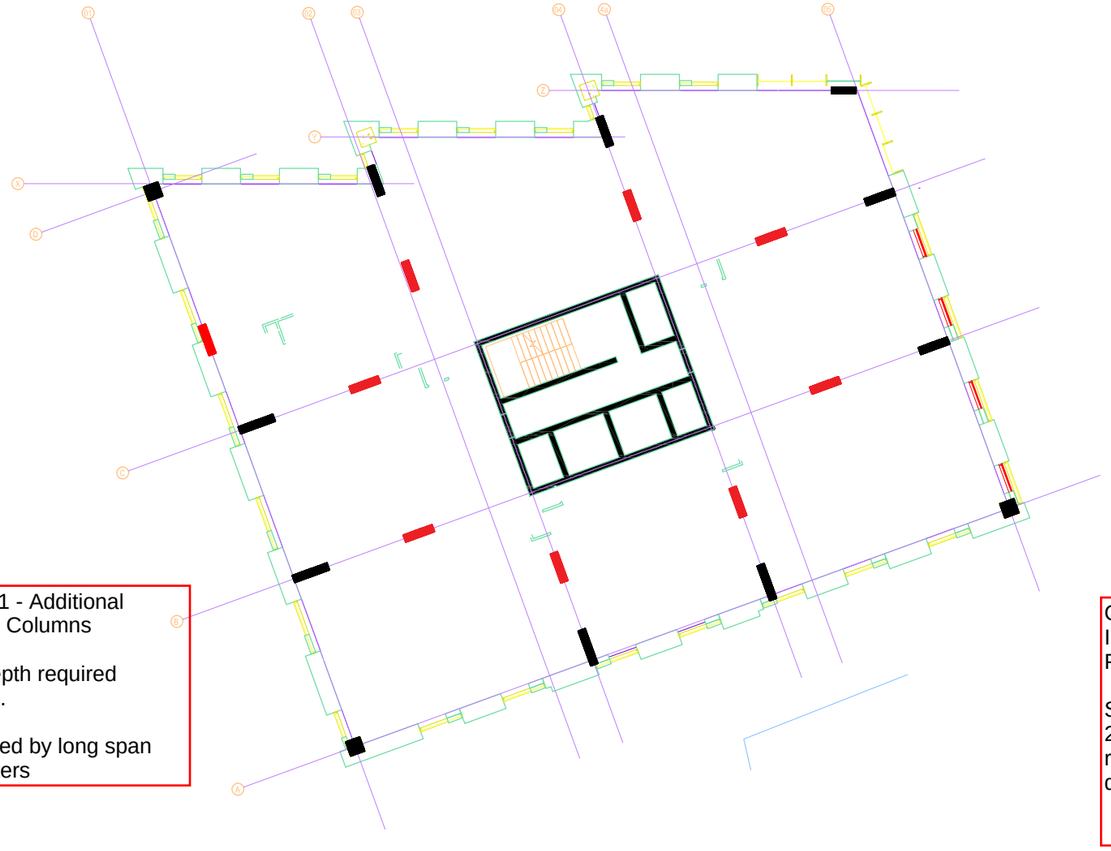
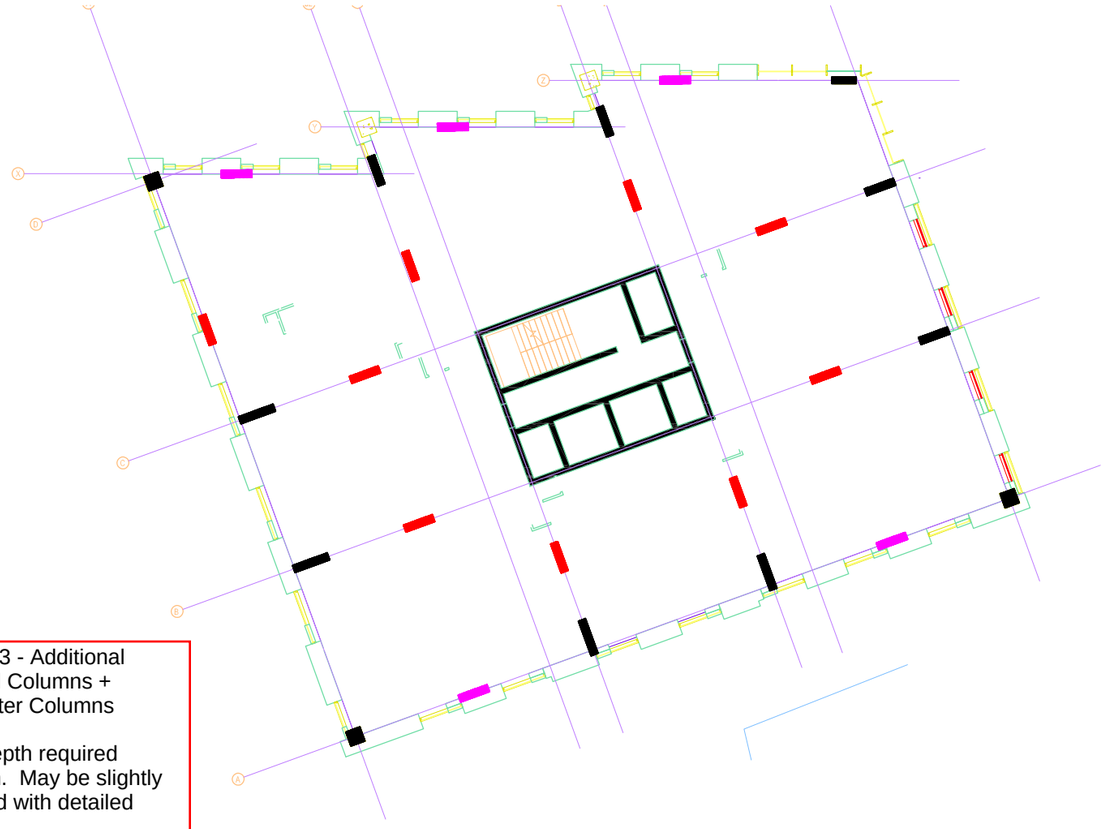


Option 1 - Additional Internal Columns

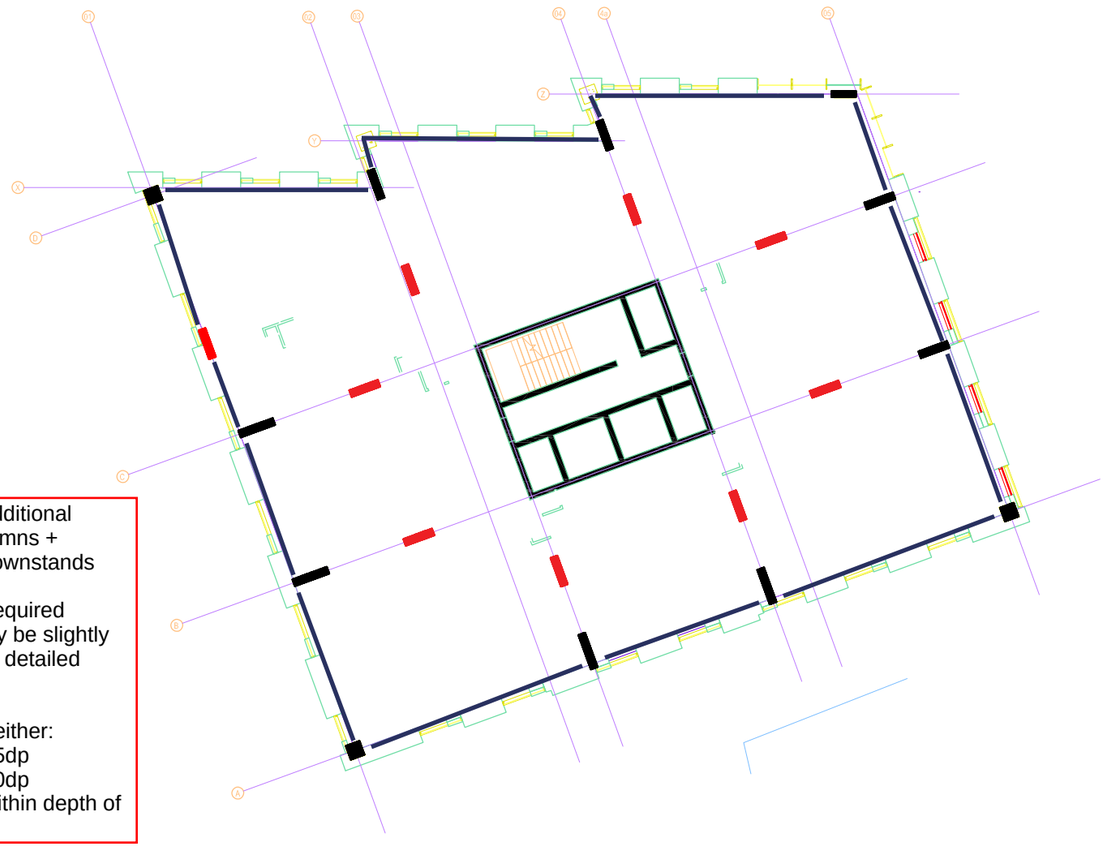
Slab depth required 300mm.

