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PROPERTY CONSULTANTS

FINANCIAL VIABILITY ASSESSEMENT

Parkfield House, Manchester Old Road, Middleton, M24 4EB

Muller Property Group
June 2025

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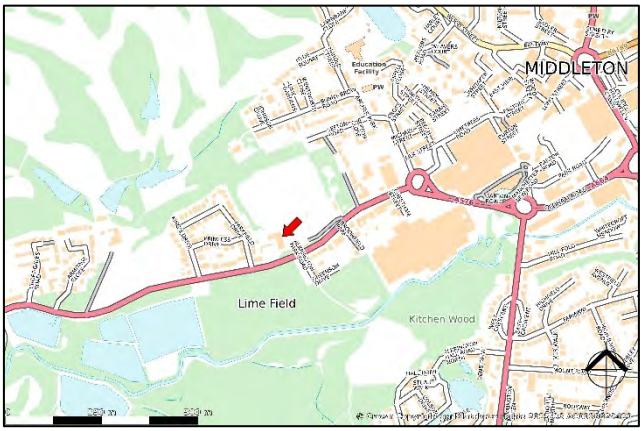
Executive Summary

For convenience, we summarise the key features of this Financial Viability Assessment, which should, nevertheless be read in full.

Location Plan



Site Plan

Property Type/Use:

Vacant office building and land.

Proposed Scheme:

Type	No. of Units
4 Bed Dwellings (semi-detached)	20

Planning Proposal

Demolition of existing building and regeneration of site to provide a care home and 20 houses.

Benchmark Land Value:

Existing Use Value - £1,790,000

Premium – 20%

BLV - £2,148,000 (say £2,150,000)

Planning Policy:

Rochdale Borough Council – Core Strategy 2016

Policy C4 – Providing Affordable Homes

The Policy confirms that on all developments of 15 dwelling or more the LPA will seek a contribution to affordable housing of 7.5% of the development sales value of the overall scheme.

Vacant Building Credit:

National policy provides an incentive for brownfield development on sites containing vacant buildings. Where a vacant building is brought back into any lawful use, or is demolished to be replaced by a new building, the developer should be offered a financial credit equivalent to the existing gross floorspace of relevant vacant buildings when the local planning authority calculates any affordable housing contribution which will be sought. Affordable housing contributions may be required for any increase in floorspace.

Viability Assessment and Conclusion:

	100% Market Scheme
Residual Land Value (BLV)	**£2,150,000**
Benchmark Land Value (BLV)	**£1,882,749**
Surplus/Deficit	**(£267,251)**

Our Financial Viability Assessment and review of the proposed development for 20x townhouse units leads us to conclude there is no financial headroom available for planning obligations, after accounting for the anticipated gross sales receipts and all reasonable aspects of the outlay necessary.

The Residual Land Value for the proposed scheme is £1,882,749. When compared against the BLV of £2,150,000 the scheme produces a deficit of (£267,251) and is therefore unable to support any planning obligations.

1.0 Introduction

We are jointly instructed by Muller Property Group (herein referred to as "the Applicant") to undertake a Financial Viability Assessment (FVA) for the proposed redevelopment of the Property located at and known as: ***Parkfield House, Manchester Old Road, Middleton M24 4EB*** (the Property).

This independent FVA is to provide support to the Applicants in demonstrating to the local planning authority, Rochdale Borough Council, whether or not planning obligations, and a developer's contribution towards off-site affordable housing in particular, can be delivered and provide a viable retirement scheme development.

This FVA report has been prepared in accordance with the RICS Professional Statement 'Financial Viability in Planning: Conduct and Reporting 1st Edition (May 2019). In relation to this statement we confirm the following:

- We have acted with objectivity, impartially, without interference and with reference to all appropriate available sources of information.
- In preparing this report, no performance related or contingent fee arrangements have been agreed.
- We have not provided previous advice to either applicant on this site or any other third party.

We confirm that in accordance with the RICS Professional Statement Paragraph 2.2, we have no conflicts of interest in conducting this Financial Viability Assessment and have not received any specific requests by the applicants or decision-makers that contradict the mandatory requirements of the RICS Professional Statement.

We have also had regard to the Revised NPPF 2025 and Viability PPG which provides national planning policy and guidance in respect of undertaking viability assessments.

Please note that this assessment is undertaken at a particular point in time (June 2025). Values and costs will change over time and it must be understood that our assessment is based on current estimated values and costs as at the date of this report and is not a projection of value.

This report and its contents have been prepared specifically to support the planning application in respect of the Property. No responsibility whatsoever is accepted to any third party and neither the whole of the report, nor any part, nor references thereto, may be published in any document, statement or circular, nor in any communication with third parties without our prior written approval of the form and context in which it may appear.

Sources of Information

Information	Source	Dated
Accommodation Schedule & GIA Measurements	**Applicant**	**June 2025**
Abnormal Construction Costs	**Applicant**	**June 2025**

This report is for feasibility assessment purposes only and it does not constitute a formal valuation. The advice contained in this report is exempt from the current RICS Valuation Global Standards - 31 January 2025 – (the Red Book). We reserve the right to update, amend or vary our advice should the matter progress to a planning Appeal Hearing or Inquiry.

We have produced this Viability Assessment utilising the Argus Developer residual appraisal software. Argus Developer is an established property development appraisal software program used by owners, commercial developers, house builders, land developers, agents and financial institutions. It is designed to work for all forms of property development, including commercial, single or multiphase residential, retail, office, industrial, hotels, land development and any combination for mixed use developments. This report summarises our assumptions, inputs and outcomes of our Argus model.

2.0 Background

The site is approximately 1.1 hectares (2.72 acres) and is located to the west of the town of Middleton. The site currently comprises a 4 storey 'L' shaped, former commercial/office building set back from the main road and with extensive external areas.

The office building is now vacant having previously been occupied by Chubb Security until they vacated the site in 2020. The building measures 2,499.91 sq m (26,909 sq ft).

A planning application 23/00335/FUL) for the demolition of the existing office building and development to comprise 20 dwellings (Use Class C3) and a 80 bed care home (Use Class C2) was submitted in April 2023. The application has not yet been determined.

In August 2020 prior apporval for change of use from exiting office accommodation to 33 apartments was granted permission (20/00699/PRA56).

3.0 Viability in Planning – Policy Context

3.1. National Planning Policy Framework (NPPF) 2024 & Planning Practice Guidance (PPG)

In December 2024 the Government published a revised version of the National Planning Policy Framework (NPPF). This revised document replaces the previous National Planning Policy Framework which was first published on 27th March 2012 and updated on 24th July 2018, 19th February 2019, 20th July 2021, 5th September 2023 and 20th December 2023.

The most recent evidence base for viability was a report completed by Arc4 Ltd dated November 2010. The report is significantly out of date and does not follow the latest NPPF Guidance or PPG relating to viability.

Paragraph 008 of the Viability Guidance PPG addresses how a viability assessment should be treated in decision making, including referring back to the viability assessment that informed the plan and whether the plan, and viability evidence underpinning the plan is up to date. Regard must also be given to whether site circumstances have changed since the plan was brought into force.

Further guidance is provided within the PPG which relates to the specific inputs that are appropriate in a viability assessment.

3.2. Vacant Building Credit (PPG)

Planning Obligations Guidance (PPG) confirms that National Policy provides an incentive for brownfield development on sites containing vacant buildings. Paragraph 026 confirms "***Where a vacant building is brought back into any lawful use, or is demolished to be replaced by a new building, the developer should be offered a financial credit equivalent to the existing floorspace of relevant vacant buildings when the local planning authority calculates any affordable housing contribution which will be sought"***.

Paragraph 027 details the process of determining vacant building credit and Paragraph 028 details the circumstances by which some vacant buildings aren't applicable.

In this case the existing accommodation extends to 2,499.91m^2. The GIA of the proposed scheme (excluding the care home) extends to 2,150.40m^2 resulting in an overall reduction in floorspace (349.5m^2). After allowing for this reduction in floorspace and applying VBC, the affordable housing requirement would equate to 0%.

3.3. **Rochdale Core Strategy (October 2016)**

Policy C4 – Providing Affordable Homes

We will seek affordable housing on all developments of 15 dwellings or more. We will seek a contribution to affordable housing of 7.5% of the development sales value of the overall scheme. Affordable housing should be:

a. Provided on-site using this contribution to deliver homes of a type, size and tenure agreed by the developer and the local authority based on local evidence and, where appropriate, delivered in partnership with a Registered Provider; or

b. Provided via an off-site financial contribution in exceptional circumstances, for example, where:

i. The local authority considers that the site is not an appropriate location for affordable housing e.g. poor access to local services and public transport; or

ii. The type of housing on the site makes it difficult to provide an element of affordable housing;

or iii. It is not practical to properly manage an element of affordable housing on the site e.g. on-site provision would only deliver a very small number of homes.

We will take the following factors into account when negotiating the level of affordable housing and how it is to be provided:

i. The type of affordable housing required in the area;

ii. The availability of Social Housing Grant or equivalent;

iii. The need to deliver other planning objectives with a higher priority; and

iv. The economic viability of the development.

As stated at 3.2, it is our view that the Policy requirement for affordable housing, after allowing for VBC, is 0%.

3.4. **RICS Professional Standard - Assessing viability in planning under the National Planning Policy Framework 2023 for England**

In March 2021, RICS published the Assessing Viability in Planning guidance. Effective from 1 July 2021, it replaces the previous 2012 guidance note. The new guidance note supplements and gives added guidance to RICS members and other stakeholders in the planning process on undertaking and understanding financial viability assessments (FVAs) under the NPPF and PPG in both a plan-making and decision-taking context.

In April 2023 the guidance was elevated to a Professional Standard. The RICS Professional Standards set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions. There are mandatory requirements, which use the word 'must' and must be complied with, and or recommended best practice, which uses the word 'should'.

In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence.

It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.

3.5. RICS Professional Statement – Financial Viability in Planning: Conduct and Reporting

The RICS published a mandatory statement in May 2019 (effective from 1 September 2019) addressing the conduct and reporting requirements of Members who act in viability matters.

The Statement sets out mandatory requirements informing the practitioner on what must be included within reports and how the process must be conducted. This is to demonstrate how a reasonable, objective and impartial outcome, without interference, should be arrived at, and so support the statutory planning process.

4.0 Viability Assessment Overview

As confirmed in Section 3, the Viability PPG provides further information relating to the specific inputs that are appropriate to a viability assessment. This includes reference to the viability assessment that informed the plan.

As outlined previously, the most recent area wide viability assessment was undertaken by BNP Paribas in 2019. Whilst the latest areawide viability assessment considered standard residential schemes being delivered on brownfield land, the analysis does not appear to reference any form of housing for older people/ retirement housing within the testing and so where applicable, the inputs to the viability appraisal will reference the general housing assumptions as a benchmark in the following analysis.

In assessing the viability of the proposed scheme the following approach (in accordance with the RICS Viability Practice Statement) has been adopted:

Gross Development Value

Less

Development Costs (inc. Developer Profit)

Less

Planning Obligations

Equals

Residual Land Value (RLV)

The usual test applied in establishing whether a planning obligations package (including Affordable Housing) is viable, is to consider whether the Residual Land Value (RLV) of the proposed scheme exceeds the Benchmark Land Value of the property. If it does, there is financial headroom for planning obligations. If it does not, there is no financial headroom and thus there is no viability for planning obligations to be included. The following sections outline the appraisal inputs that form this viability assessment, having regard to the guidance contained in the PPG and the RICS Guidance Note.

In Section 6 we review the appropriate Benchmark Land Value. In the following Section 7 we review the other key viability appraisal inputs (other than the Benchmark Land Value) and determine the viability of the Proposed Scheme based on current market conditions.

In Section 8, we sensitivity test the result of the appraisal to establish the impact should values and costs rise and fall in the near future.

5.0 The Proposed Scheme

A planning application has been submitted by Muller Property Group ("the Applicant") for the development of 20 x 4-bed townhouses (23/00335/FUL). The red-line boundary also includes the provision of care home facility. The planning application is described as follows:-

'Residential development comprising of 20 dwellings (Use Class C3) and a 80 bed care home development (Use Class C2) including car parking, landscaping, open space and other associated works following the demolition of Parkfield House"

The enclosed FVA considers the viability of the housing schemes and a land receipt for the sale of the Care Home land.

Following the application of Vacant Building Credits, all units are to be open market units with a breakdown of the residential mix included below:-

Type	Av. Size (m^2)	No. of Units
4 Bed Houses	107.52	20

The Proposed Scheme Site Plan is at Appendix 1.

Appendix 1 – Proposed Site Plan

6.0 Benchmark Land Value

Paragraph 13 of the Viability PPG outlines how land value should be defined for the purpose of viability assessments.

> *"To define land value for any viability assessment, 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 land for development*** *while allowing a sufficient contribution to comply with policy requirements. This approach is often called 'existing use value plus' (EUV+)."* ***[Our emphasis]***

Existing Use Value is defined within the RICS Practice Statement as:-

> *"EUV is the value of land in its existing use, with no expectation of that use changing in the foreseeable future (based on the current edition of RICS' Valuation of development property). PPG paragraph 015 advises specifically that the EUV excludes hope value from any assessment of the existing use value. International Valuation Standards 104 paragraph 150.1 defines current/existing use as 'the current way an asset, liability, or group of assets and/or liabilities is used".*

If appropriate, a premium (EUV+) may be applicable with a premium defined within the RICS Practice Statement as:-

> *The premium should reflect the minimum return at which 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 land for development while allowing a sufficient contribution to fully comply with plan policy requirements (PPG paragraphs 013 and 016).*

Paragraph 5.1.2 of the RICS Practice Statement highlights that in some instances, the BLV may sometimes be based on the Alternative Use Value (AUV) ***excluding*** a premium where appropriate.

