Reading Station Park, Reading RG1 8AL

Independent Viability Review

Prepared on behalf of Reading Borough Council

10th February 2022

Planning Reference: 200328

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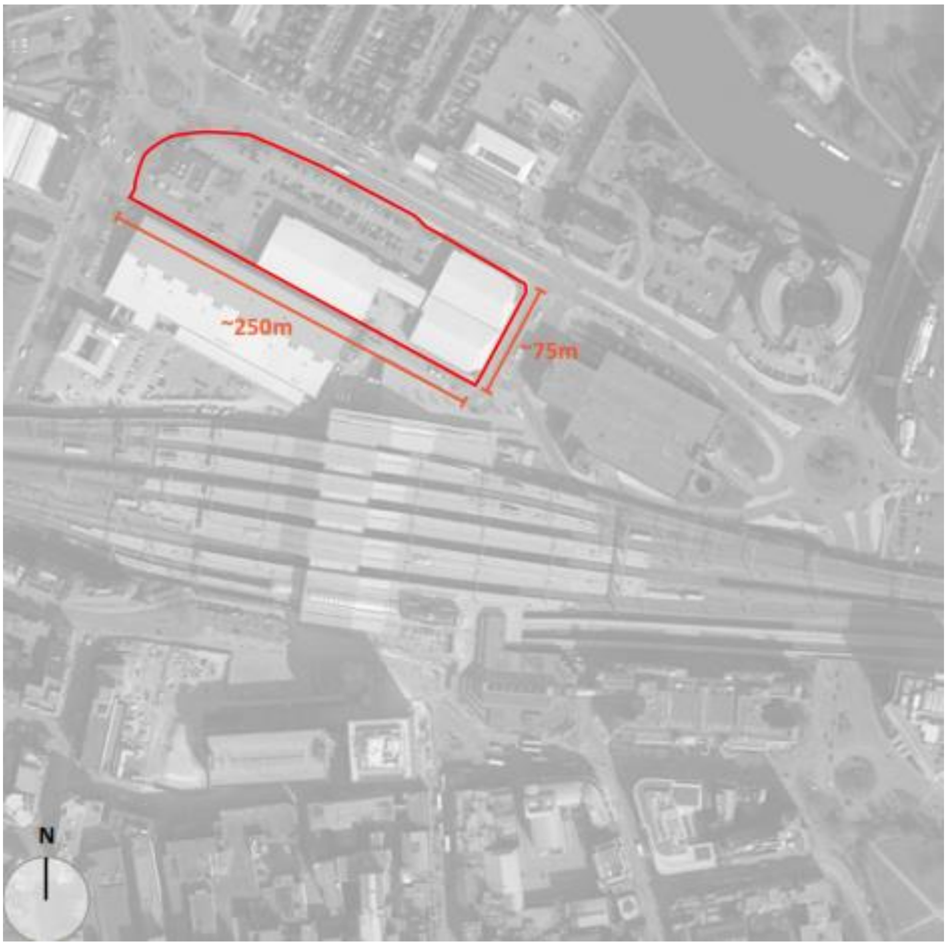
1.0 INTRODUCTION

1.1 BPS Chartered Surveyors have been instructed by Reading Borough Council ('the Council') to undertake a review of a Financial Viability Assessment (FVA) prepared by Savills on behalf of Aviva Investors ('the Applicant') in connection with an outline planning application for the redevelopment of the above site.

1.2 The site currently comprises a 1.8 hectare retail warehouse park, currently arranged in 5 units, one of which is vacant. The remaining 4 units are let on terms expiring between 2023 and 2029.

1.3 The location is predominantly mixed in nature and the site is located on a corner plot bordered by the A329, Reading Station Car Park and the former Royal Mail delivery depot which forms another development site. The site is not located in a conservation area nor is it listed.

1.4 We include a plan outlining the development site in red, taken from the Design and Access Statement:



1.5 According to the FVA, the proposals are for:

'Outline planning permission with the details of access, appearance, landscaping, layout and scale reserved for later determination. A demolition phase and phased redevelopment (each phase being an independent act of development) comprising a flexible mix of the following uses: Residential (Class C3 and including PRS); Offices (Use Class B1(a); development in Use Classes A1, A2, A3 (retail), A4 (public house),

A5 (takeaway), D1 and D2 (community and Leisure); car parking; provision of new plant and renewable energy equipment; creation of servicing areas and provision of associated services, including waste, refuse, cycle storage and lighting; and for the laying out of the buildings; routes and open spaces within the development; and all associated works and operations including but not limited to: demolition; earthworks; provision of attenuation infrastructure; engineering operations.'

1.6 The basis of our review is the Financial Viability Assessment report prepared by Savills, dated September 2021, which presented a scenario based analysis of the proposed scheme. Their report concluded that the scheme currently shows a deficit of £57m and £40m, for Scenario 1 and Scenario 2 respectively, and therefore no affordable housing can viably be offered.

1.7 We have downloaded documents available on Reading Council's planning website.

1.8 We have received live versions of the Argus appraisals included in the report.

1.9 We have assessed the cost and value inputs within the financial appraisal in order to determine whether the scheme can viably make any affordable housing contributions.

1.10 We have searched the Reading Council's planning website and have identified one planning application (no 191936), dated December 2019, with a request for a scoping opinion, relating to the site.

1.11 A Land Registry search shows that the applicant currently owns the property. We have no details of the purchase date or a price paid for the land.

1.12 The advice set out in this report is provided in the context of negotiating planning obligations and therefore in accordance with PS1 of the RICS Valuation – Global Standards 2020, the provisions of VPS1–5 are not of mandatory application. Accordingly, this report should not be relied upon as a Red Book Valuation. The Valuation Date for this Viability Review is the date of this report, as stated on the title page. This Viability Review has been undertaken in accordance with the Terms & Conditions provided to the Council and with any associated Letters of Engagement and should only be viewed by those parties that have been authorised to do so by the Council.

1.13 This Viability Review adheres to the RICS Professional Statement on Financial Viability in Planning (published May 2019). In accordance with this Statement, we refer you to our standard terms and conditions which incorporate details of our Quality Standards Control & Statement on Limitation of Liability/ Publication.

2.0 CONCLUSIONS AND RECOMMENDATIONS

2.1 We have reviewed the Financial Viability Assessment report prepared by Savills on behalf of the applicant which concludes that the proposed scheme generates a negative residual value of -£21.8m and -£4.7m in the first and second scenario respectively, which represents a deficit of £57.5m and £40m when compared to their proposed benchmark land value of £35.7m.

2.2 On this basis the scheme cannot provide any affordable housing contribution and leads to serious questioning of the scheme's deliverability with deficits at the suggested level. We note that Savills' analysis reflects a developer profit of 3.30%, which is somewhat below the Savills' target developer profit of 19.72% and that the developer proposes to proceed on this basis.

Benchmark Land Value

2.3 Savills have approached the Benchmark Land Value on an Existing Use Value (EUV) basis. They have relied upon an external EUV report which has not been made available to us and we are therefore unable to comment upon its contents. Savills have added a Landowner Premium of 25% and conclude that the BLV is £35.7m.

2.4 Having taken the above into consideration, and in the light of the minimal information we have received, we consider the Benchmark Land Value should be £21,357,600. In the event that current rent and operating costs are provided we are willing to review this figure further.

Development Value

2.5 The outline planning application indicates that the proposed scheme can be delivered in a range of forms. In their FVA Savills propose three scenarios (Scenario 1, Scenario 2 and a Parameter scheme) to demonstrate possible outcomes of different unit mixes. The first scenario is of a predominantly residential use (866 residential units and 53,233 sq ft ancillary commercial space); the second scenario combines residential and office uses (627 residential units, 200,102 sq ft office and 40,889 sq ft ancillary commercial). The Parameter scheme is another residential option which introduces different unit mix under scenario one (1,000 residential units and 53,233 sf of ancillary commercial).

2.6 We are of an opinion that the residential values in each scenario are as follows:

Scenario 1 & 2

Size	Average BPS GDV/ unit	Total BPS GDV (Scenario 1)	Total Residential BPS GDV (Scenario 2)	% Change to Savills
Studio	£270,000	£30,240,000	£20,250,000	0%
1B2P	£320,000	£86,960,000	£57,920,000	2%
1B2P(w)	£330,000	£9,900,000	£9,900,000	0%
2B3P	£400,000	£13,695,000	£5,395,000	6%
2B3P(w)	£415,000	£5,160,000	£5,160,000	6%
2B4P	£430,000	£132,440,000	£95,920,000	5%
2B4P(w)	£450,000	£8,100,000	£8,100,000	1%
3B5P	£500,000	£41,000,000	£40,000,000	3%
Total		**£329,495,000**	**£242,645,000**	**3%**

Parameter scheme

Unit Type	Average GDV/unit (BPS)	Average GDV psf (BPS)	Total GDV (BPS)	% change to Savills
Studio	£270,000	£622	£67,500,000	2%
1Bed	£320,974	£584	£112,341,000	3%
2Bed	£438,898	£593	£161,147,000	6%
3Bed	£500,000	£531	£16,000,000	4%
Total			**£356,987,000**	**4%**

2.7 Noting the Government's restated intentions to introduce legislation reforming current leasehold practices which would reduce ground rents to a nominal sum, we have excluded capitalised ground rental income from our appraisal. This is supported by limitations from many mortgage lenders lending on new build properties with such provisions and by the help to buy scheme not being eligible to apartments subject to ground rents.

2.8 We are of an opinion that no additional revenue for the car parking provision should be included at this stage.

2.9 We have reviewed the proposed value for the commercial space and we find the values and yield levels proposed by Savills, of £25 psf with 5.5% yield for retail with yield and £35 psf with 7% yield for office space, to be reasonable. The GDV of the commercial space for the first and second scenarios equates to £17,176,997 and £139,625,460 respectively.

Development Costs

2.10 Our Cost Consultant, Neil Powling has reviewed the Cost Plan for Scenarios 1 and 2 prepared by Cast, dated 08/09/2021, and concludes that:

'Based on the results in the tables at 3.12 and 3.14 we consider the Applicant's costs for all sections except the car park to be reasonable. We suggest a new and more detailed estimate for the car park is prepared when more detailed design information is available.'

2.11 Our Cost Consultant has been unable to review the costs presented for the Parameter scheme due to the lack of cost and scheme information. We have adopted costs used for Scenario 1 for interim analysis of the Parameter scheme, although our figures are subject to a full cost review.

Recommendations

2.12 We have been provided with a live version of the Argus appraisals included in Savills report to which we have applied our amendments which include:

- Assessment of the proposals by means of a single Argus appraisal for each of the three scenarios.
- Amendment of the appraisals to reflect our opinion of BLV.