Governed by long span perimeters



Option 3 - Additional Internal Columns + Perimeter Columns

Slab depth required 250mm. May be slightly reduced with detailed design.



Option 2 - Additional Internal Columns + Perimeter Downstands

Slab depth required 250mm. May be slightly reduced with detailed design.

Beam sizes either:
~ 300w x 675dp
~ 600w x 600dp
slab depth within depth of beam

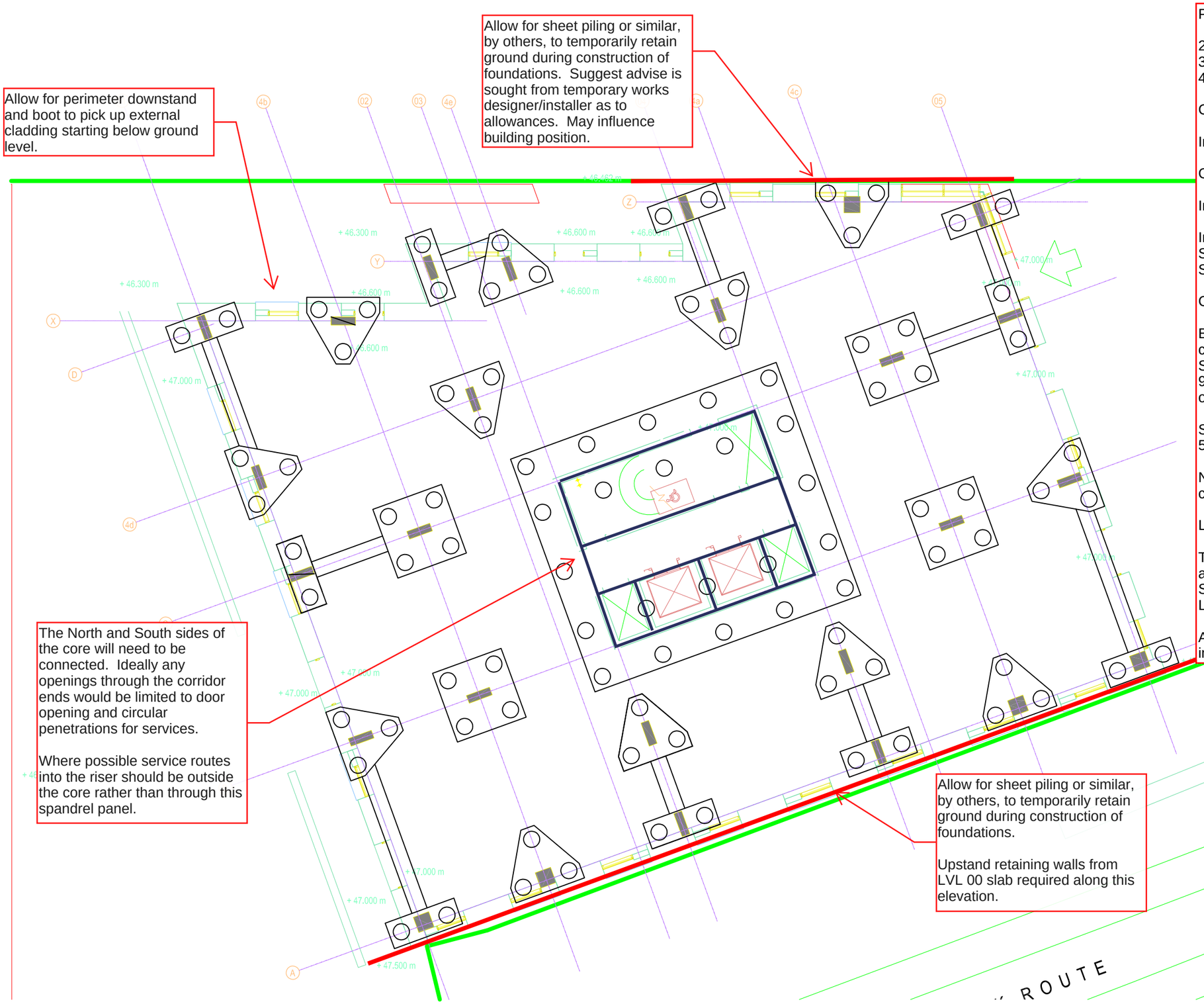
Initial Loading Assumptions

- 2.5kPa Live Load
- 1.0kPa SIDL Load
- Masonry outer leaf, SFS inner leaf supported at each floor.

Column sizes and concrete grade subject to number of floors and further design of slabs.

All blade columns to be a minimum length of 4 x width. Minimum width 250mm. Final sizes to be confirmed, longer and slightly wider may be required.

9681 Ferrous
9/6/21
WML - RCJ
Floor plate GA options
SK02



Prelim Sizes

2 Pile Pile Caps: 2.7m x 1m x 1.25m dp
3 Pile Pile Caps: 2.7m x ~2.5m x 1.25m dp
4 Pile Pile Caps: 2.7m x 2.7m x 1.25m dp

Core Caps: 10.4m x 9.1m x 1.75m dp

Interaction with Lift Pit TBC.

Ground Beams: 0.6m w x 1.0m dp

Initially assume TOF -0.675m from LVL 0.

Initial Pile Dia: 600mm
SWL of 1750kN initially assumed from pro-rataing 1000kN SWL shown for 450mm dia piles shown on Phoenix I drawings.

Column Sizes:

Blade Columns: Typically 1000x250. Allow for 1200x250 for cols on 4 pile pile caps.
Some of the perimeter column may be able to reduce to 900x225 subject to detailed design. Need to maintain minimum of L >= 4x B.

Square Columns: Allow for 600x600. May be able to reduce to 550x550.