The RICS Professional Statement confirms at 2.7 of the Statement that in the interest of transparency, when providing benchmark land value in accordance with the PPG, members must report the:

- **Current use value**: CUV, referred to as EUV or first component in the PPG (paragraph 015).
- **Premium**: second component as set out in the PPG (paragraph 016).
- **Market Evidence** as adjusted in accordance with PPG (paragraph 16).
- **All supporting considerations, assumptions and justifications adopted** including valuation reports, where available (see PPG paragraphs 014, 015 and 016).
- **Alternative Use Value** as appropriate (market value on the special assumption of a specified alternative use (see PPG paragraph 017).

When establishing the appropriate Benchmark Land Value, the first consideration is thus the EUV of the site, whilst the second consideration is the appropriate premium or minimum competitive return at which a reasonable landowner would sell their site based on the alternative options available to them.

6.1. Existing Use Value (EUV)

The land's existing use, as defined by PPG, is limited to the current use rather than the potential use. The PPG confirms when assessing the EUV, the following:

> *"EUV can be established in collaboration between plan makers, developers and landowners by assessing the value of the specific site or type of site using published sources of information such as agricultural or industrial land values, or if appropriate capitalised rental levels at an appropriate yield (excluding any hope value for development)."*

The Property currently comprises a vacant office building extending to approximately 2,499.91 sq m (26,909 sq ft). The EUV has been established through analysis of available comparable evidence detailed below:

Property Address	Description/Transaction Details	Analysis ft²	Relevance
Unit 1 Howarth Court Oldham OL9 9XB	2024 - Modern office building situated in Broadway Business Park. 25,500 sq ft with 108 car parking spaces. First floor letting (8,410 sq ft) New 5 year lease to Office Depot International (UK) ltd. Agreed rent £117,740 per annum.	£14.00	Modern office. Better location and specification.

Property Address	Description/Transaction Details	Analysis ft²	Relevance
St Albans House, Drake Street, Rochdale	Three storey office building adjacent to Rochdale Town Centre. 9,648 sq ft. New 3 year lease to Rochdale Borough Council at £64,930 per annum.	£6.75	1970'a office building. Lease reflects condition (Council to refurbish for educational use).

There is a limited level of leasehold transaction of a similar size. Having regards to the limit evidence and the current condition of the Property we have valued the building on an EUV as set out below:

Market Rent: 26,909 sq ft x £8.00: £215,272 per annum

YP in Perp at 12%: £1,793,926

Say: £1,790,000

The EUV equates to a capital rate of £66.52 per sq ft.

6.2. **Premium**

PPG confirms that land does not transact at EUV. Paragraph 016 pf the PPG confirms:

> *The premium (or the 'plus' in EUV+) is the second component of benchmark land value. It is the amount above existing use value (EUV) that goes to the landowner. The premium should provide a reasonable incentive for a land owner to bring forward land for development while allowing a sufficient contribution to fully comply with policy requirements.*

The site is a clear redevelopment opportunity. A vendor is likely to have regard to the uplift in value a residential led consent would generate. We have therefore applied a 20% premium to the EUV.

6.3. **Benchmark Land Value**

Having regard to paragraph 13 of the Viability PPG. In this instance we have adopted the EUV+ approach to the BLV.

The BLV applied within the viability assessment equates to **£2,150,000.**

7.0 Viability Assessment

As noted above, in this Section 7, we review the other key viability appraisal inputs (other than the benchmark Land Value) and determine the viability of the Proposed Scheme based on current market conditions.

Our Argus Developer appraisal summary is at Appendix 2 but our assumptions and outcomes are summarised below.

Appendix 2 – Argus Developer Appraisal

7.1. Appraisal Inputs

7.1.1. Development Programme/Timing Assumptions

It is assumed that construction would commence at month 7, i.e. following a 6-month lead-in period to receive all necessary consents and discharge conditions. The construction period is assumed to be 18 months for the whole scheme with Practical Completion at the end of month 25 and the overall scheme end date is assumed to be in month 37 i.e. following a 12- month sales period.

It is assumed the Care Home land would sell 12 months into the development programme.

7.1.2. Appraisal Revenue – Gross Development Value (GDV)

In respect of how GDV should be defined for the purpose of viability assessments, Viability PPG paragraph 11 states:

"Gross development value is an assessment of the value of development. For residential development, this may be total sales and/or capitalised net rental income from developments. Grant and other external sources of funding should be considered. For commercial development broad assessment of value in line with industry practice may be necessary.

For broad area-wide or site typology assessment at the plan making stage, average figures can be used, with adjustment to take into account land use, form, scale, location, rents and yields, disregarding outliers in the data. For housing, historic information about delivery rates can be informative.

For viability assessment of a specific site or development, market evidence (rather than average figures) from the actual site or from existing developments can be used. Any market evidence used should be adjusted to take into account variations in use, form, scale, location, rents and yields, disregarding outliers. Under no circumstances will the price paid for land be a relevant justification for failing to accord with relevant policies in the plan."

With regards to the adopted market revenues within the enclosed appraisal, consideration has been given to available new-build 4-bed housing within the Middleton area with a schedule of comparable evidence included at **Appendix 6**. Values are included at £368,500 per unit. This results in a residential GDV of **£7,370,000** (£3,427.27 per m^2).

We have included a payment for the Care Home Land on a serviced parcel basis. We have assessed the value at £1,600,000, based off £20k per bed space.

7.1.2.1. **Land Acquisition Costs**

The Argus Developer appraisal has been set up to provide a residual land value, having fixed the development profit. The result of the appraisal, the 'Residualised Amount' is compared against the Benchmark Land Value to consider if there is a surplus which can be made available for S106/Off-Site Affordable Housing contributions.

The residual price allows for land acquisition costs at the prevailing rate.

7.1.2.2. **Constructions Costs**

Regarding development costs, Viability PPG paragraph 12 states the following:

"Assessment of costs should be based on evidence which is reflective of local market conditions. As far as possible, costs should be identified at the plan making stage. Plan makers should identify where costs are unknown and identify where further viability assessment may support a planning application.

Costs include:,

- *build costs based on appropriate data, for example that of the Building Cost Information Service*
- *abnormal costs, including those associated with treatment for contaminated sites or listed buildings, or costs associated with brownfield, phased or complex sites. These costs should be taken into account when defining benchmark land value*
- *site-specific infrastructure costs, which might include access roads, sustainable drainage systems, green infrastructure, connection to utilities and decentralised energy. These costs should be taken into account when defining benchmark land value*
- *the total cost of all relevant policy requirements including contributions towards affordable housing and infrastructure, Community Infrastructure Levy charges, and any other relevant policies or standards. These costs should be taken into account when defining benchmark land value*
- *general finance costs including those incurred through loans*
- *professional, project management, sales, marketing and legal costs incorporating organisational overheads associated with the site. Any professional site fees should also be taken into account when defining benchmark land value*
- *explicit reference to project contingency costs should be included in circumstances where scheme specific assessment is deemed necessary, with a justification for contingency relative to project risk and developers return"*

In line with the PPG, we have undertaken research using BCIS Review Online" The Building Cost Information Service" which produces detailed cost information and indices and is a recognised source of assessing build costs when testing viability.

BCIS average costs are provided at mean, median, and upper quartile rates (as well as lowest, lower quartile and highest, upper quartile). BCIS confirm the following in relation to each definition:

Mean *– This is what most people think as the average. It is the sum of the rates in the sample divided by the number of units in the sample. The mean is affected by all rates in the sample and can be unduly influenced by one or two extreme values when the sample size is small. The mean is particularly relevant when you are choosing a rate to be applied across an estate of buildings.*

Median - *The middle statistic (not the middle of the range). Unlike mean, this is not as easily affected by rouge figures. It is not the 'typical' rate (see Mode) but can be used as such in most cases. This is probably the best figure to use when choosing a rate for a single typical building.*

25% (Lower Quartile) *– just as the median is the middle statistic, the lower quartile is the statistic which is one quarter of the way up a list of order rates, i.e. 25% of rates fall below the lower quartile and 75% above.*

If you judge your project to be below average cost then this figure will give you an indication of an appropriate rate.

75% (Upper Quartile) – *just like the lower quartile. You can expect half of all the rates lie between the lower and upper quartile. If you judge your project to be above average cost then this figure will give you an indication of an appropriate rate.*

We have adopted the Median rate i.e. the best rate for a typical building.

BCIS Average cost information is available on a default basis which includes all historic data with a weighting for the most recent, or for a selected maximum period ranging from 5 to 40 years. The default data is now based on projects that are up to 15 years old except where this would result in the sample size being less than four projects, when a longer period will be used. We generally consider both default and maximum 5 year average prices; the latter are more likely to reflect current regulations, specification, technology and market requirements.

For the proposed townhouses, 2-storey BCIS allowances for estate housing generally (810.12) have been adopted which equates to £1,471 per m^2. This reflects the median quartile of allowances, locationally weighted to Rochdale.

A copy of the BCIS extracts are included at **Appendix 3.**

Appendix 3 – BCIS Extracts

In addition to the core build cost we have added cost to comply with Part L and O of the updated building regulation at £3,500 per unit.

For the avoidance of doubt, the enclosed appraisal does not include any allowances for costs associated with Biodiversity Net Gain (BNG) and we reserve the right to amend this position should it be required.

BCIS costs only reflect the cost to construct the building itself (foundations up) and exclude site works and external costs. These allowances reflect the costs associated with car parking, landscaping with limited access and service roads. We have made an allowance at 20% of core build cost.

In addition to the core build costs, we have made an allowance for off-site drainage, gas membrane, capping layer to soft landscaping areas and potential soft spots following demolition and site clearance as highlighted in the Will Rudd Engineering report. Abnormal costs amounting to £3,000 per plot (£60,000) have been applied. In addition, electrical connection to the site has been costed at £121,000.

Site clearance and demolition has been estimated at £198,000.

A copy of the Will Rudd report and demolition quote is at **Appendix 4**.

Appendix 4 – Will Rudd Report and Demolition Quote

A contingency allowance of 5% is typically the norm for a scheme such as this and has been applied to all construction costs.

7.1.2.3. **Professional Fees**

Professional building design fees (Architect QS etc.) are assumed to be 8% of the total construction cost to include all planning and building regulation fees.

7.1.2.4. **Marketing and Sales Fees**

In this instance, combined Marketing (2%) and Sales costs (1%) allowances are assumed, amounting to 3% of each sale.

7.1.2.5. **Disposal Fees**

Legal costs on open market sales equate to £1,000 per unit.

7.1.3. **Finance Costs**

Where development finance is available (which having been available for a select number of situations is now improving) lenders are currently charging 3 - 5% above LIBOR. Arrangement fees (1-3%), monitoring fees (2-5%) and exit fees (1% of GDV) amongst other fees can be added costs dependant on the status of the borrower. These lending terms have emerged due to the bank's perceived risk of residential development in the current market.

An extract from the Investment Property Forum (IPF) 'UK Development Finance Review 2015' confirms the range of fees that banks may charge:

"*Fees are a significant feature of development finance and they often pose a challenge when attempting to compare all-in financing costs because of their variation. Many lenders offering the lowest margins will demand higher fees or impose more types of fees.*

The spectrum of fees a bank lender may require will include front end (i.e. arrangement) fees, exit fees, non-utilisation fees, hedging fees, booking fees for residential (as each unit is sold) and, occasionally, pre-payment fees. In addition, there may be an array of management and monitoring fees, while agency fees will be payable if the deal is a club or syndication."

Over the last 24 months interest rates have risen significantly as the Bank of England has attempted to control inflation. In January 2022 the base rate was 0.25%. At the time of reporting the base interest rate is 5%. As a result funding rates have also increased dramatically. Taking into account typical setup and exit fees, the core finance rate is approximately 9%.

In this instance we have adopted an 'all-in' debit interest rate of 7.5% together with a credit rate of 1%, with no additional allowance for fees, which we consider to be an optimistic generic assumption for a development of this nature in the current market.

7.1.4. **Developer's Return for Risk and Profit**

Paragraph 18 of the Viability PPG sets out how the appropriate return to developer should be defined for the purpose of viability assessments. It states:

"Potential risk is accounted for in the assumed return for developers at the plan making stage. It is the role of developers, not plan makers or decision makers, to mitigate these risks. The cost of complying with policy requirements should be accounted for in benchmark land value. Under no circumstances will the price paid for land be relevant justification for failing to accord with relevant policies in the plan.

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. Plan makers may choose to apply alternative figures where there is evidence to support this according to the type, scale and risk profile of planned development. A lower figure may be more appropriate in consideration of delivery of affordable housing in circumstances where this guarantees an end sale at a known value and reduces risk. Alternative figures may also be appropriate for different development types."

The profit amount is fixed at 18.5% Profit on GDV.

7.2. Appraisal Summary

The summary table below details the outcome of the residual appraisal of the proposed scheme. The outcome (residual value) is compared against the Benchmark Land Value.