- The Benchmark Land Value has been inputted as a fixed land value so that land interest charges are not over or understated. Profit has been included as a development cost timed to the end of development. This results in the appraisal outputting a profit above profit targets representing either the development surplus or deficit.

- Residential GDV has been increased to reflect our analysis below.

- Finance costs have been reduced to 6.50%.

- Build costs have been amended to reflect the Cast reports provided and costs have been increased on a psf GIA basis from Scenario 1 for the Parameter scheme.

- Residential sales agent fees and sales legal fees have been adjusted to reflect our comments below.

- We have allowed a longer average sales period for the Parameter Scenario.

100% Private Residential/Commercial schemes	Savills			BPS		
	Scenario 1 866 units	Scenario 2 627 units	Parameter Scenario 1,000 units	Proposed Scenario 1 866 units	Scenario 2 627 units	Parameter Scenario 1,000 units
EUV	£28,525,000	£28,525,000	£28,525,000	£17,798,000	£17,798,000	£17,798,000
LP	25%	25%	25%	20%	20%	20%
Abnormal Costs	-	-	-	-	-	-
BLV	£35,700,000	£35,700,000	£35,700,000	£21,357,600	£21,357,600	£21,357,600
GDV	£335,441,997	£372,894,460	£358,166,997	£346,671,869	£382,270,062	£373,758,992
Developer's Profit	19.72%	18.13%	19.82%	19.75%	18.17%	19.77%
Surplus/ Deficit	**-£57,500,000**	**-£40,400,000**	**Deficit** (not reported)	**-£38,915,531**	**-£8,234,864**	**-£11,820,806**

2.13 We conclude that at a target profit of 19.75%, Scenario 1 results in a deficit of £38,915,531. We therefore conclude that the scheme would not be able to contribute towards or provide some affordable housing.

2.14 Scenario 2 and the Parameter Scenario result in reduced levels of deficit, but still return deficits of £8,234,864 and £11,820,806 respectively and are therefore also unviable.

2.15 We have undertaken sensitivity analysis to test the impact of changes to Residential GDV and build costs. We include our sensitivity analysis in Appendix 2. Our analysis shows that the scheme would need to see both a decrease in costs of 5.00% and an increase in revenue of 5.00% in order to return a surplus. We therefore recommend that the scheme is subject to review.

2.16 We note that the Savills analysis of Scenario 1 calculates an actual net profit of £11,054,384 (3.30%), which is significantly below their target profit of 19.72%, although we note that the Applicant still wishes to proceed with the scheme.

2.17 We consider the value and continued trading potential of the existing retail based development on site is open to question. It is however apparent that a number of lease terms are relatively close to expiry and there is a void unit. We consider it likely that a prudent land owner would wish to consider all their options as part of an approach to maintain and maximise the value of their investment.

2.18 Given the above consideration we consider that the timing and nature of any development which may come forward on this site to be subject to significant scope for further refinement. Given this considerable ambiguity and the scale of the apparent deficit we consider that any consent should be subject to further reviews of viability. More specifically:

A) a pre-implementation review triggered by the submission of Reserved Matter Approval. This point would provide clarity as to the form of development thereby its costs and values. Furthermore it would also assist in narrowing the timing considerations. This review should be informed by a relevant benchmark land value assessment, noting we are unable to confirm a definitive figure at this point in time together with a clear profit target. Any surplus identified by this review should be applied 100% to the delivery of on site affordable housing. This is consistent with practices undertaken by other LPA's ,most notably the GLA.

B) Noting that the development has been identified in substantial phases it may be appropriate to consider a mid point review when actual costs and values are potentially available from phase 1 but before the RMA later phases have been determined. This would allow further scope for assessing scheme viability and provide a further opportunity for onsite affordable delivery. Typically we would expect a 50/50 division of any surplus identified at this stage.

C) Consistent with the Council's normal practices we would expect a final outturn review to be undertaken which reviews the costs and largely achieved values generated by the scheme. the trigger for this review would typically be at a point where the unsold balance of the scheme exceeds the scale of any deferred contribution. There are available mechanisms for a quick review to allow more of the development to be completed and sold before this review is formally undertaken which should also be considered. Division of any surplus under these arrangement would again normally be around a 50/50 split but with any surplus being provided in the form a a payment in lieu

All three reviews should be undertaken on an open book basis.

3.0 PRINCIPLES OF VIABILITY ASSESEMENT

3.1 Development appraisals work to derive a residual value. This approach can be represented by the formula below:

Gross Development Value – Development Costs (including Developer's Profit) = Residual Value

3.2 The residual value is then compared to a benchmark land value. Existing Use Value (EUV) and Alternative Use Value (AUV) are standard recognised approaches for establishing a land value as they help highlight the apparent differences between the values of the site without the benefit of the consent sought.

3.3 The rationale for comparing the scheme residual value with an appropriate benchmark is to identify whether it can generate sufficient money to pay a realistic price for the land whilst providing a normal level of profit for the developer. In the event that the scheme shows a deficit when compared to the benchmark figure the scheme is said to be in deficit and as such would be unlikely to proceed.

3.4 Development appraisals can also be constructed to include a fixed land value and fixed profit targets. If an appropriate benchmark is included as a fixed land value within a development appraisal this allows for interest to be more accurately calculated on the Benchmark Land Value, rather than on the output residual value. By including fixed profit targets as a cost within the appraisal, programmed to the end of development so as not to attract interest payments, the output represents a ‘super’ profit. This is the profit above target levels generated by the scheme which represents the surplus available towards planning obligations

3.5 This Viability Review report adheres to the RICS Professional Statement on Financial Viability in Planning: Conduct and Reporting (published May 2019). In accordance with this Statement, Section 8 below incorporates details of our Quality Standards Control & Statement on Limitation of Liability/ Publication. This report has been prepared according to the Professional Statement’s requirement for objectivity and impartiality, without interference and with reference to all appropriate available sources of information. Where information has not been obtainable, we have stated this expressly in the body of the report.

4.0 BENCHMARK LAND VALUE

Viability Benchmarking

4.1 Planning Policy Guidance, published May 2019, states:

Benchmark land value should:

- *be based on existing use value*
- *allow for a premium to landowners (including equity resulting from those building their own homes)*
- *reflect the implications of abnormal costs; site-specific infrastructure costs; and professional site fees and*

Viability assessments should be undertaken using benchmark land values derived in accordance with this guidance. Existing use value should be informed by market evidence of current uses, costs and values. Market evidence can also be used as a cross-check of benchmark land value but should not be used in place of benchmark land value. These 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 evidence should be based on developments which are fully compliant with emerging or up to date plan policies, including affordable housing requirements at the relevant levels set out in the plan. Where this evidence is not available plan makers and applicants should identify and evidence any adjustments to reflect the cost of policy compliance. This is so that historic benchmark land values of non-policy compliant developments are not used to inflate values over time.

[…] Where viability assessment is used to inform decision making under no circumstances will the price paid for land be a relevant justification for failing to accord with relevant policies in the plan. Local authorities can request data on the price paid for land (or the price expected to be paid through an option agreement).

4.2 The NPPF recognises the need to provide both land owners and developers with a competitive return. In relation to land owners this is to encourage land owners to release land for development. This is set out in PPG as follows:

To define land value for any viability assessment, a benchmark land value should be established on the basis of 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 fully comply with policy requirements. Landowners and site purchasers should consider policy requirements when agreeing land transactions. This approach is often called 'existing use value plus' (EUV+).

4.3 The RICS Guidance Note 'Assessing viability in planning under the National Planning Policy Framework 2019 for England', published March 2021, supports the NPPG's definition of Benchmark Land Value.

4.4 NPPG further defines EUV as follows:

Existing use value (EUV) is the first component of calculating benchmark land value. EUV is the value of the land in its existing use. Existing use value is not the price paid and should disregard hope value. Existing use values will vary depending on the type of site and development types. 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).

4.5 Guidance indicates that the sale of any premium should reflect the circumstances of the land owner. We are of the view that where sites represent an ongoing liability to a land owner and the only means of either ending this liability or maximising site value is through securing a planning consent this should be a relevant factor when considering whether a premium is applicable.

4.6 While EUV is the primary approach to defining BLV, in some circumstances an Alternative Use Value approach can be adopted. This is the value of the land for a use other than its existing use. NPPG outlines:

If applying alternative uses when establishing benchmark land value these should be limited to those uses which would fully comply with up to date development plan policies, including any policy requirements for contributions towards affordable housing at the relevant levels set out in the plan.

[…] Plan makers can ser out in which circumstances alternative uses can be used. This might include if there is evidence that the alternative use would fully comply with up to date development plan policies, if it can be demonstrated that the alternative use could be implemented on the site in question, if it can be demonstrated there is market demand for that use, and if there is an explanation as to why the alternative use has not been pursued.

4.7 The RICS Guidance Note 'Assessing viability in planning under the National Planning Policy Framework 2019 for England', published March 2021, supports the definition of AUV from NPPG and reiterates that any AUV must reflect relevant policy requirements.

4.8 When adopting an AUV approach, the premium to the landowner is implicit and therefore an additional landowner premium should not be added as this would be double counting.

4.9 NPPG and RICS guidance are clear that if refurbishment or redevelopment is necessary to realise an existing use value then this falls under the AUV provision of NPPG and no landowner premium should be added.

<u>The Proposed Benchmark</u>

4.10 The benchmark proposed by Savills for viability testing is based on an Existing Use Value approach.

4.11 Savills have relied upon an EUV valuation prepared by an external consultant. We have not been supplied with a copy of the EUV report despite our request and we are therefore unable to comment further. Savills report their view of EUV as at July 2021 at £28,525,000.

4.12 The property is retail warehouse park situated a short distance from Reading Station and town centre. We have been provided with the following tenancy details. We have not inspected the site. No further details regarding condition or tenancy terms have been provided despite our request.

Unit	Tenant	Size sf	Lease start	Lease Expiry	Rent review	Rent Passing pa	Rent passing psf
1	Vacant	15,457	-	-	-	-	-
2	Majestic Wine	3,131	25.12.13	25.12.28	25.12.23	£59,750	£19.10
2a	Aldi	13,177	21.01.08	20.01.23	-	£421,592	£31.95
4&5	The Range	35,103	22.02.10	21.02.25	-	£437,195	£12.45
6	TGI Fridays	8,153	25.03.89	25.03.29	25.03.24	£183,500	£22.50
Total		**73,203**				**£1,102,037**	

4.13 Further, we are informed that:

- Unit 1 was previously let to <Mothercare at £425,070pa (27.50psf)
- Unit 2 is subject to break clause in December 2023

4.14 Photographs included in the Design and Access statement downloaded from the Council planning website appear to show the property is presented in reasonable condition.