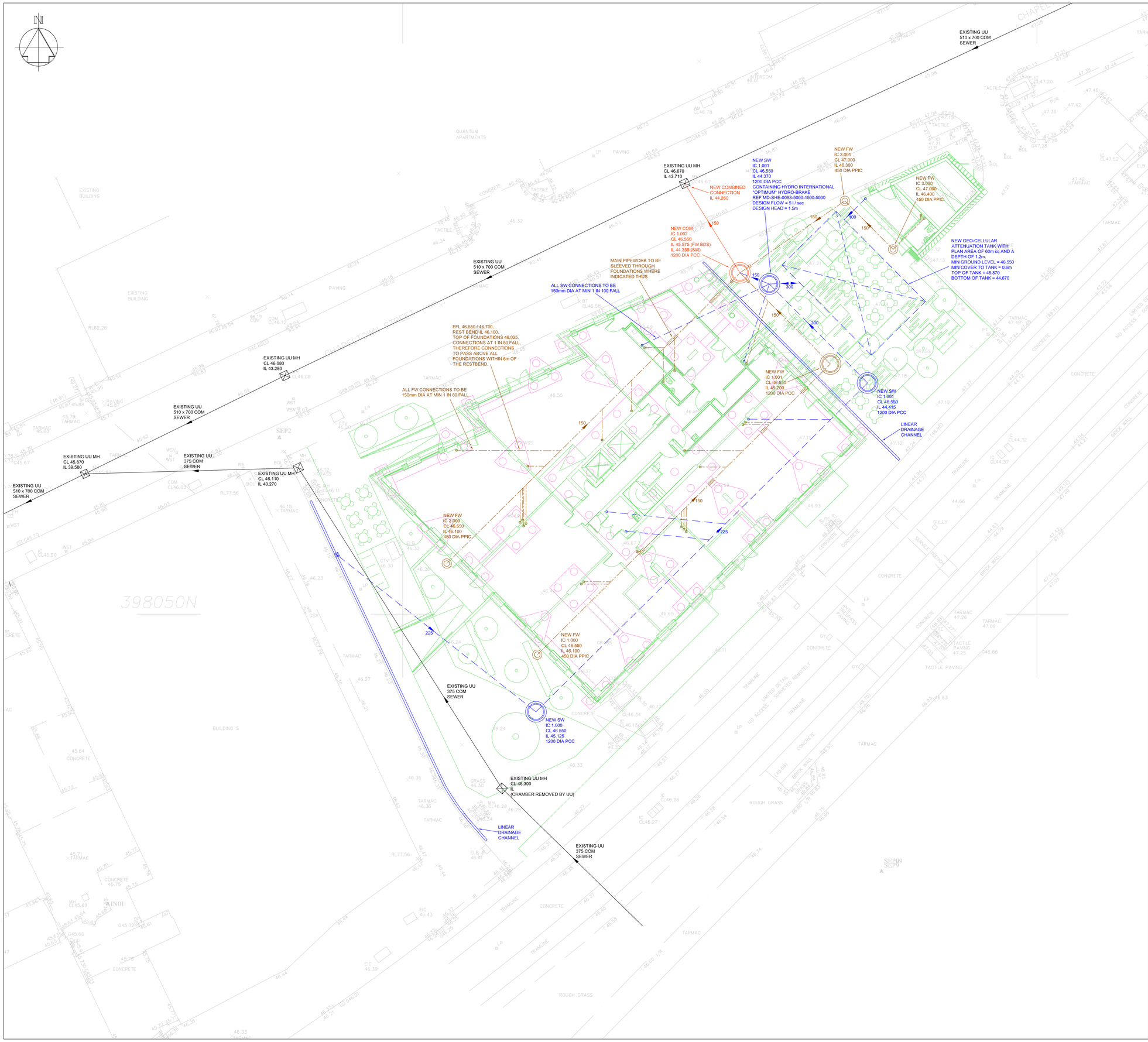
Note: Fire resistance requirements are influencing minimum column dimensions.

Loading Allowance:

Typical Floor Slab: 250thk (with detailed design this may be able to reduce slightly although would increase reinforcement)
SIDL per floor: 1.0 kN/m2
LL per floor: 1.5kN/m2 + 1.0kN/m2 (partitions)

All subject to detailed design development and receipt of SI information.

9861 Ferrous
25/6/21
WML - RCJ
Preliminary Foundation Scheme
SK03



SURFACE WATER DRAINAGE STRATEGY

THE PROPOSED DEVELOPMENT IS TO BE DRAINED VIA SEPARATE FOUL AND SURFACE WATER DRAINAGE SYSTEMS.

THE SURFACE WATER DRAINAGE PROPOSALS HAVE BEEN DESIGNED IN ACCORDANCE WITH BS EN 752-4 AND THE BUILDING REGULATIONS APPROVED DOCUMENT H (2010), WHICH INDICATES THE FOLLOWING HIERARCHY FOR THE DISPOSAL OF SURFACE WATER DRAINAGE FROM DEVELOPMENT SITES:-

1. DISCHARGE VIA INFILTRATION;
2. DISCHARGE TO WATERCOURSE;
3. DISCHARGE TO SEWER.

THESE OPTIONS ARE DISCUSSED IN FURTHER DETAIL BELOW.

SURFACE WATER DISCHARGE VIA INFILTRATION
RECENT SITE INVESTIGATION WORKS HAVE CONFIRMED THAT THE GROUND CONDITIONS AT THE SITE ARE NOT SUITED TO THE USE OF INFILTRATION / SOAKAWAYS TECHNIQUES.

SURFACE WATER DISCHARGE VIA WATERCOURSE
THERE ARE NO EXISTING WATERCOURSES WITHIN OR IN THE VICINITY OF THE SITE, HENCE IT WILL NOT BE POSSIBLE TO DISCHARGE THE SURFACE WATER RUNOFF FROM THE PROPOSED DEVELOPMENT TO AN EXISTING WATERCOURSE.

SURFACE DISCHARGE VIA THE PUBLIC SEWERAGE SYSTEM
GIVEN THE ABOVE IT WILL BE NECESSARY TO DISCHARGE THE SURFACE WATER RUNOFF FROM THE PROPOSED DEVELOPMENT TO THE PUBLIC DRAINAGE SYSTEM, AS THE EXISTING SITE DOES.

PROPOSED SURFACE WATER DISCHARGE RATE

THE EXISTING SITE IS CONSIDERED TO BE "GREENFIELD" IN TERMS OF SURFACE WATER RUNOFF. HENCE THE GENERALLY ACCEPTED PRACTICAL MINIMUM DISCHARGE RATE OF 5 l / sec HAS BEEN UTILISED IN THE DESIGN.

THIS ALLOWABLE DISCHARGE RATE SHOULD NOT BE EXCEEDED FOR ALL STORM EVENTS UP TO AND INCLUDING THE CRITICAL 1 IN 100 YEAR EVENT INCLUDING A 40% CLIMATE CHANGE ALLOWANCE.

TO ENSURE THAT THE ALLOWABLE DISCHARGE RATE IS NOT EXCEEDED, A HYDRO-BRAKE FLOW CONTROL DEVICE WILL BE EMPLOYED AT THE DOWNSTREAM END OF THE PROPOSED DRAINAGE SYSTEM, WITH ATTENUATION STORAGE PROVIDED IN A BELOW GROUND GEO-CELLULAR TANK.

IN LINE WITH MODERN DESIGN STANDARDS FOR SURFACE WATER DRAINAGE SYSTEMS, THE PROPOSALS SHOWN HAVE BEEN FORMULATED TO ENSURE THERE WILL BE:-

1. NO SURCHARGING OF SEWERS FOR THE CRITICAL 1 IN 1 YEAR STORM EVENT.
2. NO SURFACE FLOODING FOR THE CRITICAL 1 IN 30 YEAR EVENT.
3. NO SURFACE FLOODING THAT MAY AFFECT BUILDINGS ON OR OFF SITE FOR THE CRITICAL 1 IN 100 YEAR EVENT INCLUDING A 40% CLIMATE CHANGE ALLOWANCE.

GENERAL NOTES

DO NOT SCALE FROM THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY.

NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS ALLOWED WITHOUT PRIOR PERMISSION IN WRITING.

ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.

THE CONTRACTOR SHALL INCORPORATE ALL THE REQUIREMENTS OF THE PRE-TENDER STAGE HEALTH AND SAFETY PLAN.

FOR DETAILS OF MATERIALS AND WORKMANSHIP REFER TO THE SPECIFICATION.

THE CONTRACTOR IS RESPONSIBLE FOR CHECKING INVERT LEVELS AND POSITIONS OF ALL EXISTING DRAINS, SEWERS, INSPECTION CHAMBERS AND MANHOLES SHOWN ON THIS DRAWING IMMEDIATELY ON SITE ESTABLISHMENT, ANY DISCREPANCIES MUST BE REPORTED TO WML CONSULTING IMMEDIATELY.

WHERE THE NEW SITE DRAINAGE CONNECTS IN TO EXISTING MANHOLES IN CARRIAGEWAYS AND / OR EXISTING ADOPTED SEWERS, THE CONTRACTOR IS RESPONSIBLE FOR ALL LIAISON WITH THE RELEVANT STATUTORY UNDERTAKER AND LOCAL AUTHORITY WITH REGARD TO ROAD CLOSURES, TRAFFIC MANAGEMENT, PERMITS TO WORK, SUBMISSION OF CONTRACTORS METHOD STATEMENTS AND RISK ASSESSMENTS AND OTHER DOCUMENTATION AND CORRESPONDENCE ASSOCIATED WITH THE SITE STAGE (PART 2) ELEMENT OF THE WORKS.

ROCKER PIPES TO BE PROVIDED AT ALL CONCRETE CASED INTERFACES.

PROVIDE ADEQUATE PROTECTION TO MAINTAIN MINIMUM COVER TO DRAINS DURING THE CONSTRUCTION PERIOD.