Appendix 2 – ARGUS Summary Worksheet

Appraisal Summary			
Appraisal Revenue:			
	Units	**£/Unit**	**Total**
Townhouses (Open Market) – 3 Bed	20	£369,500	£7,370,000
Care Home – Serviced Land Receipt			£1,600,000
Net Development Value/Net Realisation			**£8,970,000**
Appraisal Outlay:			
Core Construction Cost	BCIS		£3,163,238
External Costs	20%		£632,648
Abnormal Costs			£60,000
Demolition & Site Clearance			£198,000
Electrical Connections			£121,000
Part L & O	£3,500/Unit		£70,000
Contingency	5%		£212,244
Professional Fees	8%		£329,111
Sales & Marketing Fees	3%		£221,100
Sales Legal Fee	£1,000/Unit		£20,000
Sale and Legal Fee (Care Home Land)	1.8%		£28,800
Finance			£550,274
Developers Profit		**18.5% of GDV**	£1,363,450
Residualised Price (Net of Purchaser's Costs):			**£1,882,749**
Benchmark Land Value:			**£2,150,000**
Surplus/(Deficit):			**(£267,251)**

8.0 Sensitivity Analysis

The viability of a development scheme when calculated by the residual method can be affected by variations in Gross Development Value, Build Costs and to a lesser extent by variations in planning obligations, finance costs, phasing/build and sales rates and industry expectations as to profit margins.

We set out below a "sensitivity analysis" schedule showing the effect of percentage changes in Gross Development Value and Build Costs to the viability of the scheme. We have adjusted the core build rate and GDV by increases and decreases of 5%. The Sensitivity Analysis displays the residual land value generated from each scenario, which can then be compared against the Benchmark Land Value to understand if a surplus or deficit is produced for planning obligations, including offsite affordable housing commuted payment.

The sensitivity is run off an appraisal that has no allowance for contributions and cosiders the change in RLV against variations of build cost and GDV (up and down) from the stated position. The sensitivity appraisal simply residulises the land and therefore the starting position is a RLV that is then compared against the BLV.

SENSITIVITY ANALYSIS REPORT **ALDER KING LLP**

MIDDLETON - Parkfield House
Muller Property Group

Table of Land Cost and Profit on GDV%

	Construction: Rate /m²						
Sales: Rate /m²	-15.000%	-10.000%	-5.000%	0.000%	+5.000%	+10.000%	+15.000%
	1,250.35 /m²	1,323.90 /m²	1,397.45 /m²	1,471.00 /m²	1,544.55 /m²	1,618.10 /m²	1,691.65 /m²
-15.000%	(£1,741,704)	(£1,558,454)	(£1,375,204)	(£1,191,954)	(£1,008,704)	(£825,454)	(£642,204)
2,913.18 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%
-10.000%	(£1,971,969)	(£1,788,719)	(£1,605,469)	(£1,422,219)	(£1,238,970)	(£1,055,719)	(£872,469)
3,084.54 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%
-5.000%	(£2,202,234)	(£2,018,984)	(£1,835,734)	(£1,652,484)	(£1,469,234)	(£1,285,986)	(£1,102,734)
3,255.91 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%
0.000%	(£2,432,499)	(£2,249,249)	(£2,065,999)	(£1,882,749)	(£1,699,499)	(£1,516,249)	(£1,333,001)
3,427.27 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%
+5.000%	(£2,662,764)	(£2,479,514)	(£2,296,264)	(£2,113,014)	(£1,929,764)	(£1,746,514)	(£1,563,264)
3,598.63 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%
+10.000%	(£2,893,030)	(£2,709,780)	(£2,526,530)	(£2,343,280)	(£2,160,030)	(£1,976,780)	(£1,793,530)
3,770.00 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%
+15.000%	(£3,123,295)	(£2,940,045)	(£2,756,795)	(£2,573,545)	(£2,390,295)	(£2,207,045)	(£2,023,795)
3,941.36 /m²	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%	18.500%

A copy of the Sensitivity Analysis is at Appendix 5.

Appendix 5 – Sensitivity Analysis

9.0 Conclusion

Our Financial Viability Assessment and review of the proposed development leads us to conclude there is no financial headroom available for planning obligations, after accounting for the anticipated gross sales receipts and all reasonable aspects of the outlay necessary.

Completed by:

R James Mackay MRICS
Partner
RICS Registered Valuer

For and on behalf of
Alder King LLP

Tel: 07778 942321
Email: jmackay@alderking.com

Reviewed by:

Sam Carson MRICS
Associate
RICS Registered Valuer

For and on behalf of
Alder King LLP

Appendix 1: Proposed Site Plan

Accommodation Schedule

House Type	Amount	Floor Area (m²)
M	11	108
N	4	106.4
O	3	108
P	2	106.4
TOTAL	20	2144
Care Home	80 Bed	4109

* Plots with gable windows/detailing

MÜLLER

PROPERTY GROUP

Project
Parkfield House, Middleton, M24 4EB

Client
Muller Property Group

Title
Proposed Colour Site Plan

Bower Mattin

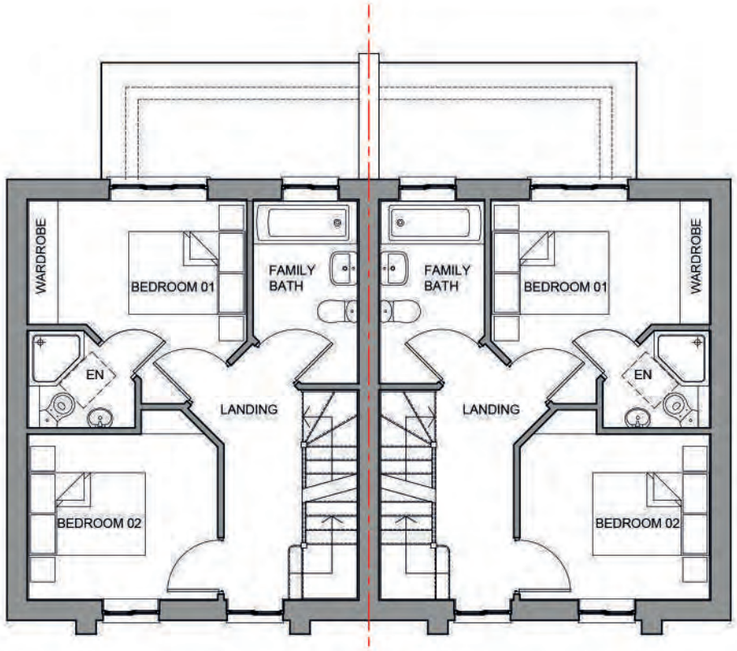
Unit 23/ 24
Beechfield House
Winterton Way
Macclesfield
Cheshire
SK11 0LP

Telephone
01625-509187

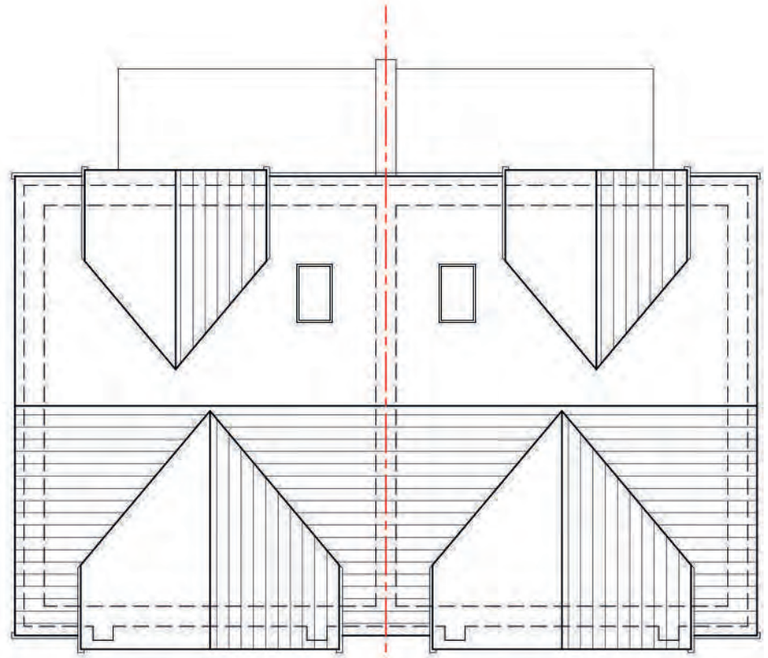
E-Mail
architects@bower-mattin.co.uk

Chartered Architects
Surveyors

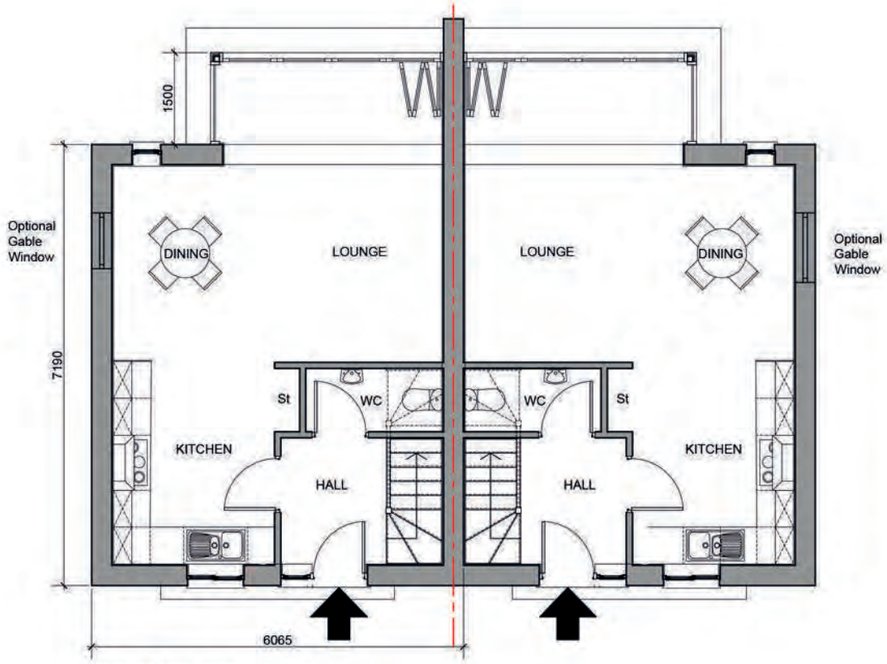
Scale	Date	Job No	Original
1:250 @ A1	Nov 24	23590	
Drawn By	Checked		
TRM	-		
Category	CiSfb Element	Sequential No	Revision
L	-	002	I



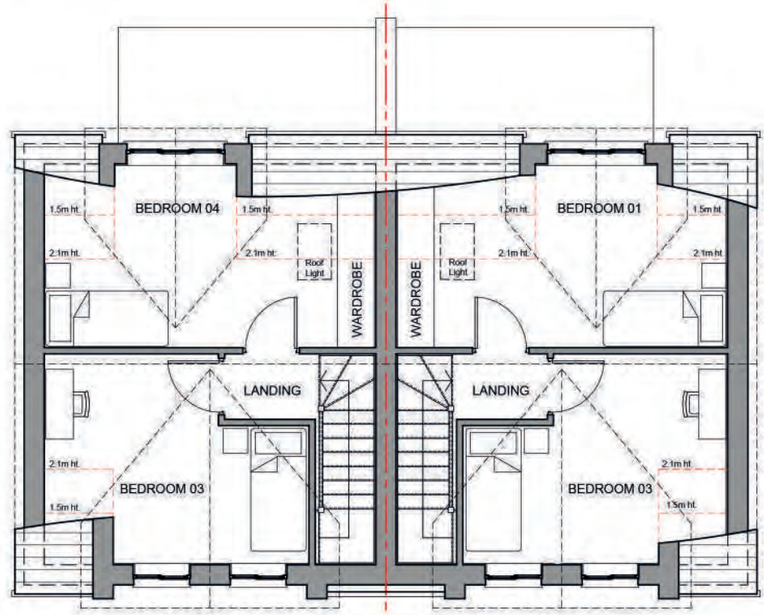
First Floor Plan



Roof Plan



Ground Floor Plan



Second Floor Plan/ Roof Accommodation

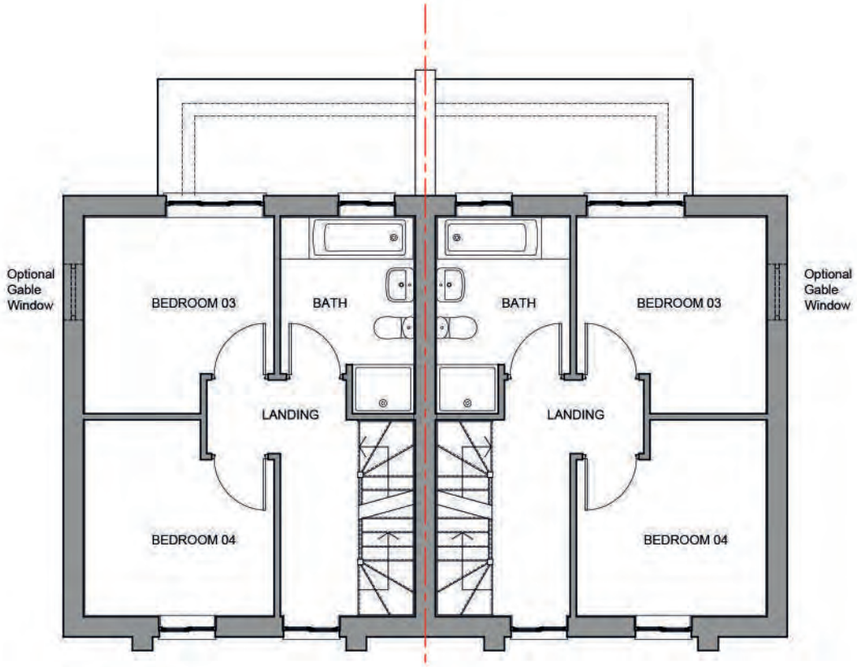
SCHEDULE

TYPE N
2.5 Storey 4B5P
Gross Internal Floor Area (GIFA)
106.4sqm (1,145sq ft)