<u>BPS Assessment of Benchmark Land Value</u>

4.15 We have also approached the Benchmark Land Value on an Existing Use Value basis in line with PPG. The current use of the property is a retail warehouse park which has been categorised on the planning application form as ‘retail park’ (Use Class E).

4.16 In addition to the letting evidence from the subject site itself, we have sought to identify any transactions in the surrounding area to test whether the Existing Use Values assigned to this element of the scheme are reasonable. Our research can be summarised as follows:

Address	Description	Date	Transaction details	Rent £psf
Chalfont Square Retail Park, The Square, Reading, RG6 5HJ	Retail Park is situated on a Rushey Way, approximately 3 miles from the Reading town centre. Built in 1990, one storey	02/11/2020	10 Years lease; FRI; 4,873 sf	8.21
9 Newbury Retail Park, Pinchington Lane, Newbury, RG14 7HU	Let to Homebase. Retail Park is situated approximately 1.25 mile from the town centre.	30/06/2020	25 years lase; FRI; 19,580sf	22.98
Solartron Retail Park, Solartron Road, Farnborough, GU14 7QJ	Let to Lidl. Retail Park located on the edge of the town centre, 0.7 miles from the train station. Occupants include DFS, Pets at Home, Carpetright, Dreams, Natuzzi and Furniture Village.	11/12/2020 13/10/2020	25 years lase; FRI; 17,857sf 25 years lase; FRI; 20,356sf	22.69 29.47

4.17 There is a wide variation in rents achieved depending particularly on specific location and size.

4.18 We have been provided with limited information on the property and the lease terms. We have therefore made assumptions where necessary. We have assumed that all leases are on standard institutional terms and are drafted on an FRI basis. We have assumed that the Break in the Unit 2 lease is a tenant break.

4.19 On the basis of the available evidence, we have assumed an ERV of £22.50psf on Units 1, 2, 2a and 6. We have assumed a discount for quantum for Unit 4&5 and have assumed an ERV of £12.50 for this unit.

4.20 We have been unable to find any relevant yield comparables, which are scarce and details of such transactions are often not disclosed by the parties concerned. We have referred to the Knight Frank Prime Yield Guide January 2022 which lists Out of town retail 'Open A1 (essential retailers)' at 5.50% and Secondary Open A1 Parks at 6.75% to 7.00%.

4.21 We are aware that purpose built foodstores tend to attract lower yields, whilst out-of-town leisure tends to attract higher yields. The subject park appears to have been constructed with open A1 use in mind and we consider it to be reasonably well located although it is now a little dated. We therefore consider that a yield of 6.00% on the rent passing is appropriate, with the reversions to ERV being valued at between 6.50% and 7.00%. In addition we have assumed a 12 month combined void/rent free on the vacant unit. This generates an EUV of £17.87m.

4.22 To this we suggest the addition of a Landowner's Premium of 20%, which reflects the nature of the property as an income producing investment and its brownfield character.

4.23 On this basis we have adopted a figure of £21,357,600 as the Benchmark Land Value. This valuation is contingent on confirmation of the tenancy details assumed. We require confirmation of the full heads of terms for the occupational leases and reserve the right to revise our figures on receipt of such information.

5.0 DEVELOPMENT VALUES

5.1 According to the Planning Statement, the residential element of the proposed scheme can be delivered in a range of different options, comprising a maximum area of 100,000 sq m (1,076,400sf) GEA. In their appraisal Savills considered three separate scenarios on how the development can be delivered and schedule of residential areas in each of them have been assumed as follows:

	Block A	Block B	Block C	Block D	Total
Max (GEA SQ FT)	199,134	252,954	299,239	325,073	1,076,400
Scenario 1 (NIA, SQ FT)	126,931	139,751	166,876	148,495	582,054
Scenario 2 (NIA, SQ FT)	126,931	139,751	166,876	-	433,559
Parameter Scheme (NIA, SQ FT)	119,406	144,992	169,716	**147,874**	**581,988**

<u>Private Residential Values</u>

5.2 866 units are proposed to be for private sale in line with the Scenario 1 of proposed scheme and achievable prices have been assumed by Savills as follows:

Scenario 1 Unit Type	No of units	% of the mix	Average Size (sq ft)	Savills Average GDV psf	Savills Average GDV/ unit	Total Savills GDV
Studio	112	13%	434	£622	£270,000	£30,240,000
1B2P	278	32%	541	£578	£312,500	£86,875,000
1B2P(w)	30	3%	716	£461	£330,000	£9,900,000
2B3P	33	4%	665	£586	£390,000	£12,870,000
2B3P(w)	12	1%	780	£519	£405,000	£4,860,000
2B4P	301	35%	785	£535	£420,000	£126,420,000
2B4P(w)	18	2%	963	£462	£445,000	£8,010,000
3B5P	82	9%	936	£518	£485,000	£39,770,000
Total	866	100%		£525	£382,000	**£318,945,000**

5.3 The second scenario of the proposal comprises a mix of 627 residential and commercial units. The GDV has been assumed by Savills as follows:

Scenario 2 Unit Type	No of units	% of the mix	Savills Average GDV/unit	Total Savills GDV
Studio	75	12%	£270,000	£20,250,000
1B2P	181	29%	£312,500	£56,562,500
1B2P(w)	30	5%	£330,000	£9,900,000
2B3P	13	2%	£390,000	£5,070,000
2B3P(w)	12	2%	£405,000	£4,860,000
2B4P	218	35%	£420,000	£91,560,000
2B4P(w)	18	3%	£445,000	£8,010,000
3B5P	80	13%	£485,000	£38,800,000
Total	**627**	**100%**	**£382,000**	**£235,012,500**

5.4 According to Savills report the total GDV for the private residential units in Scenario 1 is £318,265,000 and in Scenario 2 £233,269,000. According to our calculations based on the prices assumed by Savills, the total GDV of the proposed scenario one is £318,945,000 and scenario 2 £235,012,500, giving a marginal difference of 0.2% and 1% respectively. The relatively small difference in our opinion does not impact the viability, therefore we assume the figures presented by Savills to be largely correct.

5.5 The Parameter scheme included in the FVA illustrates the mix of the residential units as proposed in the planning application. In comparison to Scenario 1, Savills have assumed a marginal reduction in unit sizes. The GDV of the parameter scheme has been assumed by Savills as follows:

Parameter Scheme Unit Type	No of units	% of the mix	Average Size (sq ft)	% size difference to the Scenario 1	Savills Average GDV psf	Savills Average GDV/unit	Total Savills GDV
Studio	250	25%	420	3%	£630	£265,000	£66,250,000
1Bed	350	35%	538	4%	£576	£310,000	£108,500,000
2Bed	369	37%	705	10%	£581	£410,000	£150,880,000
3Bed	32	3%	914	2%	£525	£480,000	£15,360,000
Total	1,000	100%					£340,990,000

5.6 We have reviewed the comparable evidence provided by Savills and we note that sales evidence provided for Thomas House dates from 2018, we therefore consider this comparable historic. We agree with Savills comments about the inferiority of the Reading Riverside building due to its less central location and low level of amenities provided. We find the Verto building to be a useful comparable, considering its proximity to the subject site and we note Savills comments about the superiority of this scheme relative to the subject due to its high specification and close proximity to the town centre and the station.

5.7 We however noted that the majority of the sales prices are from 2019, which is a little historic and predates the Covid Pandemic. Moreover, the specification of the subject scheme has not yet been detailed in the Planning Application, therefore we find the assumption of the inferiority of the subject scheme to be invalid. In our opinion the subject development has the potential to achieve marginally higher prices than Verto due to its location and height. Specification will ultimately be driven by market requirements at the time so to suggest any lower specification would be illogical.

5.8 Huntley Wharf is in our opinion the most useful comparable in the context of the subject development, considering its close proximity to the station. As this development is still under construction, the achieved prices reported by Savills are the most up to date representation of the local market. In our opinion the subject development sales values will be similar to the ones achieved in Huntley Wharf, although the subject will benefit from a height premiums.

Address	Description	No of bedrooms	Size (SF)	Asking price psf	Asking Price
Huntley Wharf, Kenavon Drive, Reading RG1 3ES	Development is still under construction a mentioned in the Savills report. (Floors 2-8)	1 1 2	525 590 780	£657 £529 £603	£345,000 £312,000 £470,000
Castle Street, Reading RG1	Flat is situated just off A33, on a second floor of a period building with a 993 year lease, 0.6 miles from the Reading station. Property has been recently refurbished.	1	414	£568	£235,000
40 London Road, Reading RG1 5AG	Raised ground floor, luxury refurbished, located in a historic building, with 122 year lease, in a close proximity to the town centre.	1	787	£419	£330,000
Verto, Kings Road, Reading, RG1 3FS	Riverside located, contemporary development. This 13th floor apartment comprises air conditioning, underfloor heating and underground parking space.	2	780	£769	£599,950
Brigham Road, Reading RG1	Riverside located (0.3 miles from the subject site) two bedroom maisonette is situated in a period building with a 978 year lease. Property comes with a secured allocated parking space.	2	858	£495	£425,000
Blakes Quay, Reading, Reading RG1	0.9 miles from the subject site	3	1,604	£421	£675,000

5.9 We have undertaken our own research in the area surrounding the subject site and have identified the following additional market evidence. The market evidence is sourced from Zoopla and represents asking prices only. We appreciate the asking prices may differ from the prices achieved and caution needs to be taken when analysing the figures in the context of the proposed development.

5.10 Presented evidence comes from the re-sale and second hand market, with the exception of the properties in Huntley Wharf which are the only comparables showing brand new units. We however find the data a useful indicator of current market expectations.

5.11 The area benefits from market demand that is anticipated from the forthcoming opening of the Crossrail train link.

5.12 We have noted that the values presented by Savills in the Parameter Scheme are slightly lower than the ones used in Scenario 1 and 2. We assume this has been done to reflect the reduction in the average unit size. We have tested this approach and found that the reduction in the average unit size is marginal. In our approach we have used a blended average of the unit prices from the first Scenario. The results are presented in the table below:

Unit Type	Average Size sf (Parameter Scheme)	Average Size sf (Scenario 1)	% change difference to the Scenario 1 (size)	Average Price (Parameter Scheme	Average Price (Scenario 1)	% change to the Scenario 1 (Price)
Studio	420	434	3%	£265,000	£270,000	1.8%
1Bed	538	558	4%	£310,000	£314,204	1.3%
2Bed	705	783	10%	£410,000	£418,021	1.9%
3Bed	914	936	2%	£480,000	£485,000	1%

5.13 We are of the opinion that the marginal reduction in unit sizes will not affect the average market price of each unit. We note the incomplete information available for the Parameter scheme and reserve the right to amend our valuations as more detailed information becomes available.