COVER LEVELS ON THIS DRAWING ARE APPROXIMATE AND INDICATIVE ONLY ARCHITECT TO CONFIRM COVER LEVELS TO ALL MANHOLES AND GULLIES PRIOR TO CONSTRUCTION.

THE LAYOUT OF DRAINAGE ON THIS DRAWING IS INDICATIVE ONLY ARCHITECT TO CONFIRM EXACT LOCATION OF MANHOLES AND GULLIES.

U.N.O. ALL DRAINAGE GOODS & FITTINGS TO BE:-

UPTO 225 DIA (AND INCLUDING) TO BE SUPERSLEVE VITRIFIED CLAY PIPES OR SIMILAR.

300 DIA AND ABOVE TO BE CONCRETE BY STANTON BONNA OR SIMILAR.

ALL COVERS AND RODDING ACCESS POINTS TO BE SEALED AND SCREWED TIGHT.

ALL INTERNAL MANHOLE COVERS TO BE DOUBLE SEALED, LOCKABLE AND RECESSED TO ACCEPT FLOOR FINISHES WHERE APPLICABLE.

SETTING OUT OF ALL INTERNAL GULLY / PLUMBING CONNECTIONS TO BE CO-ORDINATED BETWEEN THE SERVICE ENGINEERS AND THE ARCHITECT.

ALL INTERNAL GULLIES, PLUMBING CONNECTIONS, SOIL STACKS, SVPS AND ALL OTHER CONNECTIONS OF FOUL AND SURFACE WATER DRAINS TO BELOW GROUND TO BE FITTED WITH ACCESSIBLE RODDING POINTS ABOVE SLAB LEVEL.

ALL SURFACE WATER CONNECTIONS TO BE 100mm DIAMETER AT MINIMUM FALLS OF 1:80 UNLESS NOTED OTHERWISE.

ALL FOUL WATER CONNECTIONS TO BE 100mm DIAMETER AT MINIMUM FALLS OF 1:40 UNLESS NOTED OTHERWISE.

ALL CONNECTIONS TO BE MADE IN ACCORDANCE WITH STANDARD DETAIL DRAWINGS.

ALL PIPEWORK TO BE INSTALLED WITH SOFFITS LEVEL (E.G. AT CHANGES IN PIPE SIZE) U.N.O.

ON COMPLETION OF DRAINAGE WORKS, THE NEW DRAINAGE SYSTEM IS TO BE THOROUGHLY CLEANED AND A CCTV SURVEY CARRIED OUT TO CONFIRM NO CONSTRUCTION DEBRIS OR BLOCKAGES REMAIN.

CONNECTIONS TO CARRIER DRAINS ARE TO BE "Y" JUNCTIONS.

ALL PRIVATE DRAINAGE IS TO COMPLY WITH BS EN 752 AND BUILDING REGS, PART H.

MANHOLE COVERS IN VEHICULAR AREAS TO BE EN124 CLASS D400, IN NON - VEHICULAR AREAS TO BE EN124 CLASS C250

MAINTENANCE OF THE BELOW GROUND DRAINAGE SYSTEM

THE SURFACE WATER DRAINAGE PROPOSALS INDICATED ARE RELATIVELY TRADITIONAL IN NATURE, AND SHOULD PROVIDE YEARS OF RELATIVELY LOW MAINTENANCE OPERATION IN RELATION TO THE ANTICIPATED LIFESPAN OF THE PROPOSED DEVELOPMENT.

IN LINE WITH CURRENT GOOD PRACTICE:-

- GULLIES AND LINEAR DRAINAGE CHANNELS SHOULD BE INSPECTED AND / OR CLEANED OUT AT 6 MONTHLY INTERVALS.
- INSPECTION CHAMBERS, MANHOLES, CATCHPITS, ETC. SHOULD BE INSPECTED AT 6 MONTHLY INTERVALS TO ENSURE THAT THE PIPEWORK ASSOCIATED WITH THEM ARE OPERATING EFFECTIVELY.
- ANY PROBLEMS HIGHLIGHTED BY THESE INSPECTIONS WILL NEED TO BE INVESTIGATED, POSSIBLY BY CCTV SURVEY, TO CONFIRM THE NATURE OF THE PROBLEM AND TO ALLOW IT TO BE REMEDIED IN A TIMELY MANNER. IT IS UNDERSTOOD THAT THE MONITORING AND ROUTINE MAINTENANCE OF THE BELOW GROUND DRAINAGE SYSTEM WILL BE CARRIED OUT BY THE BUILDING OWNERS MAINTENANCE STAFF WITH ADDITIONAL HELP PROVIDED BY EXTERNAL SPECIALIST DRAINAGE PROFESSIONALS BROUGHT IN AS REQUIRED.

PRELIMINARY

NOTE THAT THE DRAINAGE PROPOSALS SHOWN ARE SUBJECT TO THE APPROVAL OF THE LOCAL PLANNING AUTHORITY AND UNITED UTILITIES.

Rev.	Amendment	Date	By	Chkd
P01	PRELIMINARY ISSUE.	07.10.21	KPT	AW

Project
FERROUS

Client
CAPITAL & CENTRIC

Title
PROPOSED DRAINAGE LAYOUT

WML Job No.	Drawn	Checked	Date	Scale
9861	KPT	AW	OCT. 2021	1:100 AT A0

WML CONSULTING
Civil, Structural & Geotechnical Engineers
No.8 Oak Green
Earl Road
Stanley Green Business Park
Cheadle Hulme
Cheshire SK8 6QL
Tel 0161 482 0600
Fax 0161 486 9210
e-mail info@wmlconsulting.com
www.wmlconsulting.com

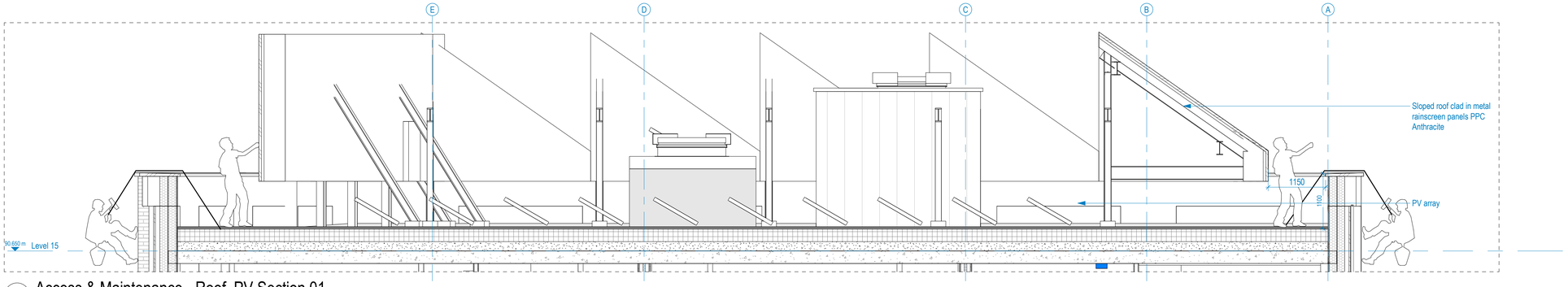
Drawing No.