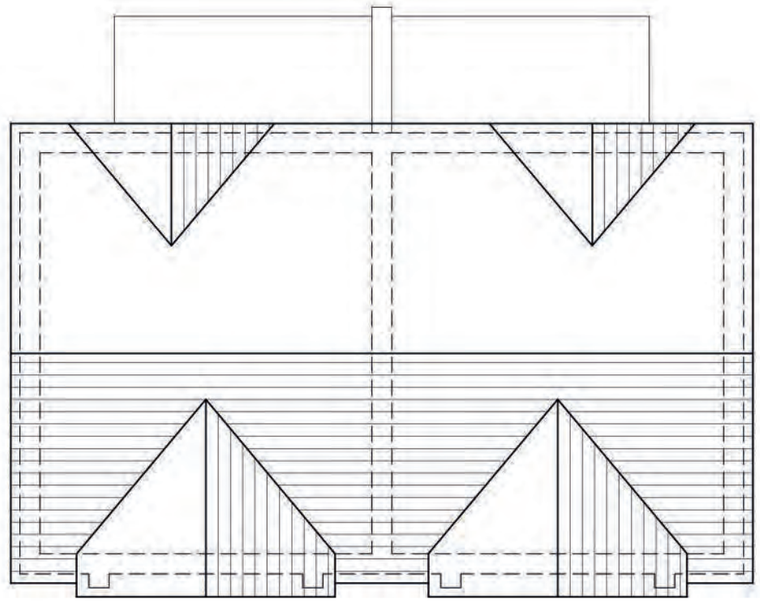
MÜLLER
PROPERTY GROUP

Project: Parkfield, Middleton, Manchester, M24 4EB			Bower Mattin
Title: House Type N Floor Plans			Unit 23/ 24 Beechfield House Winterton Way Macclesfield Cheshire SK11 0LP
Scale: 1:100@A3	Date	Job No: 23590	Original
Drawn By	Checked		
Category: L	CiSfb Element: .	Sequential No: 101	Revision: E

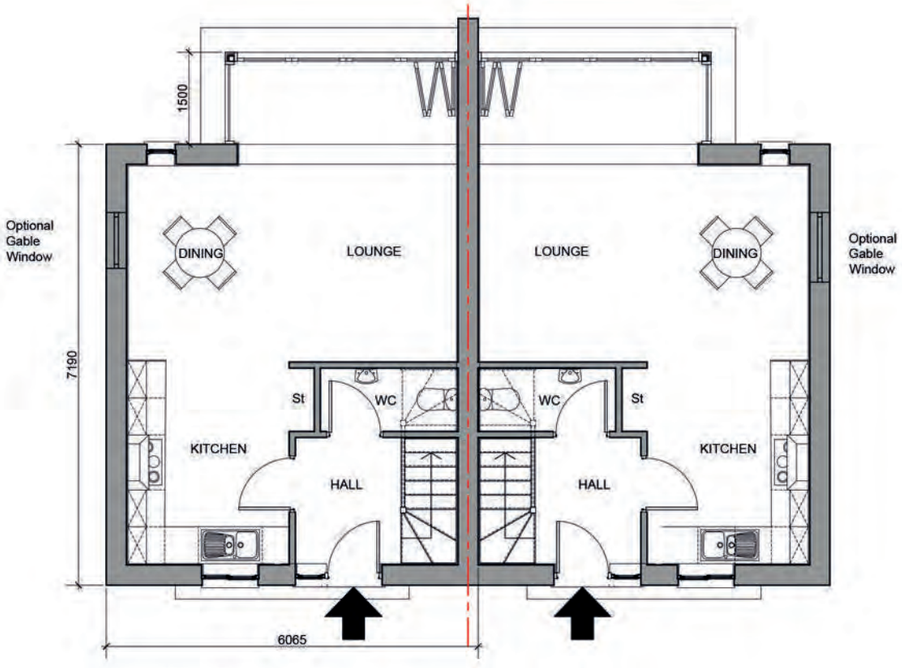
Chartered Architects Surveyors



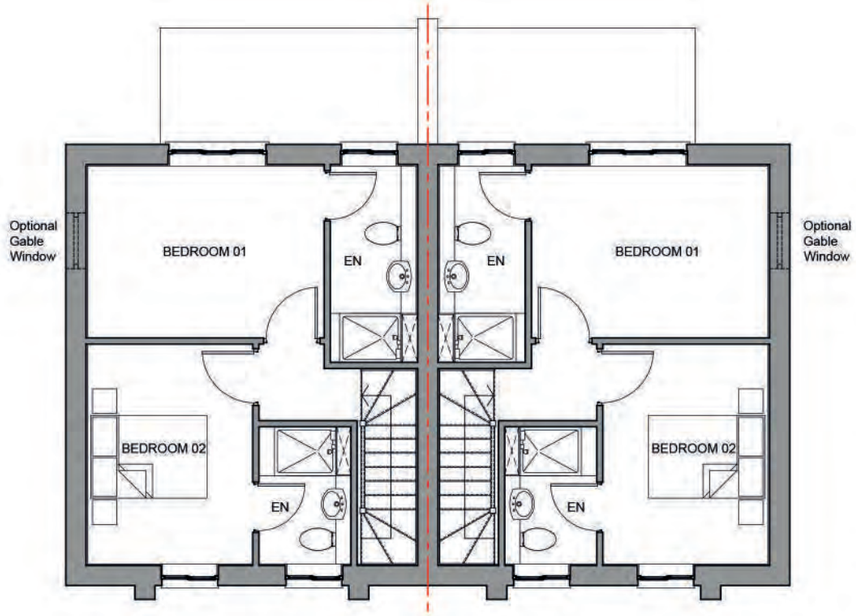
First Floor Plan



Roof Plan



Ground Floor Plan



Second Floor Plan

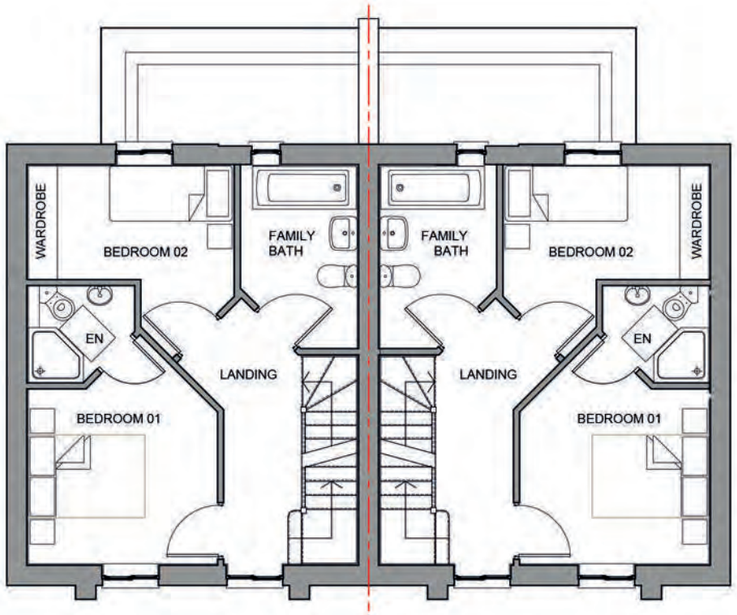
SCHEDULE

TYPE M
3 Storey 4B5P
Gross Internal Floor Area (GIFA)
108sqm (1,162sq ft)

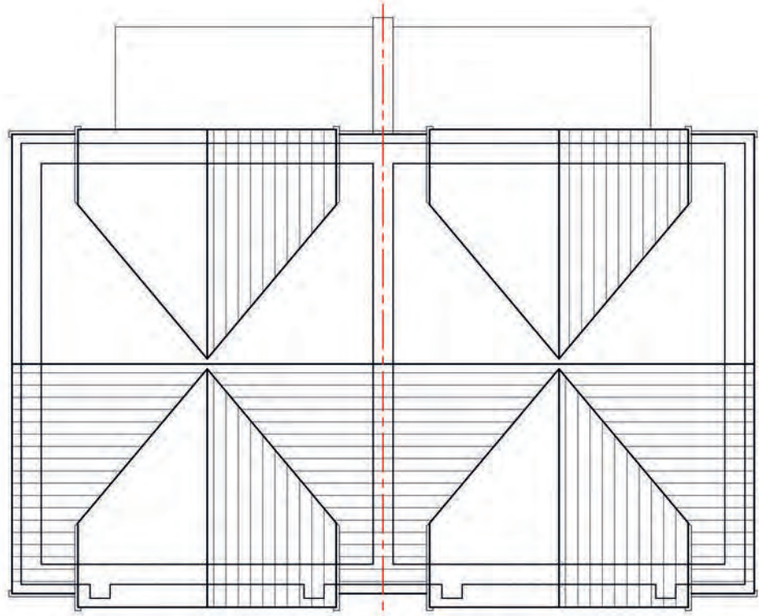
MÜLLER
PROPERTY GROUP

Project: Parkfield, Middleton, Manchester, M24 4EB			
Title: House Type M Floor Plans			
Scale 1:100@A3	Date	Job No 23590	Original
Drawn By	Checked		
Category L	CiSfb Element .	Sequential No 103	Revision C

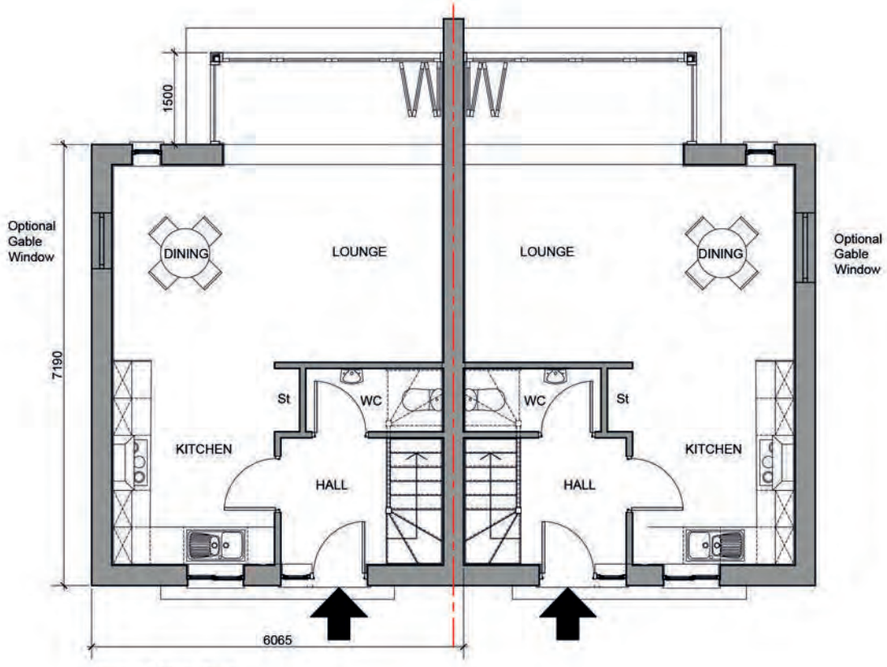
Bower Mattin
Unit 23/ 24
Beechfield House
Winterton Way
Macclesfield
Cheshire
SK11 0LP
Chartered Architects
Surveyors



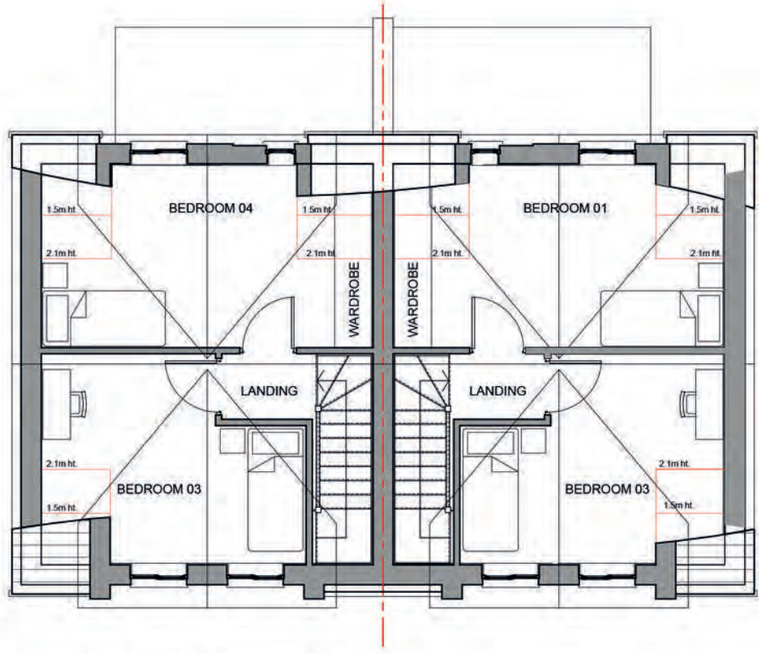
First Floor Plan



Roof Plan



Ground Floor Plan



Second Floor Plan/ Roof Accommodation

SCHEDULE

TYPE P
2.5 Storey 4B5P
Gross Internal Floor Area (GIFA)
106.4sqm (1,145sq ft)