5.14 In arriving at our valuation of the residential in the parameter scheme, we have apportioned the GDV in line with NSA using an average value psf across the scheme.

5.15 We refer to two reports in Appendix 3, which confirm the industry standard view that height generates increases in unit values approximating to 1.50% per floor with a premium for penthouse suites at the upper levels. The proposed scheme will contain four blocks, A (13 storeys), B and C (both 17 storeys) and D (25 storeys) with the tallest one to be used as either residential or office accommodation, depending on the scenario. We have not been provided with the proposed accommodation schedule of the parameter scheme, therefore we have calculated the GDV based on the same height assumptions.

5.16 In general we find the prices proposed by Savills to be broadly reasonable, with the exception of average price for units situated on higher levels. Our revised values are as follows:

Size	BPS Average GDV/unit	Average BPS GDV psf	Total BPS Residential GDV (Scenario 1)	Total BPS Residential GDV (Scenario 2)	% Change to Savills
Studio	£270,000	£622	£30,240,000	£20,250,000	0%
1B2P	£320,000	£591	£86,960,000	£57,920,000	2%
1B2P(w)	£330,000	£461	£9,900,000	£9,900,000	0%
2B3P	£400,000	£601	£13,695,000	£5,395,000	6%
2B3P(w)	£415,000	£532	£5,160,000	£5,160,000	6%
2B4P	£430,000	£548	£132,440,000	£95,920,000	5%
2B4P(w)	£450,000	£463	£8,100,000	£8,100,000	1%
3B5P	£500,000	£534	£41,000,000	£40,000,000	3%
Total			**£329,495,000**	**£242,645,000**	**3%**

5.17 In our opinion the values of the Parameter Scheme will be as follows, giving a total GDV of £357m, which is approximately 4% increase to the GDV assumed by Savills.

Unit Type	Average GDV/unit (BPS)	Average GDV psf (BPS)	Total GDV (BPS)	% change to Savills
Studio	£270,000	£622	£67,500,000	2%
1Bed	£320,974	£584	£112,341,000	3%
2Bed	£438,898	£593	£161,147,000	6%
3Bed	£500,000	£531	£16,000,000	4%
Total			**£356,987,000**	**4%**

5.18 Overall, the values reflect an increase of approximately £10m, £7m and £16m in Scenario one, two and the parameter scheme respectively on the values proposed by Savills.

Ground Rents

5.19 Noting the Government's restated intentions to introduce legislation reforming current leasehold practices with legislation currently before Parliament which would reduce ground rents to a nominal sum, we have excluded capitalised ground rental income from our appraisal. This is supported by limitations from many mortgage lenders lending on new build properties with such provisions and by the help to buy scheme not being eligible to apartments subject to ground rents.

5.20 It is not yet apparent whether the eradication of ground rents will result in a positive uplift to sales values on leasehold property where this obligation is at a nominal level but we reserve the right to revisit our valuation in the even that such evidence becomes available.

Parking

5.21 The FVA refers to provision of 51 and 57 car parking spaces in the Scenario 1 and 2 respectively. Savills did not include any additional value generated from the parking spaces due to the limited level of detail at this early application stage. The proposed development description attached to the outline proposed application refers to provision of 62 parking spaces in total, with 100% of them being Blue Badge. On this basis, we agree with Savills approach that no additional value should be added in respect of car parking provisions at this stage.

Affordable Residential Values

5.22 The scenarios proposed in the FVA do not include any affordable housing units.

Commercial Valuation

5.23 The proposed scheme includes delivery of a maximum of 115,000 sq m (1,237,849sq ft) of one or more commercial land uses, comprising B1(a) (office), C1 (hotels), A1-A5 (Retail) and D1-D2 (non-residential institutions & assembly and leisure) space. The exact sqft of each space has not yet been specified.

5.24 We note from the FVA that the commercial spaces, in each of the proposed scenarios, are arranged as follows:

Unit Type	Size (SF)- Scenario 1	Size (SF)- Scenario 2	Size (SF)- Parameter Scheme
Office	0	200,102	0
Ancillary Commercial	53,233	40,889	0

5.25 Savills have based their appraisal on the assumption that the ancillary commercial space will be Use Class "E" flexible accommodation. Likewise we have treated it as class "E" accommodation excluding the purpose built offices in Scenario 2. If this assumption changes we also reserve the right to amend our position. We find this assumption to be reasonable and have adopted it in our appraisal. Savills have provided recent local comparable evidence for both office and retail space. They have assigned a rental value of £35psf to the office and £25psf for the use class E space, to arrive at a rental income of £1,330,825 per annum for scenario 1 and £8,025,795 pa for scenario 2. Savills propose investment values of the commercial space for the first and second scenarios equating to £17,176,997 and £139,625,460 respectively.

5.26 We have sought to identify any additional transactions in the surrounding area to test whether the value assigned to this element of the scheme is reasonable. Our research can be summarised as follows:

Address	Description	Use	Date	Size psf	Price psf
105 Friar Street, Reading, RG1 1EP	The lettable area is arranged over ground and first floors of a period building. Property is located in a close proximity to West Street, opposite the Station Hill development site. Distance to the subject site is approximately 0.6 miles. Premises was rented on an FRI basis. We find the property to be superior to the subject site due to its desirable, central location.	Retail	28/08/2020	1,140	£36.83 Achieved
27 Queen Victoria Street, Reading, RG1 1SY	The unit is located in a mid-terraced 1970s building, providing retail and ancillary space across basement and ground floors. Premises is located 0.1 mile from the subject site. We find the property to be superior to the subject site due to its central location.	Retail	10/11/2020	717	£59.27 Achieved
25 Queen Victoria Street, Reading,	The unit is located in the mid-terraced 1970s building, providing retail and ancillary space across basement and ground floors. Premises is located 0.1 mile from the subject site. We find the property to be superior to the subject site due to its central location.	Retail	17/06/2021	732	£49.80 Achieved
1 Station Road, Reading, RG1 1DT	Retail unit situated on the corner of a busy road, in a mixed use building. Ground and first floor space has been let to Starbucks on a 20 year lease with 5 yearly rent reviews. Premises is located 0.5 miles from the subject property. We find the property to be superior to the subject site due to its attractive location.	Retail	30/10/2020	2,775	£42.34 Achieved
33 Belgrave Street, Reading, RG1 1PW	Office space located 0.5 miles from the subject property, on the south side of Reading train station in the prestigious town centre. This 5 storey building comprises secure underground parking, cycle storage, shower facilities on each floor and CCTV. This period building has recently been fully refurbished.	Office	29/10/2021	2,799	£28.50 (Asking)
Town Hall, Belgrave Street, Reading, RG1 1QH	Grade A office accommodation in a centrally located historic building, 0.5 miles from the subject development. Third and fourth floor of the building were leased for a period of 10 years.	Office	01/12/2021	25,299	£37.50 (Achieved)
The Brickworks, 35-43 Greyfriars Road, Reading, RG1 1NP	This recently refurbished building is located in Reading town centre, 0.4 miles from the subject site, on the south side of Reading train station. The property extends to 18,908 sf over ground and four upper floors	Office	29/07/2020	4,263	£35.00 (Achieved)

	with five car parking spaces. Space let on FRI basis.				
The White Building, 33 Kings Road, Reading, RG1 3AR	Centrally located, contemporary office building comprising a concierge, business lounge, car parking, secure cycle storage and roof terrace. Second floor has been leased for 10 years on FRI basis. Building is located 0.6 mile from the subject development.	Office	11/01/2020	13,340	£35.50 (Achieved)

5.27 It can be seen from the above transactions that generally the price of newly refurbished office space in close proximity to the station ranges from between £35 and £37 psf. At this stage it is not clear how the design might impact on achievable rents therefore values and it is quite possible for a well designed new build scheme to top current achieved rents. We consider the proposed offices are priced at the lower end of this range, but should be subject to review.

5.28 The subject site is situated on the northern side of the train station, which does not lead directly to the town centre. In our opinion more traffic is expected to be generated on the southern side, which directly connects the train station and the town centre. We therefore find the retail comparables above to be in superior locations to the subject and the retail ERV proposed by Savills to be broadly reasonable.

5.29 In their FVA Savills capitalised the income stream from the office space at 5.5% and retail at 7% yield.

5.30 We have reviewed evidence provided by Savills which show a range of yields from 3.36% to 7.30% for Reading offices sold between 2019 and 2020. Most of the comparables offered predate the pandemic and are a little historic; there is no detail provided on the lettings or properties and we are therefore unable to provide any analysis of these comparables.

5.31 We have been unable to provide any further useful comparables and refer to the Knight Frank Prime Yield Guide January 2022 which provides current yields for prime offices in South East Towns between 5.25% and 6.50% depending on letting profile. On this basis we consider Savills adopted office yield to be reasonable.

5.32 Savills have provided a range of retail comparables throughout Reading ranging from 4.50% to 6.95% between 2019 and 2021. Those properties sold at the higher end of this range were all mixed use. Without more detailed tenancy information, we are unable to comment further on the comparables presented. We have been unable to source any further relevant comparables. The Knight Frank Prime Yield Guide January 2022 and note that Prime shops in towns such as Oxford, Cambridge and Winchester are at 6.50%. We consider this side of the station to be a secondary pitch and therefore find Savills adopted yield of 7.00% to be reasonable.

5.33 We therefore consider Savills' assessment of the commercial GDV to be reasonable.

6.0 DEVELOPMENT COSTS

Construction Costs

6.1 Our Cost Consultant, Neil Powling has analysed the Order of Cost Estimate Rev 16 – 627 units Mixed Use Illustrative Scheme and Rev 15 – 866 units Residential Illustrative Scheme for the proposed scheme both prepared by CAST, and both dated 8th September 2021, and concludes that:

'The design information used to produce the cost estimate has been scheduled. There is no structural or services information listed. It is apparent that the extent of the design information is very limited.

The allowance for contingencies is 3.5% which we consider reasonable; we have allowed for 5% in our benchmarking.

Based on the results in the tables at 3.12 and 3.14 we consider the Applicant's costs for all sections except the car park to be reasonable. We suggest a new and more detailed estimate for the car park is prepared when more detailed design information is available

We consider the Applicant's proposed allowance of 3 months per parcel for pre-construction and enabling works allowance for pre-construction reasonable.