Project	Originator	Volume	Level	Type	Role	Number	Rev
9861	WML	00	XX	DR	C	1001	P01

Level 00 Landscape Layout

0883-RFM-XX-00-SK-L-0002

re-form
landscape architecture



01 Access & Maintenance - Roof PV Section 01
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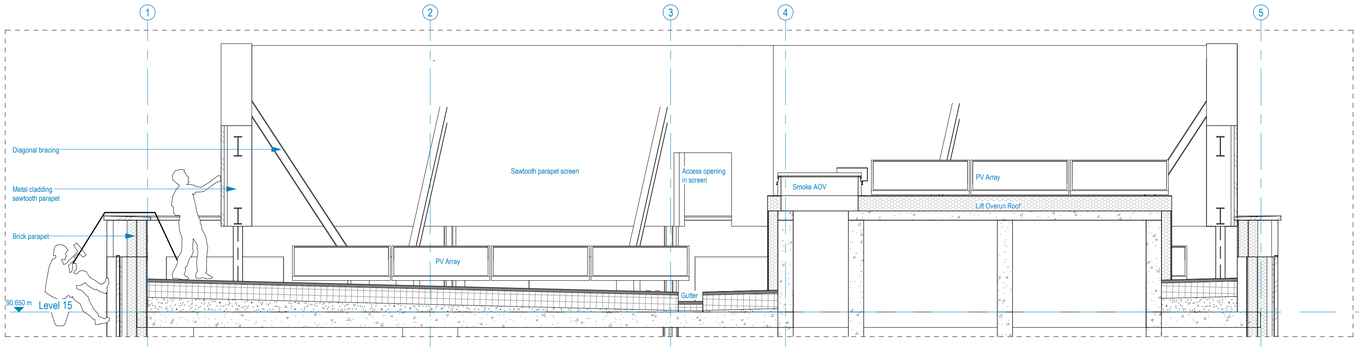
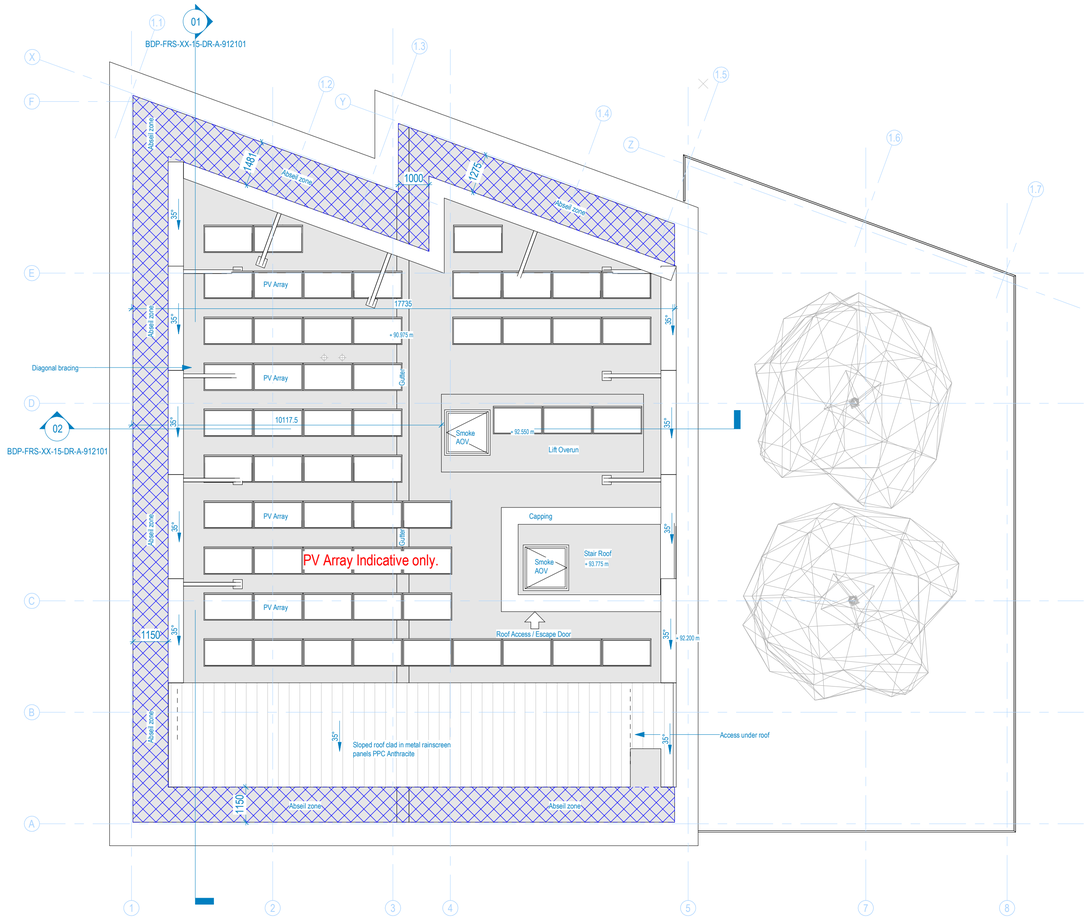
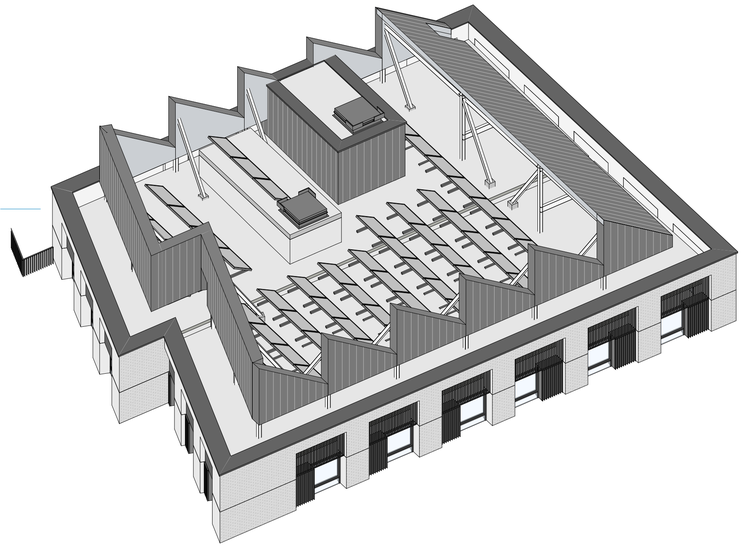


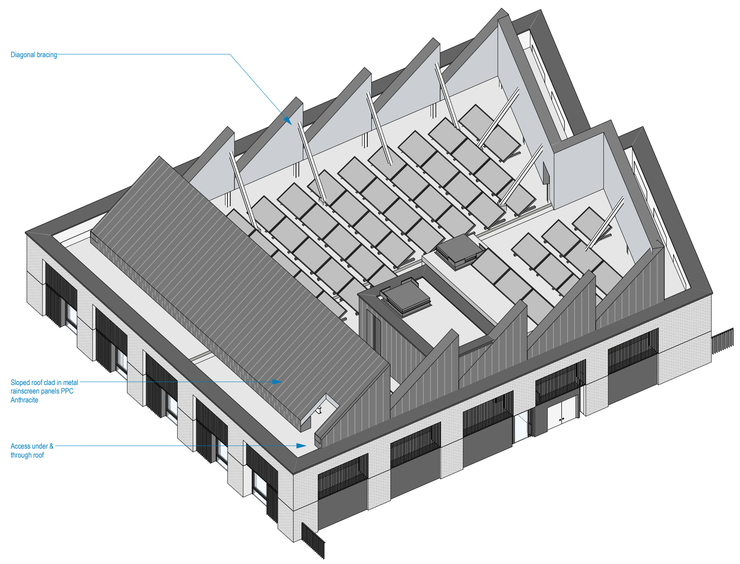
02 Access & Maintenance - Roof PV Section 02
1 : 50



03 Access & Maintenance - Roof PV Plan
1 : 100



04 Facade Study - 3D Roof PV Access NW



05 Facade Study - 3D Roof PV Access SE

BUILDING DESIGN PARTNERSHIP SHALL HAVE NO RESPONSIBILITY FOR ANY USE MADE OF THIS DOCUMENT OTHER THAN FOR THAT WHICH IT WAS PREPARED AND ISSUED.

ALL DIMENSIONS SHOULD BE CHECKED ON SITE.

DO NOT SCALE FROM THIS DRAWING

ANY DRAWING ERRORS OR DIVERGENCIES SHOULD BE BROUGHT TO THE ATTENTION OF BUILDING DESIGN PARTNERSHIP AT THE ADDRESS SHOWN BELOW.

DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE FOLLOWING BEFORE WORK COMMENCES:
- THE CDM DESIGN ISSUES REGISTER
- THE BDP RISK SERIES OF DRAWINGS
- THE PROJECT CDM RISK REGISTER

NOTES

REVISION	DESCRIPTION	DRAWN / CHECKED	DATE
P04	Roof PVs - Abseil zone added	JS/MB	05.10.21
P03	Roof PVs - Sawtooth parapet updated	JS/MB	29.09.21
P02	Access & Maintenance plans	JS/MB	22.09.21
P01	First Issue - A&M Roof PVs	JS/MB	16.09.21

KEYPLAN

CLIENT

CAPITAL&CENTRIC

BDP.