MÜLLER
PROPERTY GROUP

Project: Parkfield, Middleton, Manchester, M24 4EB			Bower Mattin Unit 23/ 24 Beechfield House Winterton Way Macclesfield Cheshire SK11 0LP Chartered Architects Surveyors
Title: House Type P Floor Plans			
Scale: 1:100@A3	Date	Job No: 23590	Original
Drawn By	Checked		
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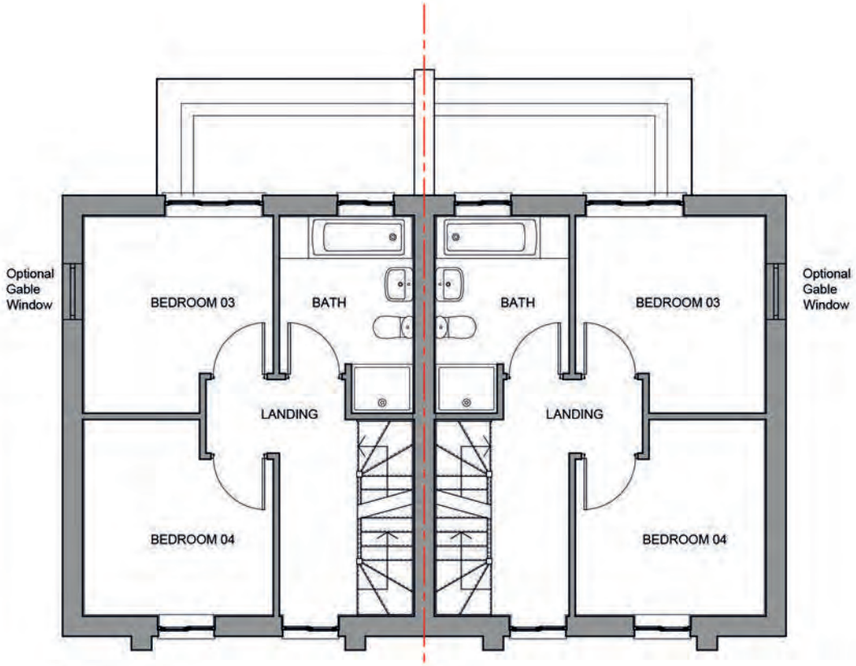
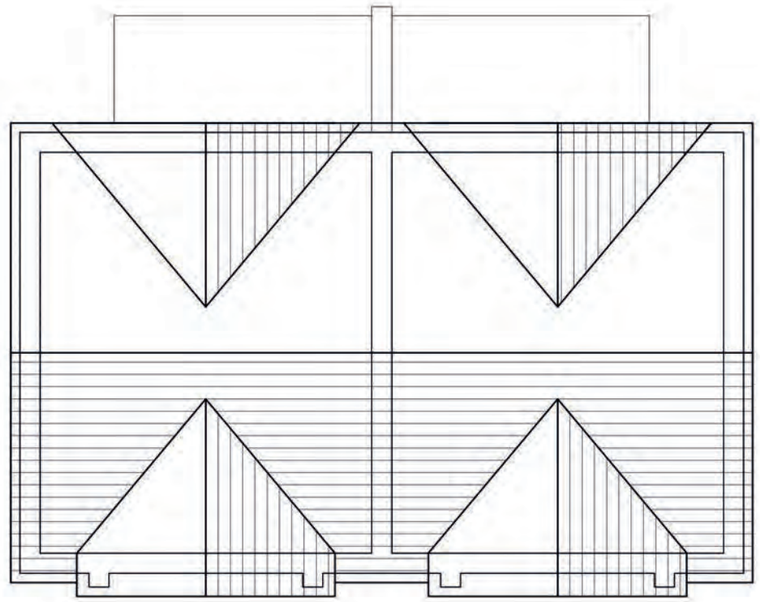
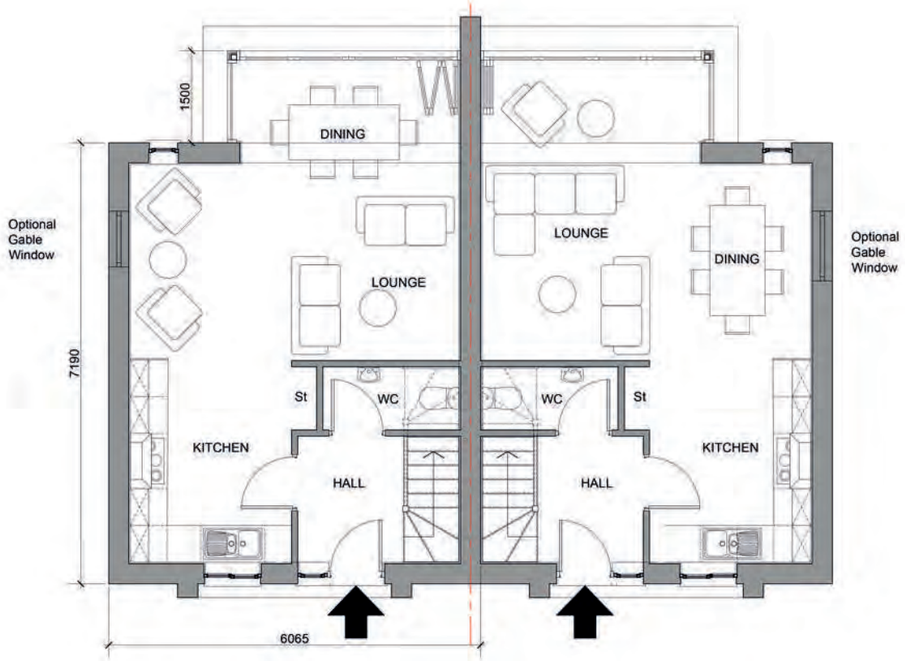


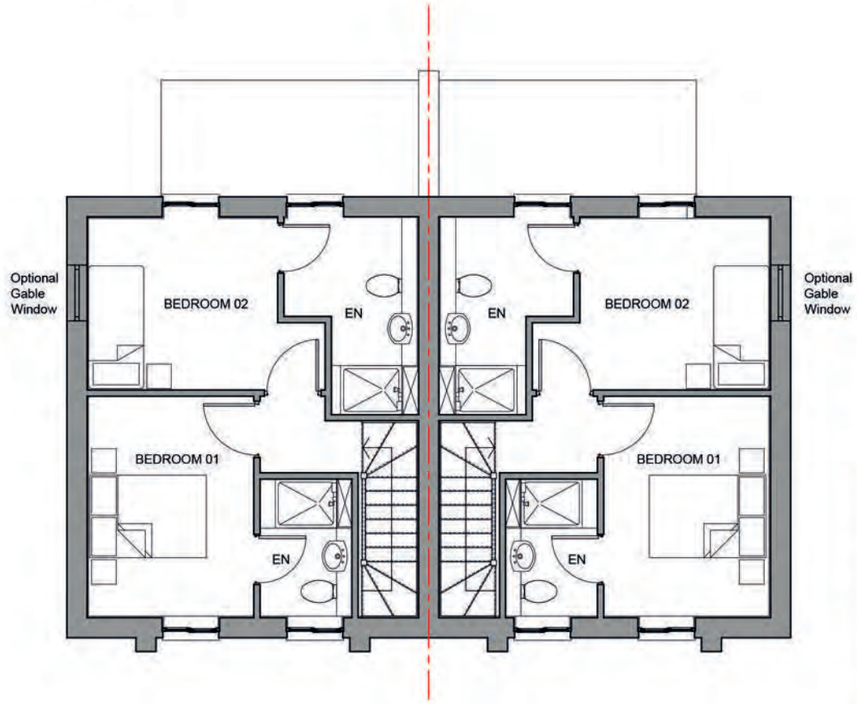
First Floor Plan



Roof Plan



Ground Floor Plan



Second Floor Plan

SCHEDULE

TYPE O
3 Storey 4B5P
Gross Internal Floor Area (GIFA)
108sqm (1,162sq ft)

MÜLLER
PROPERTY GROUP

Project: Parkfield, Middleton, Manchester, M24 4EB			Bower Mattin
Title: House Type O Floor Plans			Unit 23/ 24 Beechfield House Winterton Way Macclesfield Cheshire SK11 0LP
Scale 1:100@A3	Date	Job No 23590	Original
Drawn By	Checked		
Category L	CiSfb Element .	Sequential No 107	Revision B
			Chartered Architects Surveyors

Appendix 2: ARGUS Appraisal Summary

APPRAISAL SUMMARY — ALDER KING LLP

MIDDLETON - Parkfield House
Muller Property Group

Appraisal Summary for Phase 1

Currency in £

REVENUE					
Sales Valuation	**Units**	**m²**	**Sales Rate m²**	**Unit Price**	**Gross Sales**
4 Bed Houses	20	2,150.40	3,427.27	368,500	7,370,000
Additional Revenue					
Care Home - Serviced Land Receipt			1,600,000		
				1,600,000	
NET REALISATION				**8,970,000**	
OUTLAY					
ACQUISITION COSTS					
Residualised Price			1,882,749		
				1,882,749	
Stamp Duty			83,637		
Effective Stamp Duty Rate		4.44%			
Agent Fee		1.00%	18,827		
Legal Fee		0.75%	14,121		
				116,586	
CONSTRUCTION COSTS					
Construction	**m²**	**Build Rate m²**	**Cost**		
4 Bed Houses	2,150.40	1,471.00	3,163,238		
Contingency		5.00%	212,244		
Demolition			198,000		
				3,573,483	
Other Construction Costs					
FLOS Costs	20.00 un	3,500.00 /un	70,000		
Abnormal Costs			60,000		
Externals		20.00%	632,648		
Electrical Connection Cost			121,000		
				883,648	
PROFESSIONAL FEES					
Other Professional Fees		8.00%	329,911		
				329,911	
DISPOSAL FEES					
Sales & Marketing		3.00%	221,100		
Sales Agent Fee (Care Home Land)		1.00%	16,000		
Sales Legal Fee	20.00 un	1,000.00 /un	20,000		
Sales Legal Fee (Care Home Land)		0.80%	12,800		
				269,900	
TOTAL COSTS BEFORE FINANCE				**7,056,276**	
FINANCE					
Timescale	**Duration**	**Commences**			
Purchase	1	Jun 2025			
Pre-Construction	6	Jul 2025			
Construction	16	Jan 2026			
Sale	12	May 2027			
Total Duration	35				
Debit Rate 7.500%, Credit Rate 1.000% (Nominal)					
Land			285,907		
Construction			113,087		
Other			151,280		
Total Finance Cost				550,274	
TOTAL COSTS				**7,606,550**	
PROFIT					
				1,363,450	

Performance Measures

APPRAISAL SUMMARY

ALDER KING LLP

MIDDLETON - Parkfield House
Muller Property Group

Profit on Cost%	17.92%
Profit on GDV%	18.50%
Profit on NDV%	18.50%
IRR% (without Interest)	21.84%
Floor Area Ratio	0.00%

Appendix 3: BCIS Extract

BCIS®

The results contained on the page are as published on 01-Jun-2025

£/M2 STUDY

Description: Rate per m2 gross internal floor area for the building Cost including prelims.

Last updated: 31-May-2025 07:28

Rebased to Rochdale (100; sample 34)

MAXIMUM AGE OF RESULTS: DEFAULT PERIOD

Building function (Maximum age of projects)	£/m² gross internal floor area						Sample
	Mean	Lowest	Lower quartiles	Median	Upper quartiles	Highest	
New build							
810. Housing, mixed developments (15)	1,577	840	1,368	1,522	1,729	3,932	1254
810.1 Estate housing							
Generally (15)	1,559	802	1,320	1,493	1,706	5,359	1315
Single storey (15)	1,793	1,037	1,493	1,727	1,958	5,359	208
2-storey (15)	1,502	802	1,295	1,454	1,649	3,251	1035
3-storey (15)	1,591	966	1,324	1,539	1,770	3,180	67
4-storey or above (15)	3,242	1,585	2,594	2,896	4,312	4,820	5
810.11 Estate housing detached (15)	2,093	1,140	1,536	1,748	2,364	5,359	18
810.12 Estate housing semi detached							
Generally (15)	1,580	917	1,337	1,527	1,732	3,430	339
Single storey (15)	1,774	1,130	1,539	1,739	1,904	3,430	78
2-storey (15)	1,521	917	1,320	1,471	1,669	2,633	251
3-storey (15)	1,530	1,137	1,212	1,474	1,750	2,219	10
810.13 Estate housing terraced							

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Building function (Maximum age of projects)	£/m² gross internal floor area						Sample
	Mean	Lowest	Lower quartiles	Median	Upper quartiles	Highest	
Generally (15)	1,566	913	1,290	1,469	1,695	4,820	207
Single storey (15)	1,743	1,142	1,475	1,696	2,076	2,470	14
2-storey (15)	1,511	913	1,283	1,448	1,645	3,251	162
3-storey (15)	1,586	966	1,343	1,522	1,747	3,180	29
4-storey or above (15)	4,566	4,312	-	-	-	4,820	2
816. Flats (apartments)							
Generally (15)	1,849	959	1,521	1,731	2,095	6,266	749
1-2 storey (15)	1,767	1,060	1,476	1,659	2,027	3,494	157
3-5 storey (15)	1,820	959	1,513	1,720	2,057	3,794	502
6 storey or above (15)	2,159	1,322	1,715	2,050	2,348	6,266	88

© BCIS 2025

Appendix 4: Will Rudd Engineering Report

Will Rudd
Realise what's possible

Müller Property Group

Parkfield House, Middleton

SI Review & Engineering Commentary Report

June 2025

Project Information

Project no	G9490-05
Project Title	Parkfield House, Middleton
Client	Muller Property Group
Document Number	G9490-05-WRD-XX-XX-RP-S-00001_P04
Document Name	Site Investigation Review & Engineering Commentary Report

Document Control

	Date	Prepared By	Reviewed By	Approved By
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02	19/06/2025	Aidan Kelly *BEng(Hons)*	A MacPhee *MEng, CEng, AIStructE*	Stephen Rudd *BEng(Hons) / CEng / MIStructE / MICE / SER Certifier*
03	23/06/2025	Aidan Kelly *BEng(Hons)*	A MacPhee *MEng, CEng, AIStructE*	Stephen Rudd *BEng(Hons) / CEng / MIStructE / MICE / SER Certifier*
04	24/06/2025	Aidan Kelly *BEng(Hons)*	A MacPhee *MEng, CEng, AIStructE*	Stephen Rudd *BEng(Hons) / CEng / MIStructE / MICE / SER Certifier*

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Executive Summary

Will Rudd have been instructed by Muller Property Group to provide an engineering commentary report for a proposed care home / residential development, to be located on Parkfield House, Midleton. Planning is under consideration for the proposed scheme of 80 care beds over two / three storeys and 20 residential dwellings.