The Applicant's proposed allowance for construction of 18 to 24 months for construction is generally consistent with the BCIS durations in the table at 3.17.

Separate appraisals have been prepared for the 4 residential blocks and the alternative Block D as commercial. The cost estimate has different estimates for each block in the different scenarios ie each block is estimated at a different cost in each scenario. The amounts in the appraisals are not consistent with the sums in the estimate. The estimates have been issued as a total cost for each scenario and not on a block basis as in the appraisals.'

6.2 Mr Powling's full cost report can be found at Appendix 1. We have amended the appraisal costs provided to reflect the Cast report and reserve the right to amend our figures as more detail on the proposed car parking becomes available.

6.3 We have included demolition costs within the base build cost in line with the Cast report.

Additional Costs

6.4 The applicant's consultants have applied the following additional cost assumptions:

- Professional fees of 10%, excluding development management costs
- Marketing fees of 1% on residential GDV and £50,000 per parcel on commercial GDV
- Residential sales agent of 1.5% on GDV
- Commercial sales agent on 1% on GDV
- Residential and commercial sales legal of 0.5% on GDV
- Letting agent fees of 10 % on year 1 rent
- Commercial Legal Fees of 5% on year 1 rent

6.5 We are of an opinion that the residential sales agent fees should be reduced to 1% and sales legal fees should be at the £1,000 per unit basis. Generally, we accept that other fees are realistic and in line with market norms.

6.6 Savills have included CIL costs totalling £11,053,831 for Scenario 1 and the Parameter scenario and £9,113,286 Scenario 2. We have assumed these figures to be correct although our appraisals will need to be amended should these figures change.

6.7 Savills have not included any S106 charges in their appraisal. These costs will need to be confirmed in due course and we will need to amend our appraisals at this point.

6.8 Finance has been included at 6.75% assuming that the scheme is 100% debt financed. We consider this finance allowance to be slightly higher than industry standard and we consider 6.5% to be more appropriate in the current market for this type of scheme.

Profit

6.9 The developer profit target adopted by Savills is 20% on residential and 15% on commercial GDV. For a scheme of this type and size, we consider these profit targets to be reasonable.

Development Timeframes

6.10 Savills have assumed a 'Day1 Vacant Possession' approach and from the information in the FVA, we assume that this includes the 4 phases running concurrently. Savills have assumed the following timescales for each of the phases:

Pre-construction: 3 months

Construction: 18 months

Letting: 26 months

6.11 We consider the pre-construction and construction timescales to be reasonable. The letting schedule implies 35% pre-lets with around 5 sales per month per block thereafter. Although we would normally expect a higher level of pre-lets, due to the concurrent nature of the phasing assumed for this scheme, we consider Savills' assumptions reasonable in this case.

6.12 For the Parameter Scenario, assuming a similar proportion of pre-sales and number of sales per month, sales periods would vary from 27 months to 38 months depending upon phase and we have amended our appraisal accordingly.

7.0 AUTHOR SIGN OFF

This report is provided for the stated purpose and for the sole use of the named clients. This report may not, without written consent, be used or relied upon by any third party.

The author(s) of this report confirm that there are no conflicts of interest and measures have been put in place to prevent the risk of the potential for a conflict of interest. In accordance with the RICS Professional Statement *Financial Viability in Planning: Conduct and Reporting* September 2019, this report has been prepared objectively, impartially, and with reference to all appropriate sources of information.

The following persons have been involved in the production of this report:

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February 2021

Appendix 1: Build Cost Report

Project: Reading Station Park, Reading RG1 8AL

Independent Review of Assessment of Economic Viability

Interim Draft Report
Appendix A Cost Report

1 SUMMARY

1.1 The design information used to produce the cost estimate has been scheduled. There is no structural or services information listed. It is apparent that the extent of the design information is very limited.

1.2 The allowance for contingencies is 3.5% which we consider reasonable; we have allowed for 5% in our benchmarking.

1.3 Based on the results in the tables at 3.12 and 3.14 we consider the Applicant's costs for all sections except the car park to be reasonable. We suggest a new and more detailed estimate for the car park is prepared when more detailed design information is available

1.4 We consider the Applicant's proposed allowance of 3 months per parcel for pre-construction and enabling works allowance for pre-construction reasonable.

1.5 The Applicant's proposed allowance for construction of 18 to 24 months for construction is generally consistent with the BCIS durations in the table at 3.17.

1.6 Separate appraisals have been prepared for the 4 residential blocks and the alternative Block D as commercial. The cost estimate has different estimates for each block in the different scenarios ie each block is estimated at a different cost in each scenario. The amounts in the appraisals are not consistent with the sums in the estimate. The estimates have been issued as a total cost for each scenario and not on a block basis as in the appraisals.

2 METHODOLOGY

2.1 The objective of the review of the construction cost element of the assessment of economic viability is to benchmark the Applicant's costs against RICS Building Cost Information Service (BCIS) average costs. We use BCIS costs for benchmarking because it is a national and independent database. Many companies prefer to benchmark against their own data which they often treat as confidential. Whilst this is understandable as an internal exercise, in our view it is insufficiently robust as a tool for assessing viability compared to benchmarking against BCIS. A key characteristic of benchmarking is to measure performance against external data. Whilst a company may prefer to use their own internal database, the danger is that it measures the company's own projects against others of its projects with no external test. Any inherent discrepancies will not be identified without some independent scrutiny.

2.2 BCIS average costs are provided at mean, median and upper quartile rates (as well as lowest, lower quartile and highest rates). We generally use mean or occasionally upper quartile for benchmarking. The outcome of the benchmarking is little affected, as BCIS levels are used as a starting point to assess the level of cost and specification enhancement in the scheme on an element-by-element basis. BCIS also provide a location factor compared to a UK mean of 100; our benchmarking exercise adjusts for the location of the scheme. 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. 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.

2.3 BCIS average prices are available on an overall £ per sqm and for new build work on an elemental £ per sqm basis. Rehabilitation/conversion data is available an overall £ per sqm and on a group element basis ie. substructure, superstructure, finishings, fittings and services – but is not available on an elemental basis. A comparison of the applicants elemental costing compared to BCIS elemental benchmark costs provides a useful insight into any differences in cost. For example: planning and site location requirements may result in a higher-than-normal cost of external wall and window elements.

2.4 If the application scheme is for the conversion, rehabilitation or refurbishment of an existing building, greater difficulty results in checking that the costs are reasonable, and the benchmarking exercise must be undertaken with caution. The elemental split is not available from the BCIS database for rehabilitation work; the new build split may be used instead as a check for some, but certainly not all, elements. Works to existing buildings vary greatly from one building project to the next. Verification of costs is helped greatly if the cost plan is itemised in reasonable detail thus describing the content and extent of works proposed.

2.5 BCIS costs are available on a quarterly basis – the most recent quarters use forecast figures; the older quarters are firm. If any estimates require adjustment on a time basis, we use the BCIS all-in Tender Price Index (TPI).

2.6 BCIS average costs are available for different categories of buildings such as flats, houses, offices, shops, hotels, schools etc. The Applicant’s cost plan should ideally keep the estimates for different categories separate to assist more accurate benchmarking. However, if the Applicant’s cost plan does not distinguish different categories, we may calculate a blended BCIS average rate for benchmarking based on the different constituent areas of the overall GIA.

2.7 To undertake the benchmarking, we require a cost plan prepared by the applicant; for preference in reasonable detail. Ideally the cost plan should be prepared in BCIS elements. We usually have to undertake some degree of analysis and rearrangement before the applicant’s elemental costs can be compared to BCIS elemental benchmark figures. If a further level of detail is available showing the build-up to the elemental totals it facilitates the review of specification and cost allowances in determining adjustments to benchmark levels. An example might be fittings that show an allowance for kitchen fittings, bedroom wardrobes etc that is in excess of a normal BCIS benchmark allowance.

2.8 To assist in reviewing the estimate we require drawings and (if available) specifications. Also, any other reports that may have a bearing on the costs. These are often listed as having being used in the preparation of the estimate. If not provided we frequently download additional material from the documents made available from the planning website.

2.9 BCIS average prices per sqm include overheads and profit (OHP) and preliminaries costs. BCIS elemental costs include OHP but not preliminaries. Nor do average prices per sqm or elemental costs include for external services and external works costs. Demolitions and site preparation are excluded from all BCIS costs. We consider the Applicants detailed cost plan to determine what, if any, abnormal and other costs can properly be considered as reasonable. We prepare an adjusted benchmark figure allowing for any costs which we consider can reasonably be taken into account before reaching a conclusion on the applicant's cost estimate.

2.10 We undertake this adjusted benchmarking by determining the appropriate location adjusted BCIS average rate as a starting point for the adjustment of abnormal and enhanced costs. We review the elemental analysis of the cost plan on an element-by-element basis and compare the Applicants total to the BCIS element total. If there is a difference, and the information is available, we review the more detailed build-up of information considering the specification and rates to determine if the additional cost appears justified. If it is, then the calculation may be the difference between the cost plan elemental £/m² and the equivalent BCIS rate. We may also make a partial adjustment if in our opinion this is appropriate. The BCIS elemental rates are inclusive of OHP but exclude preliminaries. If the Applicant's costings add preliminaries and OHP at the end of the estimate (as most typically do) we add these to the adjustment amounts to provide a comparable figure to the Applicant's cost estimate. The results of the elemental analysis and BCIS benchmarking are generally issued as a PDF but upon request can be provided as an Excel spreadsheet.

2.11 We have considered the duration of the construction period by reference to the average duration calculation resulting from use of the BCIS Duration Calculator, and if we consider appropriate have drawn attention to any significant divergence between the Applicant's duration and the BCIS calculation. The duration is expected to be the result of a programme in appropriate detail for the stage of the project that should be prepared by a specialist in the field. We consider our experience of construction and duration sufficient for benchmarking comparisons using BCIS, but do not possess the appropriate qualifications and experience for undertaking a more detailed examination of the construction duration.

3 GENERAL REVIEW

3.1 We have been provided with and relied upon the Financial Viability Assessment Report issued September 2021 by Savills on behalf of Aviva Investors together with the Order of Cost Estimate Rev 16 - 627 units Mixed Use Illustrative Scheme issued 8 Sep 2021 by Cast and the Order of Cost Estimate Rev 15 - 866 units Residential Illustrative Scheme also issued 8 Sep 2021.