11 Ducie Street
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Manchester
M60 3JA
United Kingdom

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www.bdp.com

PROJECT TITLE
Ferrous

BDP JOB NUMBER
P3001911

DRAWING TITLE
Access & Maintenance - Roof PVs

SCALE @ A1
As indicated

DATE FIRST ISSUED
09/16/21

DRAWING No.
BDP-FRS-XX-15-DR-A-912101

REVISION
P04

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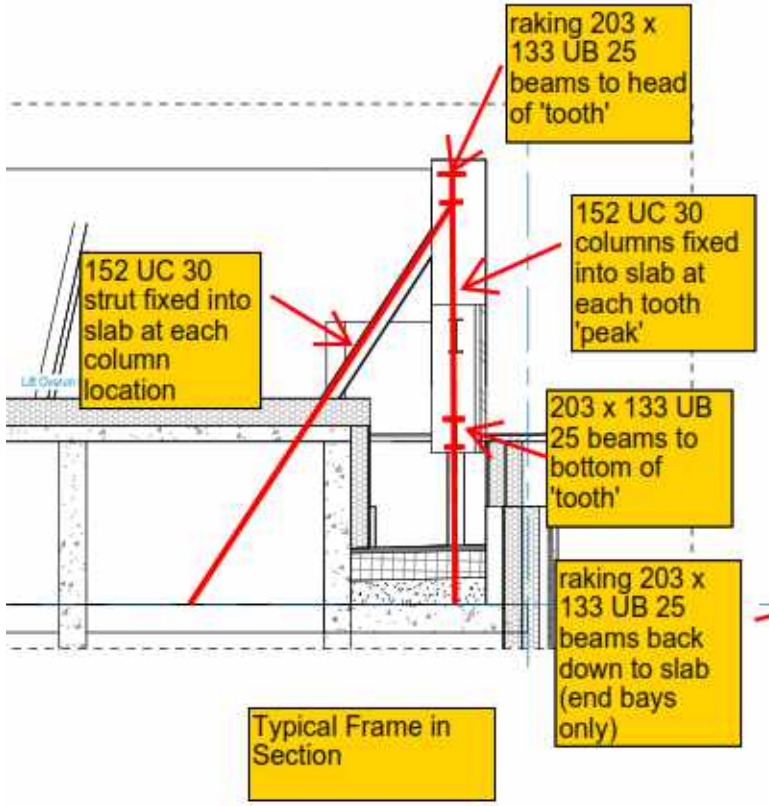
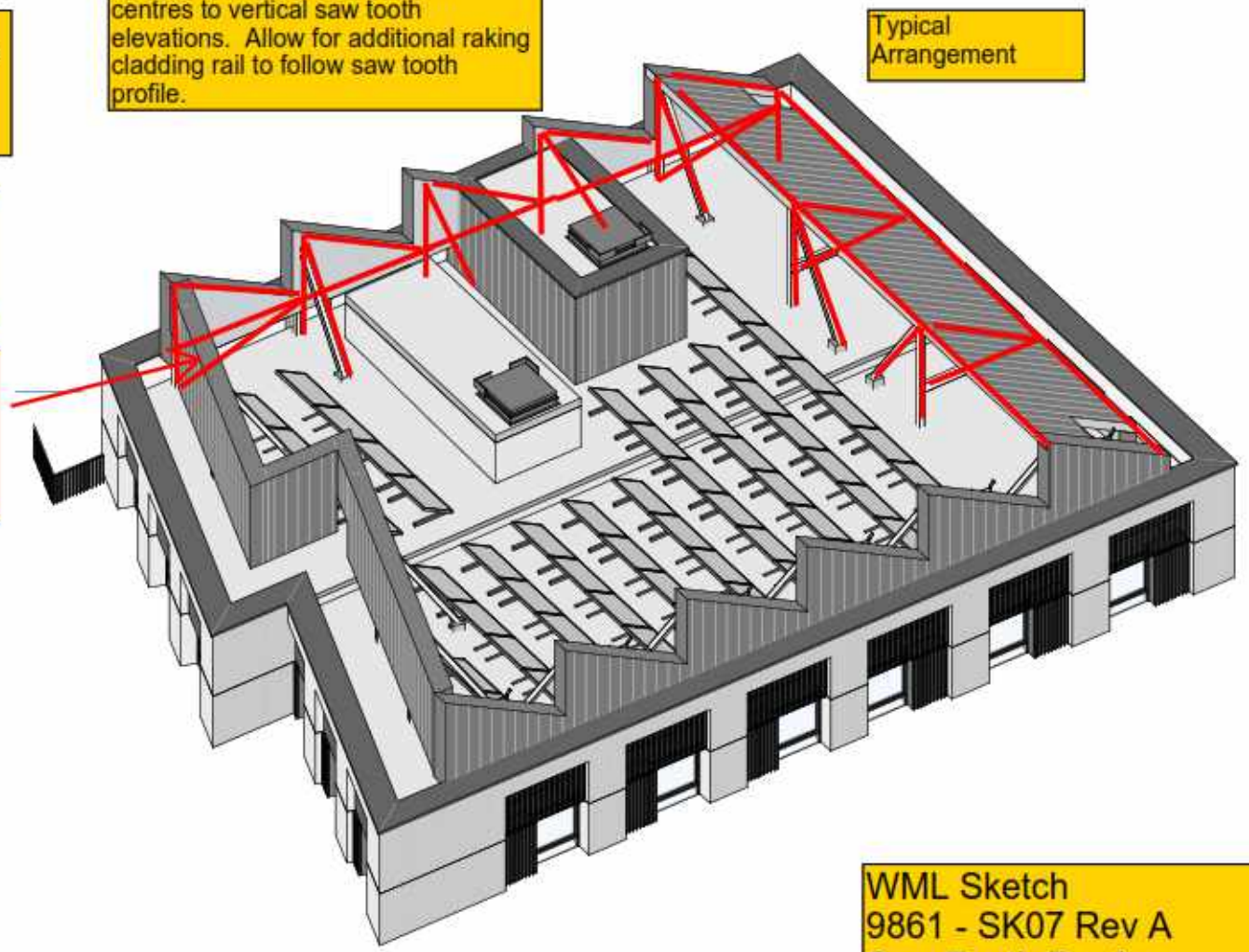
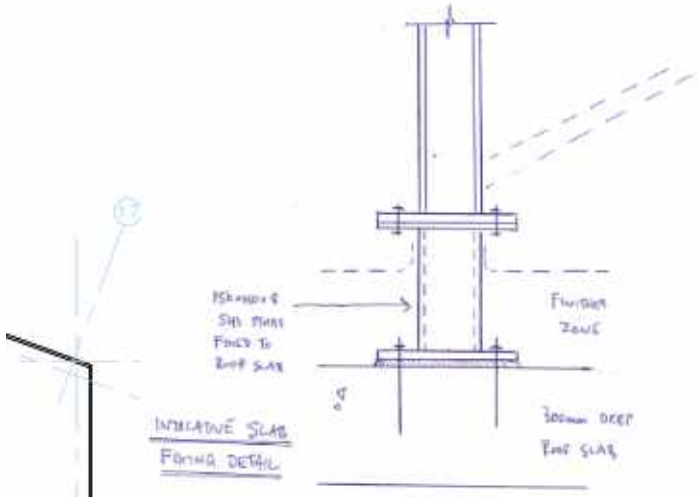


Allow for 205mm deep cold formed purlins at 1000mm centres to Picadilly fronting elevation. Allow for 205mm deep cladding rails at 1000mm centres to vertical saw tooth elevations. Allow for additional raking cladding rail to follow saw tooth profile.