Muller Property Group provided the following information of our review:

- Soil Investigation Report
- Flood Risk Assessment Report
- Topographical survey
- Proposed site levels
- Drainage strategy report

The following key observations were drawn from the Site Investigation report:

- Existing ground conditions comprise made ground, overlying a dense layer of sand and gravel, proven up to 12.5m depth.
- The sands / gravels layer provide a safe bearing pressure of 150 kN/m^2.
- Ground contamination is encountered above exceedance levels within the soil samples taken. A 600mm thick layer of clean environmental capping is recommended to all soft landscaping areas.
- CO2 gas is observed in standpipes and Characteristic Situation 2 gas protection measures are recommended.
- Zinc concentrations exceed limits in groundwater recorded in the site investigation but no remedial works are recommended..

Will Rudd are satisfied that the scope and content of the Site Investigation report is sufficient to carry out Civil and Structural engineering design to the site however additional testing may be required by the Piling Contractor or other specialist designers as required.

The detailed flood risk assessment by Betts Hydro shows the site to be within Flood Zone 1, the lowest level classification. The site is at a low risk of flooding from fluvial/tidal flooding. The site falls within the low/medium risk group for local areas in regards to surface water flooding, However the majority of the site is of very low risk.

The preliminary drainage strategy provided by Betts Hydro specifies two separate systems for drainage. The public foul water drainage would discharge onto the existing combined sewer on Manchester Old Road. The proposed surface water drainage would be collected on site, attenuated and treated before discharging to the existing public surface water sewer at the end of Alkrington Park Road

Proposed site levels have been provided: the care home is at a level of 79.07m and the residential units floor levels vary. Proposed levels appear to suit existing site levels requiring minimal cut / fill.

Will Rudd have undertaken a general engineering review of the site and note the following key points:

- Various options are available for the proposed building foundations for the care home.
    - Strip foundations: approximately 1400mm wide x 600mm deep
    - Ground improvement can be undertaken, comprising vibro stone columns. This could improve the safe bearing pressure to 250 kN/m2 allowing foundations widths to be reduced to 1000 / 900mm.
    - Piled foundations, comprising precast concrete or steel driven piles, approximately 15m deep, to support approx. 600mm wide reinforced concrete ground beams.
- For the residential dwellings, we propose that strip foundations or a raft foundation would offer a viable foundation solution.
- A suspended ground floor slab should be adopted. Several ground floor slab options are available.
- Gas protection measures are to be adopted, according to BS 8485:2015+A1:2019, to suit Characteristic Situation 2.
- Detailed design proposals to be developed for car park sub-base design. Assumed capping construction to be 600mm thick 6F2
- Localised asbestos contamination should be managed within an asbestos management plan.
- Indicative drainage information has been provided which appears to suit the site constraints. Further information would be required to confirm extent of SuDS to be used.
- A materials management plan should be developed for the site to regulate handling of materials during works.

All future design work is to be undertaken by a suitably qualified Civil and Structural engineer.

1.0 Introduction

Will Rudd have been instructed by Muller Property Group to provide a review of the Site Investigation and provide initial engineering commentary for a proposed development on Parkfield House, Middleton. The proposed development comprises a residential care home with 80 care beds over two to three storeys and 20No. $2\frac{1}{2}$/ 3 storey dwellings, with associated car parking and soft landscaping.

Planning approval is currently under consideration with planning determination imminent.

The proposed buildings are situated across the whole site, with the main care home building being situated towards the Northern side of the site and the $2\frac{1}{2}$ /3 storey dwellings to the south and east.

See extract of proposed site plan adjacent:

Figure 1 - Site Plan

2.0 Site Investigation Report

The Site Investigation report was undertaken by bEk Enviro Limited

Report title: Site Investigation & Ground Assessment

Report No: BEK-21937-2

Report date: September 2021

The following tests were conducted, in August/September 2021:

- 5No. window sample boreholes up to 5.45m bgl.
- 3No. percussive boreholes to a maximum depth of 12.45m bgl
- 6No. trial pits excavated by machine to a depth of 2.7m bgl
- Soil samples for laboratory analysis was taken at numerous locations
- 3No. California bering ratio plate load tests were undertaken

Refer bEk Enviro Site Investigation section 3.2.2

Figure 2 - SI Testing Plan

3.0 Geotechnical

From the British Geological survey maps, the bedrock is expected to be mudstone, siltstone and sandstone formed in the carboniferous period. The superficial deposits are expected to be sand and gravel deposited during the quaternary period.

3.1 – Borehole Records

The following report sections summarises key findings from the bEk Enviro report.

The existing ground conditions comprise the following:

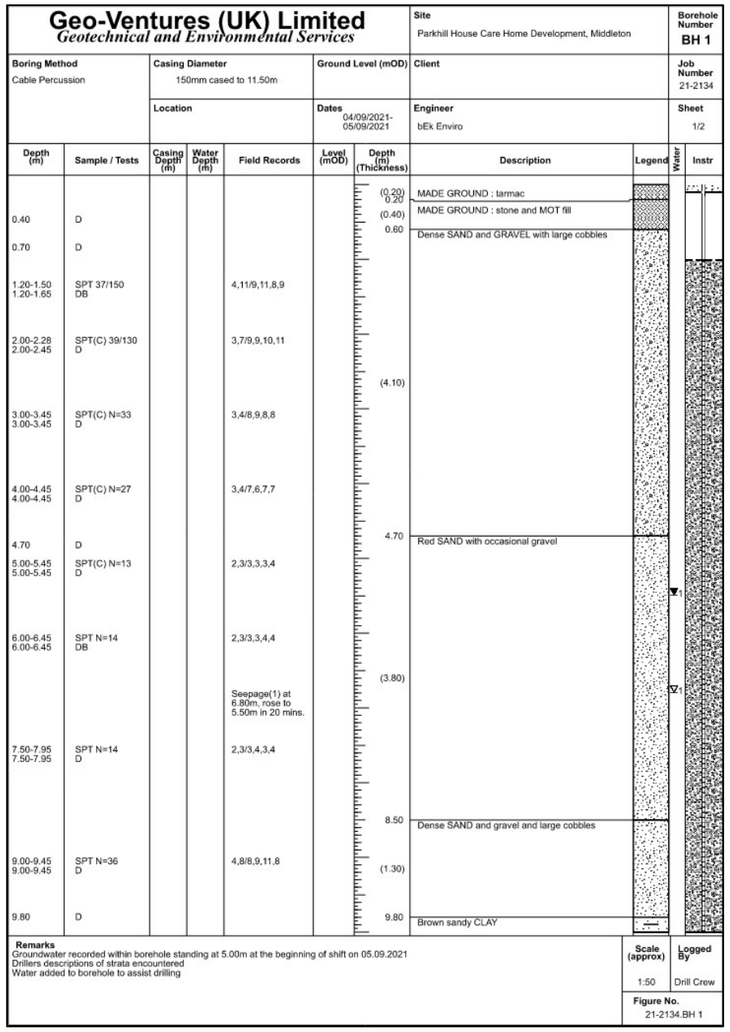
BH1:

- Imported made ground – 0.00 – 0.60m
- Sand and Gravel - 0.60 – 4.70m
- Sand - 4.70 – 9.80m
- Clay - 10.40 – 14.80m
- Sand and Gravel - 10.00 – 12.30m

BH2:

- Imported made ground – 0.00 – 0.70m
- Sand and Gravel - 0.70 – 5.60m
- Sand - 5.60 – 10.00m
- Clay - 10.00 – 11.20m
- Sand and Gravel - 11.20 – 12.45m

Made ground, sand and gravel were generally encountered in trial pits which suggests that the ground conditions are homogeneous across the site.



Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

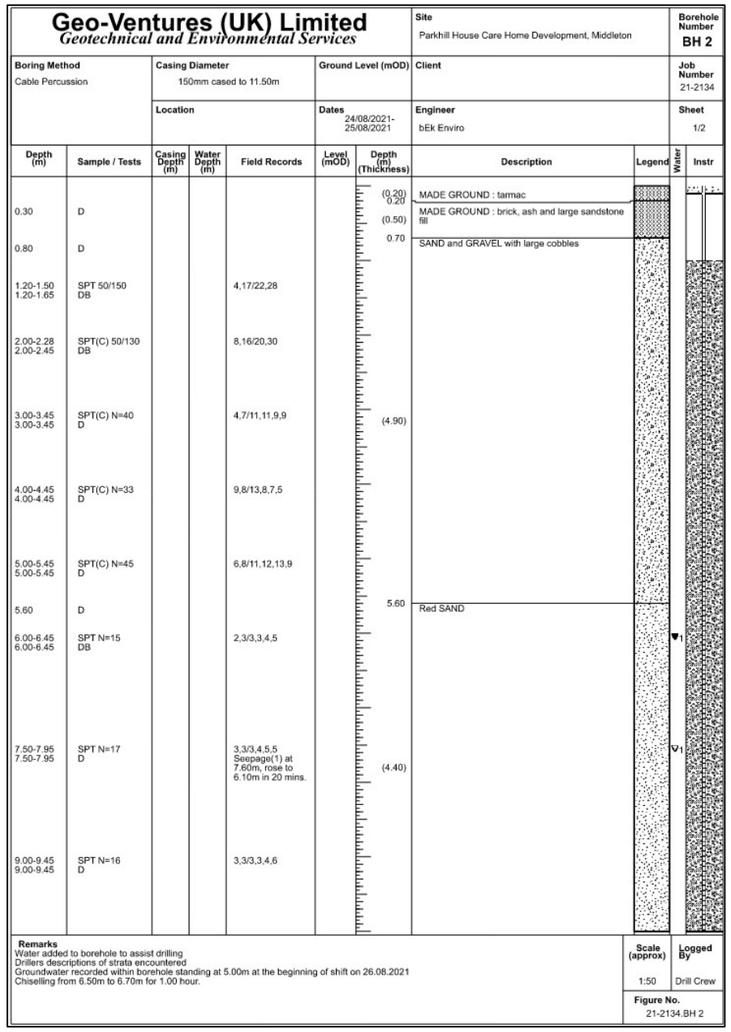
Site: Parkhill House Care Home Development, Middleton
Borehole Number: BH 1
Boring Method: Cable Percussion
Casing Diameter: 150mm cased to 11.50m
Ground Level (mOD):
Client:
Job Number: 21-2134
Location:
Dates: 04/09/2021-05/09/2021
Engineer: bEk Enviro
Sheet: 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.20) 0.20	MADE GROUND : tarmac			
0.40	D					(0.40) 0.60	MADE GROUND : stone and MOT fill			
0.70	D						Dense SAND and GRAVEL with large cobbles			
1.20-1.50 1.20-1.65	SPT 37/150 DB			4,11/9,11,8,9						
2.00-2.28 2.00-2.45	SPT(C) 39/130 D			3,7/9,9,10,11						
						(4.10)				
3.00-3.45 3.00-3.45	SPT(C) N=33 D			3,4/8,9,8,8						
4.00-4.45 4.00-4.45	SPT(C) N=27 D			3,4/7,6,7,7						
4.70	D					4.70	Red SAND with occasional gravel			
5.00-5.45 5.00-5.45	SPT(C) N=13 D			2,3/3,3,3,4						
6.00-6.45 6.00-6.45	SPT N=14 DB			2,3/3,3,4,4						
				Seepage(1) at 6.80m, rose to 5.50m in 20 mins.		(3.80)				
7.50-7.95 7.50-7.95	SPT N=14 D			2,3/3,4,3,4						
						8.50	Dense SAND and gravel and large cobbles			
9.00-9.45 9.00-9.45	SPT N=36 D			4,8/8,9,11,8		(1.30)				
9.80	D					9.80	Brown sandy CLAY			

Remarks
Groundwater recorded within borehole standing at 5.00m at the beginning of shift on 05.09.2021
Drillers descriptions of strata encountered
Water added to borehole to assist drilling

Scale (approx): 1:50
Logged By: Drill Crew
Figure No.: 21-2134.BH 1

Figure 3 - bEk Enviro Site Investigation Report – BH01



Geo-Ventures (UK) Limited
Geotechnical and Environmental Services

Site: Parkhill House Care Home Development, Middleton
Borehole Number: BH 2
Boring Method: Cable Percussion
Casing Diameter: 150mm cased to 11.50m
Ground Level (mOD):
Client:
Job Number: 21-2134
Location:
Dates: 24/08/2021-25/08/2021
Engineer: bEk Enviro
Sheet: 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.20) 0.20	MADE GROUND : tarmac			
0.30	D					(0.50) 0.70	MADE GROUND : brick, ash and large sandstone fill			
0.80	D						SAND and GRAVEL with large cobbles			
1.20-1.50 1.20-1.65	SPT 50/150 DB			4,17/22,28						
2.00-2.28 2.00-2.45	SPT(C) 50/130 DB			8,16/20,30						
3.00-3.45 3.00-3.45	SPT(C) N=40 D			4,7/11,11,9,9		(4.90)				
4.00-4.45 4.00-4.45	SPT(C) N=33 D			9,8/13,8,7,5						
5.00-5.45 5.00-5.45	SPT(C) N=45 D			6,8/11,12,13,9						
5.60	D					5.60	Red SAND			
6.00-6.45 6.00-6.45	SPT N=15 DB			2,3/3,3,4,5						
7.50-7.95 7.50-7.95	SPT N=17 D			3,3/3,4,5,5 Seepage(1) at 7.60m, rose to 6.10m in 20 mins.		(4.40)				
9.00-9.45 9.00-9.45	SPT N=16 D			3,3/3,3,4,6						

Remarks
Water added to borehole to assist drilling
Drillers descriptions of strata encountered
Groundwater recorded within borehole standing at 5.00m at the beginning of shift on 26.08.2021
Chiselling from 6.50m to 6.70m for 1.00 hour.