3.2 The cost estimate is based on price levels 2Q2021. Our benchmarking uses current BCIS data which is on a current tender firm price basis. The BCIS all-in Tender Price Index (TPI) for 2Q2021 is 331 (Provisional) and for 1Q2022 350 (Forecast).

3.3 The design information used to produce the cost estimate has been scheduled. There is no structural or services information listed. It is apparent that the extent of the design information is very limited.

3.4 The cost plan includes an allowance of 16.5% for preliminaries. The allowance for overheads and profit (OHP) is 5%. We consider both of these allowances reasonable.

3.5 The allowance for contingencies is 3.5% which we consider reasonable; we have allowed for 5% in our benchmarking. All the % figures are based on a calculation of a conventional arrangement of the sums in the analysis.

3.6 We have extracted the cost information provided by the Applicant into a standard BCIS/NRM format for each alternative to facilitate our benchmarking.

3.7 Sales have been included in the Appraisal at average figures of £547/ft² (Net Sales Area) for scenario 1 of 866 units and £538/ft² for scenario 2 of 627 units.

3.8 We have downloaded current BCIS data for benchmarking purposes including a Location Factor for Reading of 108 that has been applied in our benchmarking calculations.

3.9 We have adopted the same GIAs used in the Applicant's cost estimate; we assume these to be the GIAs calculated in accordance with the RICS Code of Measurement 6th Edition 2007.

3.10 The development comprises four blocks: Block A 13 storeys, Block B 17 storeys, Block C 17 storeys and Block D 25 storeys in both scenarios; BCIS average cost data is given in steps: 1-2 storey, 3-5 storey, 6 storey or above. We have benchmarked as 6 storey or above.

3.11 Our benchmarking results in the following results for Scenario 1 866 units:-

3.12

	Applicant £/m²	Benchmark £/m²
Block A	2,675	2,741
Block B	2,898	2,869
Block C	2,763	2,768
Block D commercial	2,880	3,314
Retail	1,736	2,115
Car park	2,271	1,675

3.13 The results for Scenario 2 627 units are:-

3.14

	Applicant £/m²	Benchmark £/m²
Block A	2,701	2,725
Block B	2,926	2,856
Block C	2,843	2,780
Block D commercial	2,615	3,071
Retail	1,759	2,135
Car park	2,270	1,674

3.15 Based on the results in the tables at 3.12 and 3.14 we consider the Applicant's costs for all sections except the car park to be reasonable. We suggest a new and more detailed estimate for the car park is prepared when more detailed design information is available

3.16 We have downloaded BCIS durations for each of the parcels as the table below.

3.17

	BCIS average		BCIS 90% conf max	
Durations	BCIS wks	BCIS mnths	BCIS wks	BCIS mnths
Block A	95	22	106	24½
Block B	100	23	112	26
Block C	104	24	117	27
Block D commercial	74	17	79	18
Block D Flats	103	24	116	27

3.18 We consider the Applicant's proposed allowance of 3 months per parcel for pre-construction and enabling works allowance for pre-construction reasonable.

3.19 The Applicant's proposed allowance for construction of 18 to 24 months for construction is generally consistent with the BCIS durations in the table at 3.17.

3.20 Separate appraisals have been prepared for the 4 residential blocks and the alternative Block D as commercial. The cost estimate has different estimates for each block in the different scenarios ie each block is estimated at a different cost in each scenario. The amounts in the appraisals are not consistent with the sums in the estimate. The estimates have been issued as a total cost for each scenario and not on a block basis as in the appraisals.

BPS Chartered Surveyors
Date: 8th February 2022

Appendix 2: BPS Appraisals

Station Retail Park, Reading
Scenario 2
100% Private Residential, with offices

Development Appraisal
Prepared by AR
BPS Surveyors
09 February 2022

Station Retail Park, Reading
Scenario 2
100% Private Residential, with offices

Appraisal Summary for Merged Phases 1 2 3 4

Currency in £

REVENUE

Sales Valuation	**Units**	**ft²**	**Sales Rate ft²**	**Unit Price**	**Gross Sales**
Market Residential	174	126,931	547.66	399,512	69,515,031
Market Residential	207	139,751	567.69	383,262	79,335,245
Market Residential	246	166,876	562.06	381,278	93,794,325
Totals	**627**	**433,558**			**242,644,601**

Rental Area Summary	**Units**	**ft²**	**Rent Rate ft²**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Commercial	1	9,485	25.00	237,125	237,125	237,125
Commercial	1	12,021	25.00	300,525	300,525	300,525
Commercial	1	13,159	25.00	328,975	328,975	328,975
Commercial	1	6,224	25.00	155,600	155,600	155,600
Block A: Office (Tranche 1)	1	66,701	35.00	2,334,535	2,334,535	2,334,535
Block A : Office (Tranche 2)	1	66,701	35.00	2,334,535	2,334,535	2,334,535
Block A: Office (Tranche 3)	1	66,701	35.00	2,334,535	2,334,535	2,334,535
Totals	**7**	**240,992**			**8,025,830**	**8,025,830**

Investment Valuation

Commercial					
Market Rent	237,125	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	3,060,579
Commercial					
Market Rent	300,525	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	3,878,885
Commercial					
Market Rent	328,975	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	4,246,090
Commercial					
Current Rent	155,600	YP @	7.0000%	14.2857	2,222,857
Block A: Office (Tranche 1)					
Current Rent	2,334,535	YP @	5.5000%	18.1818	42,446,091
Block A : Office (Tranche 2)					
Current Rent	2,334,535	YP @	5.5000%	18.1818	42,446,091
Block A: Office (Tranche 3)					
Market Rent	2,334,535	YP @	5.5000%	18.1818	
(6mths Rent Free)		PV 6mths @	5.5000%	0.9736	41,324,868
Total Investment Valuation					**139,625,461**

GROSS DEVELOPMENT VALUE				**382,270,062**
Purchaser's Costs			(9,494,531)	
Effective Purchaser's Costs Rate		6.80%		
				(9,494,531)
NET DEVELOPMENT VALUE				**372,775,531**
NET REALISATION				**372,775,531**

OUTLAY

ACQUISITION COSTS			
Fixed Price	21,357,600		
Fixed Price		21,357,600	
			21,357,600
Stamp Duty		1,057,880	
Effective Stamp Duty Rate	4.95%		

Station Retail Park, Reading
Scenario 2
100% Private Residential, with offices

Agent Fee		1.00%	213,576	
Legal Fee		0.50%	106,788	
				1,378,244
CONSTRUCTION COSTS				
Construction	**ft²**	**Build Rate ft²**	**Cost**	
Build costs	250,128	243.00	60,781,104	
Build Costs	164,492	251.00	41,287,492	
Build Costs Comm	37,039	163.00	6,037,357	
Build Costs Car Park	18,837	211.00	3,974,607	
Build Costs	199,738	272.00	54,328,736	
Build Costs	233,798	264.00	61,722,672	
Totals	**1,107,740 ft²**		**228,131,968**	
s106			4	
CIL	398,290 ft²	13.75	5,476,488	
CIL	199,738 ft²	13.90	2,776,358	
CIL	250,128 ft²	3.44	860,440	
				237,245,258
PROFESSIONAL FEES				
Professional		10.00%	15,733,890	
Professional		8.00%	4,862,488	
				20,596,378
MARKETING & LETTING				
Marketing			250,000	
Marketing		1.00%	2,426,446	
Letting Agent Fee		10.00%	802,583	
Letting Legal Fee		5.00%	401,292	
				3,880,321
DISPOSAL FEES				
Sales Agent Fee		1.00%	3,822,701	
Sales Legal Fee	627 un	1,000.00 /un	627,000	
				4,449,701
MISCELLANEOUS FEES				
Resi Profit		20.00%	13,903,006	
Comm Profit		15.00%	459,087	
Resi Profit		20.00%	15,867,049	
Comm Profit		15.00%	581,833	
Resi Profit		20.00%	18,758,865	
Comm Profit		15.00%	636,913	
Comm Profit		15.00%	19,265,986	
				69,472,739
FINANCE				
Debit Rate 6.500%, Credit Rate 0.000% (Nominal)				
Total Finance Cost				22,630,154
TOTAL COSTS				**381,010,395**
PROFIT				
				(8,234,864)
Performance Measures				
Profit on Cost%		-2.16%		
Profit on GDV%		-2.15%		
Profit on NDV%		-2.21%		
Development Yield% (on Rent)		2.11%		
Equivalent Yield% (Nominal)		5.65%		
Equivalent Yield% (True)		5.86%		
IRR% (without Interest)		4.03%		
Rent Cover		-1 yrs 0 mths		
Profit Erosion (finance rate 6.500)		N/A		

Station Retail Park, Reading
Scenario 2
100% Private Residential, with offices

Table of Profit Amount and Profit on GDV%

	Sales: Rate /ft²				
Construction: Rate /ft²	-10.000%	-5.000%	0.000%	+5.000%	+10.000%
-10.000%	(£8,401,810) -2.347%	£1,979,683 0.535%	£12,176,104 3.185%	£22,288,293 5.651%	£32,319,910 7.950%
-5.000%	(£18,740,384) -5.235%	(£8,318,337) -2.247%	£2,061,387 0.539%	£12,260,546 3.109%	£22,378,831 5.505%
0.000%	(£29,078,957) -8.122%	(£18,656,911) -5.041%	(£8,234,864) -2.154%	£2,143,091 0.543%	£12,344,989 3.037%
+5.000%	(£39,417,531) -11.010%	(£28,995,484) -7.834%	(£18,573,437) -4.859%	(£8,151,391) -2.067%	£2,224,795 0.547%
+10.000%	(£49,756,104) -13.898%	(£39,334,058) -10.627%	(£28,912,011) -7.563%	(£18,489,964) -4.688%	(£8,067,918) -1.985%

Sensitivity Analysis : Assumptions for Calculation

Sales: Rate /ft²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
Market Residential	1	£547.66	2.00 Up & Down
Market Residential	2	£567.69	2.00 Up & Down
Market Residential	3	£562.06	2.00 Up & Down
Market Residential	4	£584.87	2.00 Up & Down

Construction: Rate /ft²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
Build Costs	1	£251.00	2.00 Up & Down
Build Costs	2	£272.00	2.00 Up & Down
Build Costs	3	£264.00	2.00 Up & Down

Station Retail Park, Reading
Parameter Scenario
100% Private Residential, no offices

Development Appraisal
Prepared by AR
BPS Surveyors
09 February 2022

Station Retail Park, Reading
Parameter Scenario
100% Private Residential, no offices