04 Facade Study - 3D Roof PV Access NW

WML Sketch
9861 - SK07 Rev A
Saw Tooth Rooftop Screening
1/10/2021 AW

Appendix 6 – Unit Pricing Schedule

Ferrous - Pricing Schedule

Information				Premium **Values (£)**	Premium Weighting Values	Final Values/Rents	
Ref	**Beds**	**Sq M**	**Sq Ft**	**Floor**	**Rent - Floor**	**Rent inc Weighting**	**Annual Rent inc Weighting**
Apartment Type 1B	1 Bed, 2 Person	54	581	1	0	£950	£11,400
Apartment Type 1C	1 Bed, 2 Person	52	560	1	0	£950	£11,400
Apartment Type 2A	2 Bed, 4 Person	72	775	1	0	£1,300	£15,600
Apartment Type 2B	2 Bed, 3 Person	67	721	1	0	£1,200	£14,400
Apartment Type 2E	2 Bed, 3 Person	62	667	1	0	£1,100	£13,200
Apartment Type 2E	2 Bed, 3 Person	62	667	1	0	£1,100	£13,200
Apartment Type 2F	2 Bed, 3 Person	61	657	1	0	£1,100	£13,200
Apartment Type 2F	2 Bed, 3 Person	61	657	1	0	£1,100	£13,200
Apartment Type 1B	1 Bed, 2 Person	54	581	2	0	£950	£11,400
Apartment Type 2A	2 Bed, 4 Person	72	775	2	0	£1,300	£15,600
Apartment Type 2B	2 Bed, 3 Person	67	721	2	0	£1,200	£14,400
Apartment Type 2C	2 Bed, 3 Person	61	657	2	0	£1,100	£13,200
Apartment Type 2E	2 Bed, 3 Person	62	667	2	0	£1,100	£13,200
Apartment Type 2E	2 Bed, 3 Person	62	667	2	0	£1,100	£13,200
Apartment Type 2F	2 Bed, 3 Person	61	657	2	0	£1,100	£13,200
Apartment Type 2F	2 Bed, 3 Person	61	657	2	0	£1,100	£13,200
Apartment Type 1B	1 Bed, 2 Person	54	581	3	40	£990	£11,880
Apartment Type 2A	2 Bed, 4 Person	72	775	3	40	£1,340	£16,080
Apartment Type 2B	2 Bed, 3 Person	67	721	3	40	£1,240	£14,880
Apartment Type 2C	2 Bed, 3 Person	61	657	3	40	£1,140	£13,680
Apartment Type 2E	2 Bed, 3 Person	62	667	3	40	£1,140	£13,680
Apartment Type 2E	2 Bed, 3 Person	62	667	3	40	£1,140	£13,680
Apartment Type 2F	2 Bed, 3 Person	61	657	3	40	£1,140	£13,680
Apartment Type 2F	2 Bed, 3 Person	61	657	3	40	£1,140	£13,680
Apartment Type 1A	1 Bed, 2 Person	53	570	4	40	£990	£11,880
Apartment Type 1A	1 Bed, 2 Person	53	570	4	40	£990	£11,880
Apartment Type 1B	1 Bed, 2 Person	54	581	4	40	£990	£11,880
Apartment Type 2A	2 Bed, 4 Person	72	775	4	40	£1,340	£16,080
Apartment Type 2B	2 Bed, 3 Person	67	721	4	40	£1,240	£14,880
Apartment Type 2C	2 Bed, 3 Person	61	657	4	40	£1,140	£13,680
Apartment Type 2D	2 Bed, 4 Person	72	775	4	40	£1,340	£16,080
Apartment Type 2D	2 Bed, 4 Person	71	764	4	40	£1,340	£16,080
Apartment Type 1A	1 Bed, 2 Person	53	570	5	80	£1,030	£12,360
Apartment Type 1A	1 Bed, 2 Person	53	570	5	80	£1,030	£12,360
Apartment Type 1B	1 Bed, 2 Person	54	581	5	80	£1,030	£12,360
Apartment Type 2A	2 Bed, 4 Person	72	775	5	80	£1,380	£16,560
Apartment Type 2B	2 Bed, 3 Person	67	721	5	80	£1,280	£15,360
Apartment Type 2C	2 Bed, 3 Person	61	657	5	80	£1,180	£14,160
Apartment Type 2D	2 Bed, 4 Person	72	775	5	80	£1,380	£16,560
Apartment Type 2D	2 Bed, 4 Person	71	764	5	80	£1,380	£16,560
Apartment Type 1A	1 Bed, 2 Person	53	570	6	80	£1,030	£12,360
Apartment Type 1A	1 Bed, 2 Person	53	570	6	80	£1,030	£12,360
Apartment Type 1B	1 Bed, 2 Person	54	581	6	80	£1,030	£12,360
Apartment Type 2A	2 Bed, 4 Person	72	775	6	80	£1,380	£16,560
Apartment Type 2B	2 Bed, 3 Person	67	721	6	80	£1,280	£15,360
Apartment Type 2C	2 Bed, 3 Person	61	657	6	80	£1,180	£14,160
Apartment Type 2D	2 Bed, 4 Person	72	775	6	80	£1,380	£16,560
Apartment Type 2D	2 Bed, 4 Person	71	764	6	80	£1,380	£16,560
Apartment Type 1A	1 Bed, 2 Person	53	570	7	120	£1,070	£12,840
Apartment Type 1A	1 Bed, 2 Person	53	570	7	120	£1,070	£12,840
Apartment Type 1B	1 Bed, 2 Person	54	581	7	120	£1,070	£12,840
Apartment Type 2A	2 Bed, 4 Person	72	775	7	120	£1,420	£17,040
Apartment Type 2B	2 Bed, 3 Person	67	721	7	120	£1,320	£15,840
Apartment Type 2C	2 Bed, 3 Person	61	657	7	120	£1,220	£14,640
Apartment Type 2D	2 Bed, 4 Person	72	775	7	120	£1,420	£17,040
Apartment Type 2D	2 Bed, 4 Person	71	764	7	120	£1,420	£17,040
Apartment Type 1A	1 Bed, 2 Person	53	570	8	120	£1,070	£12,840
Apartment Type 1A	1 Bed, 2 Person	53	570	8	120	£1,070	£12,840
Apartment Type 1B	1 Bed, 2 Person	54	581	8	120	£1,070	£12,840

Apartment Type 2A	2 Bed, 4 Person	72	775	8	120	£1,420	£17,040
Apartment Type 2B	2 Bed, 3 Person	67	721	8	120	£1,320	£15,840
Apartment Type 2C	2 Bed, 3 Person	61	657	8	120	£1,220	£14,640
Apartment Type 2D	2 Bed, 4 Person	72	775	8	120	£1,420	£17,040
Apartment Type 2D	2 Bed, 4 Person	71	764	8	120	£1,420	£17,040
Apartment Type 1A	1 Bed, 2 Person	53	570	9	160	£1,110	£13,320
Apartment Type 1A	1 Bed, 2 Person	53	570	9	160	£1,110	£13,320
Apartment Type 1B	1 Bed, 2 Person	54	581	9	160	£1,110	£13,320
Apartment Type 2A	2 Bed, 4 Person	72	775	9	160	£1,460	£17,520
Apartment Type 2B	2 Bed, 3 Person	67	721	9	160	£1,360	£16,320
Apartment Type 2C	2 Bed, 3 Person	61	657	9	160	£1,260	£15,120
Apartment Type 2D	2 Bed, 4 Person	72	775	9	160	£1,460	£17,520
Apartment Type 2D	2 Bed, 4 Person	71	764	9	160	£1,460	£17,520
Apartment Type 1A	1 Bed, 2 Person	53	570	10	160	£1,110	£13,320
Apartment Type 1A	1 Bed, 2 Person	53	570	10	160	£1,110	£13,320
Apartment Type 1B	1 Bed, 2 Person	54	581	10	160	£1,110	£13,320
Apartment Type 2A	2 Bed, 4 Person	72	775	10	160	£1,460	£17,520
Apartment Type 2B	2 Bed, 3 Person	67	721	10	160	£1,360	£16,320
Apartment Type 2C	2 Bed, 3 Person	61	657	10	160	£1,260	£15,120
Apartment Type 2D	2 Bed, 4 Person	72	775	10	160	£1,460	£17,520
Apartment Type 2D	2 Bed, 4 Person	71	764	10	160	£1,460	£17,520
Apartment Type 1A	1 Bed, 2 Person	53	570	11	200	£1,150	£13,800
Apartment Type 1A	1 Bed, 2 Person	53	570	11	200	£1,150	£13,800
Apartment Type 1B	1 Bed, 2 Person	54	581	11	200	£1,150	£13,800
Apartment Type 2A	2 Bed, 4 Person	72	775	11	200	£1,500	£18,000
Apartment Type 2B	2 Bed, 3 Person	67	721	11	200	£1,400	£16,800
Apartment Type 2C	2 Bed, 3 Person	61	657	11	200	£1,300	£15,600
Apartment Type 2D	2 Bed, 4 Person	72	775	11	200	£1,500	£18,000
Apartment Type 2D	2 Bed, 4 Person	71	764	11	200	£1,500	£18,000
Apartment Type 1A	1 Bed, 2 Person	53	570	12	200	£1,150	£13,800
Apartment Type 1A	1 Bed, 2 Person	53	570	12	200	£1,150	£13,800
Apartment Type 2A	2 Bed, 4 Person	72	775	12	200	£1,500	£18,000
Apartment Type 2B	2 Bed, 3 Person	67	721	12	200	£1,400	£16,800
Apartment Type 2C	2 Bed, 3 Person	61	657	12	200	£1,300	£15,600
Apartment Type 3A	3 Bed, 5 Person	91	980	12	200	£1,950	£23,400
Apartment Type 3A	3 Bed, 5 Person	91	980	12	200	£1,950	£23,400
Apartment Type 1A	1 Bed, 2 Person	53	570	13	240	£1,190	£14,280
Apartment Type 1A	1 Bed, 2 Person	53	570	13	240	£1,190	£14,280
Apartment Type 2A	2 Bed, 4 Person	72	775	13	240	£1,540	£18,480
Apartment Type 2B	2 Bed, 3 Person	67	721	13	240	£1,440	£17,280
Apartment Type 2C	2 Bed, 3 Person	61	657	13	240	£1,340	£16,080
Apartment Type 3A	3 Bed, 5 Person	91	980	13	240	£1,990	£23,880
Apartment Type 3A	3 Bed, 5 Person	91	980	13	240	£1,990	£23,880
Apartment Type 1A	1 Bed, 2 Person	53	570	14	240	£1,190	£14,280
Apartment Type 1B	1 Bed, 2 Person	54	581	14	240	£1,190	£14,280
Apartment Type 2A	2 Bed, 4 Person	72	775	14	240	£1,540	£18,480
Apartment Type 2B	2 Bed, 3 Person	67	721	14	240	£1,440	£17,280
Apartment Type 2D	2 Bed, 4 Person	71	764	14	240	£1,540	£18,480
107		**6799**	**73281**				**£1,620,960**