Scale (approx): 1:50
Logged By: Drill Crew
Figure No.: 21-2134.BH 2

Figure 4 - bEk Enviro Site Investigation Report – BH02

3.2 - Building Foundations

The bEk Enviro report provides recommendations for the proposed building foundations.

A safe bearing capacity of 150kN/m^2 is allowed onto dense sand and gravel located below the made ground layer at 0.60 – 0.70m below ground level.

The report suggests that due to the high line loads / point loads arising from the care home foundations, strip foundations will be too wide to be practical. As such, the report recommends that a piled solution should be adopted.

The housing dwellings will produce smaller loads to the foundation and due to the high safe bearing capacity at approximately 600mm below ground level strip foundations have been recommended in within the report.

3.3 – Car Park & Road Construction

The bEk Enviro report recommends that the road construction of the estate roads and car parking should be 150mm Type 1 over a 400mm 6F2 capping. Surfacing would be a Category 1 construction layer, formed of 70mm road base, 70mm binder course and a wearing course of 45mm. This is iline with expected buildups for similar CBR values.

Refer WRD Commentary on these points in Section 7 of this report.

4.0 Geo-environmental

4.1 - Ground Gas

Exceeding levels of CO2 gas was encountered during gas testing on site during Site Investigation works. Gas flows are at a sufficient level to warrant the classification of site as 'Characteristic Situation 2'.

A gas protection score of 3.5 is to be achieved to comply with the Remediation Method Statement.

4.2 - Soil Contamination

Soil and groundwater samples were assessed by bEk Enviro to determine their impact human health. Numerous samples exceeded the assessment criteria value and thus failed.

Asbestos was encountered in one window sample: within TP at 0.026%. The risk was categorised as low-medium risk and the work within made ground soils will be classed as a minimum non-notifiable non-licenced work.

bEk Enviro recommend that an asbestos management plan should be put in place prior to any groundworks that are to take place.

To mitigate the potential risks bEk recommend that all soft landscape should be capped with 600mm of clean suitable soil.

4.3 - Groundwater

Elevated levels of Zinc can be observed within the bEk enviro SI report however due to the marginal nature and low concentrations of other contaminants the groundwater within the site the risk to controlled water is not considered any further.

Therefore the site does not pose a potential risk to controlled waters.

Refer WRD commentary on these points in Section 7 of this report.

Figure 5 - Typical foundation make up with split level

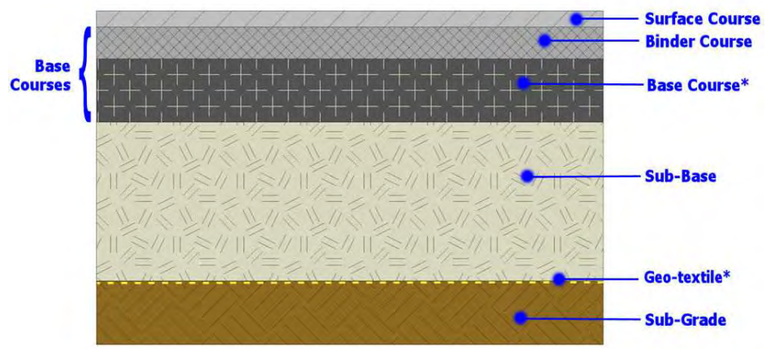


Figure 6 - Typical road construction

5.0 Flood Risk

A detailed flood risk assessment has been carried out by Betts Hydro to support a full planning application. No historical flooding has been experienced on the given site. The site is low risk of flooding from fluvial/tidal flooding but a higher risk of surface water flooding. The existing site is largely hardstanding which attributes to the surface water flooding, through the development of the site the hard standing area will be reduced as well as adopting mitigating measures which would overall reduce the risk of surface water flooding.

Ther site generally experiences very low levels of surface water flooding, however there are local areas which have a medium/high level of surface water flooding. The site would need to achieve betterment for overall surface water flooding, this can be achieved by the use of SUDS such as rain gardens, permeable paving etc.

There are no watercourses/waterbodies nearby which the surface water discharge can be directed to with the nearest being 190m away towards the South.

Figure 7 - EA Flood Risk Map (FRA)

Figure 8 - Surface Water Flooding to Site (FRA)

6.0 Drainage Design

A drainage strategy sketch has been provided by Betts Hydro dated 15/05/25. This shows the preliminary design intent of the proposals and should not be taken as a detailed drainage design.

The design intent is two separate systems of public foul water drainage and surface water drainage. The public foul water drainage would discharge onto the existing combined sewer on the intersection between Manchester Old Road and Alkrington Park Road. The public surface water drainage would travel further down Alkrington Park Road and connect to the existing surface water sewer. It is expected that both systems will discharge via gravity although invert levels of drainage have not been provided.

Surface water on impermeable surfaces should be treated on site. Treatment is provided to the dwellings via permeable parking bays with stone filtration beds below. The permeable bays will be likely designed to infiltrate the sand and gravel layers present approximately 600mm below ground level.

Attenuation is provided via below ground attenuation crates, identified to the west of the building, with additional locations that may be required as indicated on plan by pink dots to the North East and South East of the site.

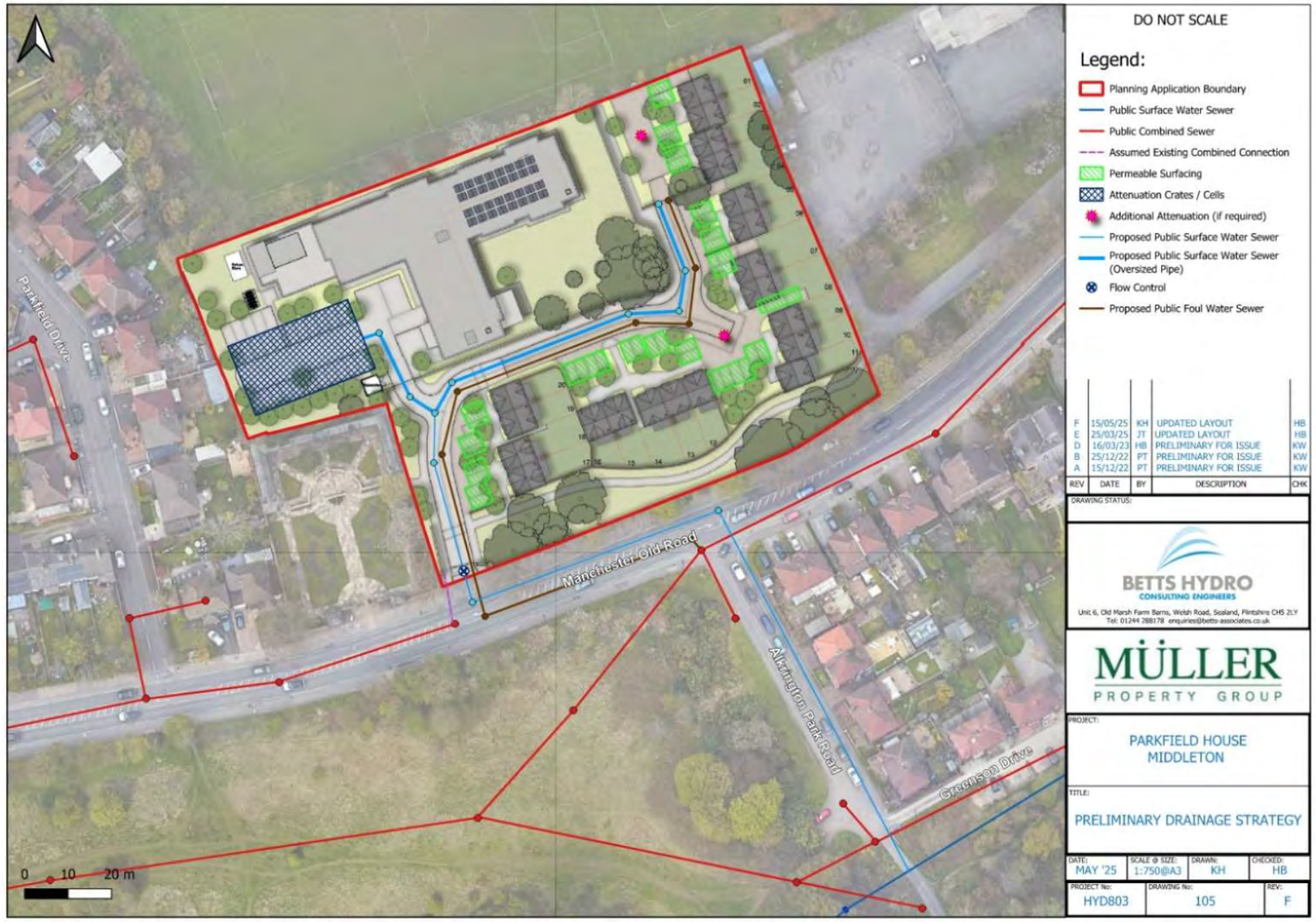


Figure 9 – Preliminary Drainage Strategy (Betts Hydro)

7.0 Civil & Structural Engineering Appraisal

The findings of the bEk Enviro report are sufficient to allow design to proceed to subsequent RIBA Stages.

The following key points are noted from a Civil and Structural Engineering perspective:

7.1 – Building Foundations

Care Home

We consider that three options are available for the care home foundations:

1. Spread foundations
2. Piled foundations
3. Ground improvement

1. Spread Foundations: Our preliminary assessment is that foundation loads in the region of 200kN/m are expected below internal strip foundations. Therefore, with a safe bearing pressure of 150 kN/m^2 recommended by the SI report, foundations widths up to 1.4m may be required. This may be deemed impractical due to the volume of concrete and reinforcement provision required.

2. Piled foundations: Based on the impracticality of shallow spread foundations, piled foundations with reinforced concrete ground beams should be considered.

Bored or driven piles can be considered. The selection of pile type is subject to consultation with a piling specialist. In our experience, driven piling would be the most appropriate solution due to their efficiency, speed of installation. Steel or precast driven piles can be adopted.

3. Ground improvement: We have contacted specialists to assess the viability of ground improvement techniques for the site.

A response is provided below:

Ideally, we would look to promote our Vibro Stone Column (VSC) solution on this site. However, bearing pressures above 200 kPa can be problematic for stone columns, as at such pressure there is a high risk that the column will fail due to excessive load causing bulging and volume loss within the column. At loads of 250kN/lm, you'd require a strip footing width of circa 1,300 mm to limit bearing pressures to 200 kPa. This is fairly wide and may not be practical.

To avoid the use of wide footings, we can switch to Controlled Modulus Columns (CMC), which can work up to bearing pressure of 350 kPa. As such, you can use a 750 mm wide strip footing with this solution.

In either event, ground improvement is definitely feasible on this site. The main consideration will be the cost difference between the cheaper VSC solution but with wider footings versus the more expensive CMC solution but with narrower footings.

Note that higher loads were provided to Vibro designer. For a safe bearing pressure of 200 kN/m2, 1m wide foundations can be deemed reasonable.

Summary

Piled and ground improvement solutions should be considered as viable options. A cost and programme comparison should be undertaken by the developer to determine the most appropriate foundation solution.

The foundation design should be confirmed by a competent structural engineer at the detailed design stage.

$2\frac{1}{2}$/3 Storey dwellings

Shallow strip foundations, bearing onto dense sands and gravels at approx. 600mm below ground level, would be an appropriate foundation solution for this site. Trench fill foundations can be adopted, utilising unreinforced mass fill concrete.