Appraisal Summary for Merged Phases 1 2 3 4

Currency in £

REVENUE

Sales Valuation	Units	ft²	Sales Rate ft²	Unit Price	Gross Sales
Market Residential	205	119,837	609.96	356,567	73,096,291
Market Residential	249	144,934	613.32	356,992	88,890,921
Market Residential	291	169,112	613.32	356,425	103,719,772
Market Residential	255	148,169	613.32	356,373	90,875,011
Totals	**1,000**	**582,052**			**356,581,995**

Rental Area Summary	Units	ft²	Rent Rate ft²	Initial MRV/Unit	Net Rent at Sale	Initial MRV
Commercial	1	9,485	25.00	237,125	237,125	237,125
Commercial	1	12,021	25.00	300,525	300,525	300,525
Commercial	1	13,159	25.00	328,975	328,975	328,975
Commercial	1	18,568	25.00	464,200	464,200	464,200
Totals	**4**	**53,233**			**1,330,825**	**1,330,825**

Investment Valuation

Commercial					
Market Rent	237,125	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	3,060,579
Commercial					
Market Rent	300,525	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	3,878,885
Commercial					
Market Rent	328,975	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	4,246,090
Commercial					
Market Rent	464,200	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	5,991,443
Total Investment Valuation					**17,176,997**

GROSS DEVELOPMENT VALUE			**373,758,992**
Purchaser's Costs		(1,168,036)	
Effective Purchaser's Costs Rate	6.80%		
			(1,168,036)
NET DEVELOPMENT VALUE			**372,590,957**
NET REALISATION			**372,590,957**

OUTLAY

ACQUISITION COSTS			
Fixed Price	21,357,600		
Fixed Price		21,357,600	
			21,357,600
Stamp Duty		1,057,880	
Effective Stamp Duty Rate	4.95%		
Agent Fee	1.00%	213,576	
Legal Fee	0.50%	106,788	
			1,378,244

CONSTRUCTION COSTS

Construction	ft²	Build Rate ft²	Cost
Build Costs	164,492	249.00	40,958,508
Build costs comm	37,039	161.00	5,963,279
Build costs car park	18,837	211.00	3,974,607
Build Costs	199,738	269.00	53,729,522
Build Costs	233,798	257.00	60,086,086

Station Retail Park, Reading
Parameter Scenario
100% Private Residential, no offices

Build Costs	203,708	268.00	54,593,744	
Totals	**857,612 ft²**		**219,305,746**	
s106			4	
CIL	601,998 ft²	13.75	8,277,473	
CIL	199,738 ft²	13.90	2,776,358	
				230,359,581
PROFESSIONAL FEES				
Professional		10.00%	20,936,786	
				20,936,786
MARKETING & LETTING				
Marketing			200,000	
Marketing		1.00%	3,565,820	
Letting Agent Fee		10.00%	133,083	
Letting Legal Fee		5.00%	66,541	
				3,965,444
DISPOSAL FEES				
Sales Agent Fee		1.00%	3,737,590	
Sales Legal Fee	1,000 un	1,000.00 /un	1,000,000	
				4,737,590
MISCELLANEOUS FEES				
Resi Profit		20.00%	14,619,258	
Comm Profit		15.00%	459,087	
Resi Profit		20.00%	17,778,184	
Comm Profit		15.00%	581,833	
Resi Profit		20.00%	20,743,954	
Comm Profit		15.00%	636,913	
Resi Profit		20.00%	18,175,002	
Comm Profit		15.00%	898,716	
				73,892,949
FINANCE				
Debit Rate 6.500%, Credit Rate 0.000% (Nominal)				
Total Finance Cost				27,783,570
TOTAL COSTS				**384,411,763**
PROFIT				
				(11,820,806)

Performance Measures

Profit on Cost%	-3.08%
Profit on GDV%	-3.16%
Profit on NDV%	-3.17%
Development Yield% (on Rent)	0.35%
Equivalent Yield% (Nominal)	7.00%
Equivalent Yield% (True)	7.32%
IRR% (without Interest)	3.80%
Rent Cover	-8 yrs -11 mths
Profit Erosion (finance rate 6.500)	N/A

Station Retail Park, Reading
Parameter Scenario
100% Private Residential, no offices

Table of Profit Amount and Profit on GDV%

	Sales: Rate /ft²				
Construction: Rate /ft²	-10.000%	-5.000%	0.000%	+5.000%	+10.000%
-10.000%	(£15,046,726) -4.450%	£1,202,890 0.338%	£16,466,076 4.406%	£31,399,462 8.018%	£46,216,653 11.288%
-5.000%	(£29,720,328) -8.790%	(£13,433,766) -3.774%	£2,760,304 0.739%	£17,966,796 4.588%	£32,897,247 8.035%
0.000%	(£44,393,931) -13.130%	(£28,107,369) -7.897%	(£11,820,806) -3.163%	£4,308,309 1.100%	£19,466,107 4.755%
+5.000%	(£59,067,534) -17.470%	(£42,780,972) -12.019%	(£26,494,409) -7.089%	(£10,207,847) -2.607%	£5,847,952 1.428%
+10.000%	(£73,741,137) -21.810%	(£57,454,574) -16.142%	(£41,168,012) -11.015%	(£24,881,449) -6.354%	(£8,594,887) -2.099%

Sensitivity Analysis : Assumptions for Calculation

Sales: Rate /ft²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
Market Residential	1	£609.96	2.00 Up & Down
Market Residential	2	£613.32	2.00 Up & Down
Market Residential	3	£613.32	2.00 Up & Down
Market Residential	4	£613.32	2.00 Up & Down

Construction: Rate /ft²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
Build Costs	1	£249.00	2.00 Up & Down
Build Costs	2	£269.00	2.00 Up & Down
Build Costs	3	£257.00	2.00 Up & Down
Build Costs	4	£268.00	2.00 Up & Down

Station Retail Park, Reading
Scenario 1
100% Private Residential, no offices

Development Appraisal
Prepared by AR
BPS Surveyors
09 February 2022

Station Retail Park, Reading
Scenario 1
100% Private Residential, no offices

Appraisal Summary for Merged Phases 1 2 3 4

Currency in £

REVENUE

Sales Valuation	**Units**	**ft²**	**Sales Rate ft²**	**Unit Price**	**Gross Sales**	
Market Residential	174	126,931	547.66	399,512	69,515,031	
Market Residential	207	139,751	567.69	383,262	79,335,245	
Market Residential	246	166,876	562.06	381,278	93,794,325	
Market Residential	239	148,495	584.87	363,390	86,850,271	
Totals	**866**	**582,053**			**329,494,872**	
Rental Area Summary	**Units**	**ft²**	**Rent Rate ft²**	**Initial MRV/Unit**	**Net Rent at Sale**	**Initial MRV**
Commercial	1	9,485	25.00	237,125	237,125	237,125
Commercial	1	12,021	25.00	300,525	300,525	300,525
Commercial	1	13,159	25.00	328,975	328,975	328,975
Commercial	1	18,568	25.00	464,200	464,200	464,200
Totals	**4**	**53,233**			**1,330,825**	**1,330,825**

Investment Valuation

Commercial					
Market Rent	237,125	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	3,060,579
Commercial					
Market Rent	300,525	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	3,878,885
Commercial					
Market Rent	328,975	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	4,246,090
Commercial					
Market Rent	464,200	YP @	7.0000%	14.2857	
(1yr 6mths Rent Free)		PV 1yr 6mths @	7.0000%	0.9035	5,991,443
Total Investment Valuation					**17,176,997**

GROSS DEVELOPMENT VALUE			**346,671,869**
Purchaser's Costs		(1,168,036)	
Effective Purchaser's Costs Rate	6.80%		
			(1,168,036)
NET DEVELOPMENT VALUE			**345,503,833**
NET REALISATION			**345,503,833**

OUTLAY

ACQUISITION COSTS

Fixed Price	21,357,600		
Fixed Price		21,357,600	
			21,357,600
Stamp Duty		1,057,880	
Effective Stamp Duty Rate	4.95%		
Agent Fee	1.00%	213,576	
Legal Fee	0.50%	106,788	
			1,378,244

CONSTRUCTION COSTS

Construction	**ft²**	**Build Rate ft²**	**Cost**
Build Costs	164,492	249.00	40,958,508
Build costs Comm	37,039	161.00	5,963,279
Build costs carpark	18,837	211.00	3,974,607
Build Costs	199,738	269.00	53,729,522
Build Costs	233,798	257.00	60,086,086

Station Retail Park, Reading
Scenario 1
100% Private Residential, no offices

Build Costs	219,728	268.00	58,887,104	
Totals	**873,632 ft²**		**223,599,106**	
s106			4	
CIL			11,053,831	
				234,652,941
PROFESSIONAL FEES				
Professional		10.00%	21,366,122	
				21,366,122
MARKETING & LETTING				
Marketing			200,000	
Marketing		1.00%	3,294,949	
Letting Agent Fee		10.00%	133,083	
Letting Legal Fee		5.00%	66,541	
				3,694,572
DISPOSAL FEES				
Sales Agent Fee		1.00%	3,466,719	
Sales Legal Fee	866 un	1,000.00 /un	866,000	
				4,332,719
MISCELLANEOUS FEES				
Resi Profit		20.00%	13,903,006	
Comm Profit		15.00%	459,087	
Resi Profit		20.00%	15,867,049	
Comm Profit		15.00%	581,833	
Resi Profit		20.00%	18,758,865	
Comm Profit		15.00%	636,913	
Resi Profit		20.00%	17,370,054	
Comm Profit		15.00%	898,716	
				68,475,524
FINANCE				
Debit Rate 6.500%, Credit Rate 0.000% (Nominal)				
Total Finance Cost				29,161,643
TOTAL COSTS				**384,419,365**
PROFIT				
				(38,915,531)
Performance Measures				
Profit on Cost%		-10.12%		
Profit on GDV%		-11.23%		
Profit on NDV%		-11.26%		
Development Yield% (on Rent)		0.35%		
Equivalent Yield% (Nominal)		7.00%		
Equivalent Yield% (True)		7.32%		
IRR% (without Interest)		-2.39%		
Rent Cover		-29 yrs -3 mths		
Profit Erosion (finance rate 6.500)		N/A		

Station Retail Park, Reading
Scenario 1
100% Private Residential, no offices

Table of Profit Amount and Profit on GDV%

	Sales: Rate /ft²				
Construction: Rate /ft²	-10.000%	-5.000%	0.000%	+5.000%	+10.000%
-10.000%	(£39,141,485) -12.476%	(£24,989,054) -7.568%	(£10,836,624) -3.126%	£3,250,405 0.895%	£17,100,251 4.505%
-5.000%	(£53,180,939) -16.952%	(£39,028,508) -11.820%	(£24,876,078) -7.176%	(£10,723,647) -2.953%	£3,360,986 0.885%
0.000%	(£67,220,393) -21.427%	(£53,067,962) -16.072%	(£38,915,531) -11.225%	(£24,763,101) -6.819%	(£10,610,670) -2.795%
+5.000%	(£81,259,847) -25.902%	(£67,107,416) -20.323%	(£52,954,985) -15.275%	(£38,802,555) -10.685%	(£24,650,124) -6.493%
+10.000%	(£95,299,301) -30.377%	(£81,146,870) -24.575%	(£66,994,439) -19.325%	(£52,842,008) -14.551%	(£38,689,578) -10.192%

Sensitivity Analysis : Assumptions for Calculation

Sales: Rate /ft²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
Market Residential	1	£547.66	2.00 Up & Down
Market Residential	2	£567.69	2.00 Up & Down
Market Residential	3	£562.06	2.00 Up & Down
Market Residential	4	£584.87	2.00 Up & Down

Construction: Rate /ft²
Original Values are varied by Steps of 5.000%.