£22.12

Appendix 7 – Policy Compliant Appraisal: 20% Affordable Rent

Ferrous, Manchester
100% Private Rent

Development Appraisal
Savills
30 November 2021

APPRAISAL SUMMARY SAVILLS

Ferrous, Manchester
100% Private Rent

Appraisal Summary for Phase 1

Currency in £

REVENUE

Sales Valuation	**Units**	**ft²**	**Sales Rate ft²**	**Unit Price**	**Gross Sales**
Apartment Block	107	73,281	349.26	239,197	25,594,105

Rental Area Summary	**Units**	**ft²**	**Rent Rate ft²**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Commercial Units	2	1,716	15.00	12,870	25,740	25,740
Pavilion	1	103	10.00	1,030	1,030	1,030
Totals	**3**	**1,819**			**26,770**	**26,770**

Investment Valuation					
Commercial Units					
Market Rent	25,740	YP @	8.0000%	12.5000	
(3mths Rent Free)		PV 3mths @	8.0000%	0.9809	315,619
Pavilion					
Current Rent	1,030	YP @	8.0000%	12.5000	12,875
Total Investment Valuation					**328,494**

GROSS DEVELOPMENT VALUE				**25,922,599**
Purchaser's Costs			(9,231)	
Effective Purchaser's Costs Rate		2.81%		
				(9,231)
NET DEVELOPMENT VALUE				**25,913,368**
NET REALISATION				**25,913,368**
OUTLAY				
ACQUISITION COSTS				
Residualised Price			306,816	
				306,816
CONSTRUCTION COSTS				
Construction	**ft²**	**Build Rate ft²**	**Cost**	
Apartment Block	95,091	187.08	17,790,000	
Contingency		5.00%	953,500	
Fair Street Stopping Up			40,000	
				18,783,500
Other Construction				
Pavilion			100,000	
Site Preparation			50,000	
External Works			520,000	
FF&E Package			610,000	
				1,280,000
PROFESSIONAL FEES				
Professional Fees		8.00%	1,476,800	
				1,476,800
MARKETING & LETTING				
Letting Agent Fee		10.00%	2,677	
Letting Legal Fee		5.00%	1,339	
				4,016
DISPOSAL FEES				
Sales Agent Fee		1.00%	259,134	
Sales Legal Fee		0.50%	129,567	

APPRAISAL SUMMARY SAVILLS

Ferrous, Manchester
100% Private Rent

		388,701
FINANCE		
Debit Rate 4.750%, Credit Rate 0.000% (Nominal)		
Land	26,441	
Construction	870,657	
Total Finance Cost		897,098
TOTAL COSTS		**23,136,930**
PROFIT		
		2,776,438

Performance Measures	
Profit on Cost%	12.00%
Profit on GDV%	10.71%
Profit on NDV%	10.71%
Development Yield% (on Rent)	0.12%
Equivalent Yield% (Nominal)	8.00%
Equivalent Yield% (True)	8.42%
IRR% (without Interest)	17.88%
Rent Cover	103 yrs 9 mths
Profit Erosion (finance rate 4.750)	2 yrs 5 mths

Appendix 8 – Appraisal: 100% Private Rent

Ferrous, Manchester
20% Affordable Rent

Development Appraisal
Savills
30 November 2021

APPRAISAL SUMMARY SAVILLS

Ferrous, Manchester
20% Affordable Rent

Appraisal Summary for Phase 1

Currency in £

REVENUE

Sales Valuation	**Units**	**ft²**	**Sales Rate ft²**	**Unit Price**	**Gross Sales**
Private Rented	86	58,735	349.26	238,532	20,513,786
Shared Ownership	16	10,882	260.00	176,833	2,829,320
Social Rented	1	3,664	180.00	659,502	659,502
Totals	**103**	**73,281**			**24,002,608**

Rental Area Summary	**Units**	**ft²**	**Rent Rate ft²**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Commercial Units	2	1,716	15.00	12,870	25,740	25,740
Pavilion	1	103	10.00	1,030	1,030	1,030
Totals	**3**	**1,819**			**26,770**	**26,770**

Investment Valuation					
Commercial Units					
Market Rent	25,740	YP @	8.0000%	12.5000	
(3mths Rent Free)		PV 3mths @	8.0000%	0.9809	315,619
Pavilion					
Current Rent	1,030	YP @	8.0000%	12.5000	12,875
Total Investment Valuation					**328,494**
GROSS DEVELOPMENT VALUE				**24,331,102**	
Purchaser's Costs			(9,231)		
Effective Purchaser's Costs Rate		2.81%			
				(9,231)	
NET DEVELOPMENT VALUE				**24,321,871**	
NET REALISATION				**24,321,871**	
OUTLAY					
ACQUISITION COSTS					
Residualised Price (Negative land)			(987,566)		
				(987,566)	

CONSTRUCTION COSTS				
Construction				
	ft²	**Build Rate ft²**	**Cost**	
Private Rented	95,091	187.08	17,790,000	**17,790,000**
Contingency		5.00%	953,500	
Fair Street Stopping Up			40,000	
				993,500
Other Construction				
Pavilion			100,000	
Site Preparation			50,000	
External Works			520,000	
FF&E Package			610,000	
				1,280,000
PROFESSIONAL FEES				
Professional Fees		8.00%	1,476,800	
				1,476,800
MARKETING & LETTING				
Letting Agent Fee		10.00%	2,677	

APPRAISAL SUMMARY SAVILLS

Ferrous, Manchester
20% Affordable Rent

Letting Legal Fee	5.00%	1,339	
			4,016
DISPOSAL FEES			
Sales Agent Fee	1.00%	243,219	
Sales Legal Fee	0.50%	121,609	
			364,828
FINANCE			
Debit Rate 4.750%, Credit Rate 0.000% (Nominal)			
Land		(76,278)	
Construction		870,657	
Total Finance Cost			794,378
TOTAL COSTS			**21,715,956**
PROFIT			
			2,605,915

Performance Measures	
Profit on Cost%	12.00%
Profit on GDV%	10.71%
Profit on NDV%	10.71%
Development Yield% (on Rent)	0.12%
Equivalent Yield% (Nominal)	8.00%
Equivalent Yield% (True)	8.42%
IRR% (without Interest)	18.90%
Rent Cover	97 yrs 4 mths
Profit Erosion (finance rate 4.750)	2 yrs 5 mths

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