7.2 - Floor Slabs

Typically, cast in situ ground floor slabs are adopted throughout the UK, designed either suspended or ground bearing, based on ground conditions. Since a thick layer of made ground is present throughout the site, it is recommended that a suspended floor slab is adopted. The following options could be considered:

- Suspended precast concrete slab with vented solum below slab, supported on underbuild blockwork walls.
- Beam and block floor with vented solum below slab, supported on underbuild blockwork walls.
- Creagh Spantherm slab with vented solum below slab, supported on underbuild blockwork walls.
- Cast in-situ concrete slab, supported on underbuild blockwork walls, spanning in two directions in bays approximately 6m x 6m.

Slab options which utilise a vented solum will easily facilitate gas ventilation detailing and should be considered.

Detailed design development should be undertaken with the project architect to achieve the most suitable solution to suit site conditions.

Ground bearing floor slabs could be adopted if suitable plate bearing tests can be undertaken to piling mat / engineered fill material.

The design of floor slabs should be undertaken by a suitably qualified structural engineer at the detailed design stage.

Figure 10 - Driven piling arrangement

Figure 11 - Vibro stone column installation

Figure 12 - Beam and block floor

7.3 - Superstructure

In our experience, load-bearing masonry construction is typical for care homes of this nature, with the following construction:

- External 140mm thick blockwork loadbearing walls
- Internal 215mm thick blockwork loadbearing walls or reduced wall thickness with appropriate header plates to enable suitable bearing of the floor slabs above**.**
- Precast upper floor slabs, approximately 200mm thick
- Timber roof trusses spanning front to back, utilizing internal walls for mid-support.

Local steelwork may be required to support the floor construction and/or loadbearing walls above which may not continue to the foundations.

Stability to the structure will be provided by shear wall action of masonry walls transferred via a floor diaphragm.

Alternative methods of construction include:

- Steelwork frame with composite floors
- Steelwork frame with precast concrete floors
- Light gauge steel frame with composite deck floors
- Timber kit frame with timber floor joists

Several options are available for the construction of $2\frac{1}{2}/3$ storey dwellings, such as timber kit construction or masonry construction.

The roof would be of timber truss construction spanning between loadbearing walls at the extents of the units.

Figure 13 - Indicative masonry construction

Figure 14 - Typical structural arrangement for care home

7.4 - Gas Protection

The site is categorised as a Characteristic Situation 2, which requires a score of 3.5 to be met, according to the recommendations of BS8485:2015+A1:2019.

According to the recommendations of Table 7, a score of 3.5/4.5 can be achieved by the following options:

- Adopting a passively vented sub-floor void and a standard gas resistant DPM.
- Adopting a passive ventilation layer (Corek Ventform or similar), gas resistant DPM and reinforced concrete ground floor slab.

All penetrations through the slab should be adequately taped and sealed according to best practice.

The gas protection system should be verified by an independent body as part of the Remediation Method Statement.

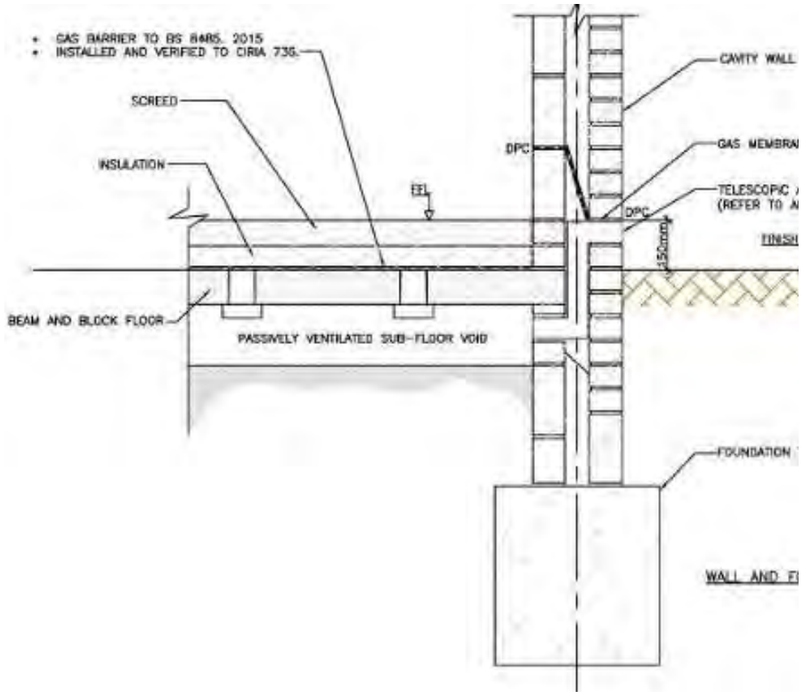


Figure 15 - Gas ventilation for suspended beam and block floor

7.5 – Roads & Car Parking

The recommendations of the bEk Enviro reports are acceptable, with adoption of 150mm type 1 fill and 400mm 6F2 capping layer. For a category 1 construction layer a road formed from 70mm road base, 70mm binder course and a wearing course of 45mm. Other options such as pre-loading the existing ground with fill material to induce settlement and the use of geogrids could reduce the depth of required engineering fill.

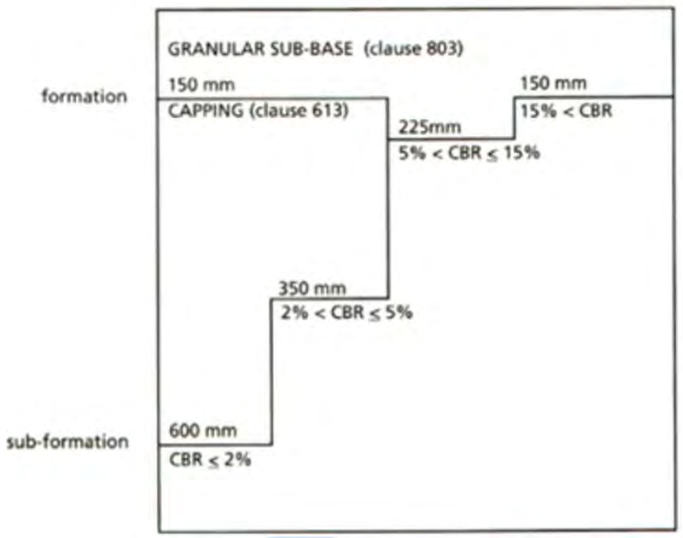


Figure 16 - Road sub-base according to CBR values

7.6 - Contamination

The bEk Enviro report recommends that a 600mm thick layer of clean environmental capping is installed to all soft landscaping areas. This is deemed appropriate. Clean environmental capping should be verified within the Remediation Method Statement, with appropriate testing. Overall there is a net export of soil on site. The contamination can have further in depth surveys enabling locating the extent of the contamination. This will allow for local soft landscaping areas to be overlayed with clean capping in local areas. Due to the current 600mm requirement, soft landscaping areas on site would require 600mm excavation and filling.

The report noted that asbestos contamination is encountered at WS3. WAC testing should be undertaken locally to any materials being exported from site to verify full extents.

There are no proposed remedial actions for groundwater on site.

Full details of the above should be encapsulated in the Remediation Method Statement by the project Geo-Environmental consultant during the detailed design stage.

Figure 17 - WAC testing

7.7 - Drainage

The initial drainage strategy provided by Betts Hydro utilises separate public foul and surface water systems.

Both systems are gravity fed and follow the natural sloping topography of the site. The proposed systems connect to the existing public mains drainage systems. The Topographic, CCTV & Underground Utility Survey indicates that the invert levels of the existing manholes are at a suitable depth for gravity fed connections.

SUDS systems have been utilised for treatment and attenuation of surface water. Attenuation crates have been indicated at one location on site with another two possible site locations. Attenuation in conjuction with permeable paving will reduce the overall surface water as well reducing the peak flow that will be transported to the existing public sewers. The surface water discharge from the site shall be limited to greenfield runoff rate.

The site catchment will need to be analysed further to determine the flow rates and accurately determine the level of attenuation and treatment needed for the finalised layout.

Figure 18 - Below ground attenuation

7.8 – Flood risk

Due to the low risk level associated with the site, minimal flood risk mitigation measures are required. The flood risk report by Betts Hydro have taken an appropriate conservative approach to the mitigation measures.

To mitigate the risk from flooding the structures within flooding zone 1 should be raised by 150mm above the existing ground level ensuring surface water and fluvial flooding will not affect the structure.

The surface water runoff generated by the proposed site should be less than the existing site to ensure that neighbouring properties are not affected by the development.

7.9 - Piling Platform

It is expected that a platform may be required up to 600mm deep. The piling platform should be formed of clean, inert 6F2 material.

The depth of the platform could be reduced following the Contractor undertaking a detailed design and plate load tests in the vicinity of the proposed piling rig movements.

The Piling platform design is the responsibility of the main Contractor.

7.10 - Ancillary Structures

Ancillary structures such as bin stores, bike stores and signage poles should be situated on engineered fill as per road construction build up.

Detailed of ancillary structures to be provided by the project Architect at the relevant project stage. Lightweight structures should be considered where possible.

7.11 - Retaining Walls

Where change in levels may dictate the use of retaining walls. Due to the small depth of cutting expected on site, retaining walls may be of blockwork construction on strip foundations. This is standard for a housing development plot where the site is slightly sloping. It is not anticipated that piled or precast retaining walls would be required but would require detailed analysis at a further stage.

7.12 - Levels

From the West to The East of the care home building there is a level difference of approximately 500mm. This may require the use of a brick retaining wall utilised in the underbuild of the structure.

10219 /KH/SB/001

09th May 2023

Alex Loumidis
Muller Property Group
Crewe Road
Alsager
Cheshire
ST7 2GP

Ref: Demolition of Parkfield House, Middleton.

Dear Alex,

We thank you for your enquiry relating to the above and the opportunity to quote for the works.

1. Act as principle contractor and providing adequate welfare and supervision for the demolition phase of the works 12 weeks.
2. Soft strip and waste removal of all arisings to a licensed waste facility.
3. Removal of all none licensed Asbestos floor coverings
4. Soft strip and mechanical demolition of the entire building down to ground level.
5. Break out all slabs and foundations inclusive of the basement and its associated slabs and footings.
6. Crush all suitable material to a 6f2 specification, backfill basement void in layers to an agreed compaction. All surplus 6f2 material to be stockpiled in an agreed location with the client for future use during the development phase
7. Hand back to the client for re-development.

Total Cost of Soft strip and demolition works £188,750 + vat if applicable.

Budget cost for associated licensed asbestos removal = £10,000 + Vat if applicable

Exclusions:

- Service disconnections by client

We hope that this is suitable for your requirements, but should you require any further information, please do not hesitate to contact the undersigned.

Yours sincerely

Keiran Hatcher,

Demolition Contracts Director
For and on behalf of
Nick Brookes Demolition Ltd.
T: 01829 260 687 | **M**: 07900911698

Appendix 5: Sensitivity Analysis

MIDDLETON - Parkfield House
Muller Property Group

Table of Land Cost and Profit on GDV%

	Construction: Rate /m²						
Sales: Rate /m²	-15.000%	-10.000%	-5.000%	0.000%	+5.000%	+10.000%	+15.000%
	1,250.35 /m²	1,323.90 /m²	1,397.45 /m²	1,471.00 /m²	1,544.55 /m²	1,618.10 /m²	1,691.65 /m²
-15.000% 2,913.18 /m²	(£1,741,704) 18.500%	(£1,558,454) 18.500%	(£1,375,204) 18.500%	(£1,191,954) 18.500%	(£1,008,704) 18.500%	(£825,454) 18.500%	(£642,204) 18.500%
-10.000% 3,084.54 /m²	(£1,971,969) 18.500%	(£1,788,719) 18.500%	(£1,605,469) 18.500%	(£1,422,219) 18.500%	(£1,238,970) 18.500%	(£1,055,719) 18.500%	(£872,469) 18.500%
-5.000% 3,255.91 /m²	(£2,202,234) 18.500%	(£2,018,984) 18.500%	(£1,835,734) 18.500%	(£1,652,484) 18.500%	(£1,469,234) 18.500%	(£1,285,986) 18.500%	(£1,102,734) 18.500%
0.000% 3,427.27 /m²	(£2,432,499) 18.500%	(£2,249,249) 18.500%	(£2,065,999) 18.500%	(£1,882,749) 18.500%	(£1,699,499) 18.500%	(£1,516,249) 18.500%	(£1,333,001) 18.500%
+5.000% 3,598.63 /m²	(£2,662,764) 18.500%	(£2,479,514) 18.500%	(£2,296,264) 18.500%	(£2,113,014) 18.500%	(£1,929,764) 18.500%	(£1,746,514) 18.500%	(£1,563,264) 18.500%
+10.000% 3,770.00 /m²	(£2,893,030) 18.500%	(£2,709,780) 18.500%	(£2,526,530) 18.500%	(£2,343,280) 18.500%	(£2,160,030) 18.500%	(£1,976,780) 18.500%	(£1,793,530) 18.500%
+15.000% 3,941.36 /m²	(£3,123,295) 18.500%	(£2,940,045) 18.500%	(£2,756,795) 18.500%	(£2,573,545) 18.500%	(£2,390,295) 18.500%	(£2,207,045) 18.500%	(£2,023,795) 18.500%

Sensitivity Analysis : Assumptions for Calculation

Construction: Rate /m²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
4 Bed Houses	1	£1,471.00	3.00 Up & Down

Sales: Rate /m²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
4 Bed Houses	1	£3,427.27	3.00 Up & Down

Alder King Property Consultants
Pembroke House, 15 Pembroke Road, Clifton, Bristol BS8 3BA