Heading	Phase	Rate	No. of Steps
Build Costs	1	£249.00	2.00 Up & Down
Build Costs	2	£269.00	2.00 Up & Down
Build Costs	3	£257.00	2.00 Up & Down
Build Costs	4	£268.00	2.00 Up & Down

Appendix 3: Height Premium Research

The Economics of Building Tall

James Barton

29th May 2014

Contact

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- The Corniche
- Paradise Street Liverpool
- Principal Place
- Battersea Power Station

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AGENDA

- Background & Context
- Value and the effect of Location & Height
- The Financial Challenges of Tall
- Design Economics & the Efficiency Drive

BACKGROUND & CONTEXT

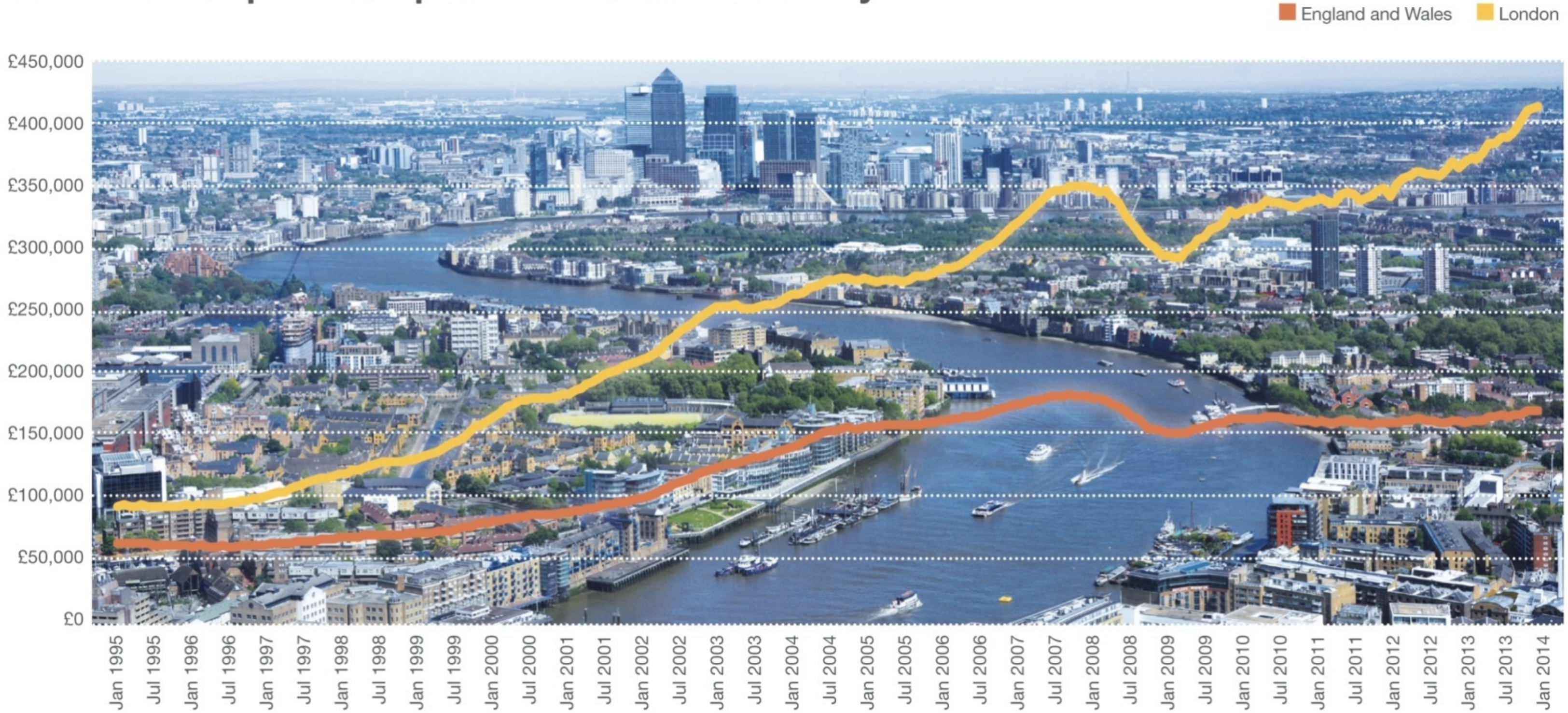
- Residential Renaissance – increasing trend for residential towers
- Intensity in Residential Development dictated by:
  - Lack of high quality Residential stock
  - Increasing land values
  - Unprecedented growth in sales
- Resistance to market volatility and price stagnation
- Extraordinary growth outside of traditionally strong areas

AECOM

BACKGROUND & CONTEXT - Residential

GRAPH 1

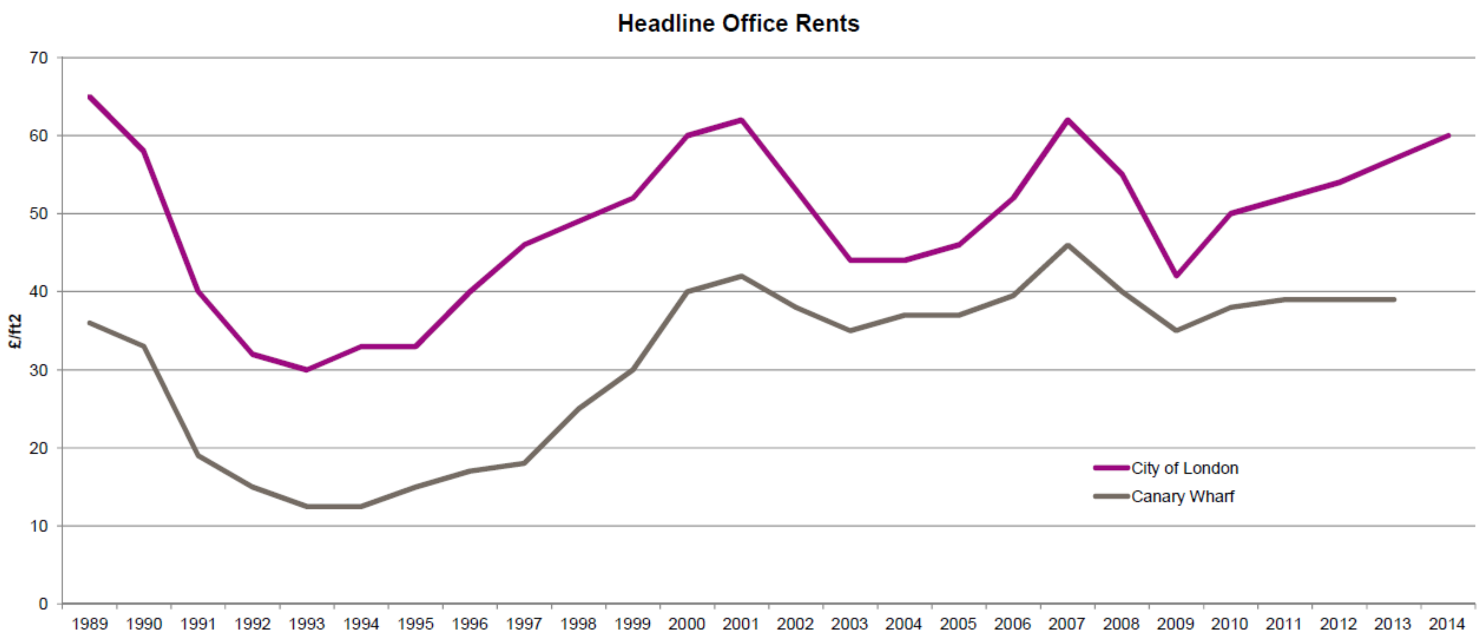
London house prices outpace the rest of the country



Source: Land Registry

BACKGROUND & CONTEXT - Offices

- Office Rentals – now weathered the storm
- Pre Recession – Upward trends and iconic architecture
- Post – Focus on Efficiency and simpler forms – Lipton



AECOM

SO WHAT?

INCREASING **DEMAND** *ON LAND AND PARTMENTS……,*

SPEED *TO MARKET &* **INFLATIONARY** *PRESSURE*

NEED TO FOCUS ON **ALIGNMENT** *OF DESIGN AND REVENUE,*

OPTIMIZATION *OF DESIGN ECONOMICS AND* **MINIMIZATIO**N

OF COSTS

VALUE & THE EFFECT OF LOCATION & HEIGHT

- London seen as a ‘Safety Deposit Box for International Investors’ – Peter Rees
- Location plays a fundamental role in sales and rental values

  Residential

  £700/sq.ft (Clapham) to £4,000 - £5,000/sq.ft (Super prime locations)

  Offices

  £35 – 45/sq.ft (Canary Wharf) to £ 60 – 70/sq.ft+ (City)

- The combination of tall building clusters provided by the GLA and location therefore has a significant viability relationship
- Tall Buildings do however add further value through increasing height

  Residential – 1.5% per floor (2.2% including penthouses)

  Offices – No formal report, but increased rents evidenced in current lettings at higher floors e.g. Walkie Talkie

The Financial Challenges of Building Tall

The Financial Challenges of Building Tall

- Towers inherently cost more to build (£/sf), take longer to construct and are less efficient (net to gross, wall to floor)

- Fundamental measures that underpin viability are cost, time and floor area efficiencies

- Ultimately, whilst the residual land value and development costs will be more, the additional density should result in significantly greater return on investment

- VALUE *less* COST = PROFIT

- Marked difference in value profiles , their costs reveal different profiles

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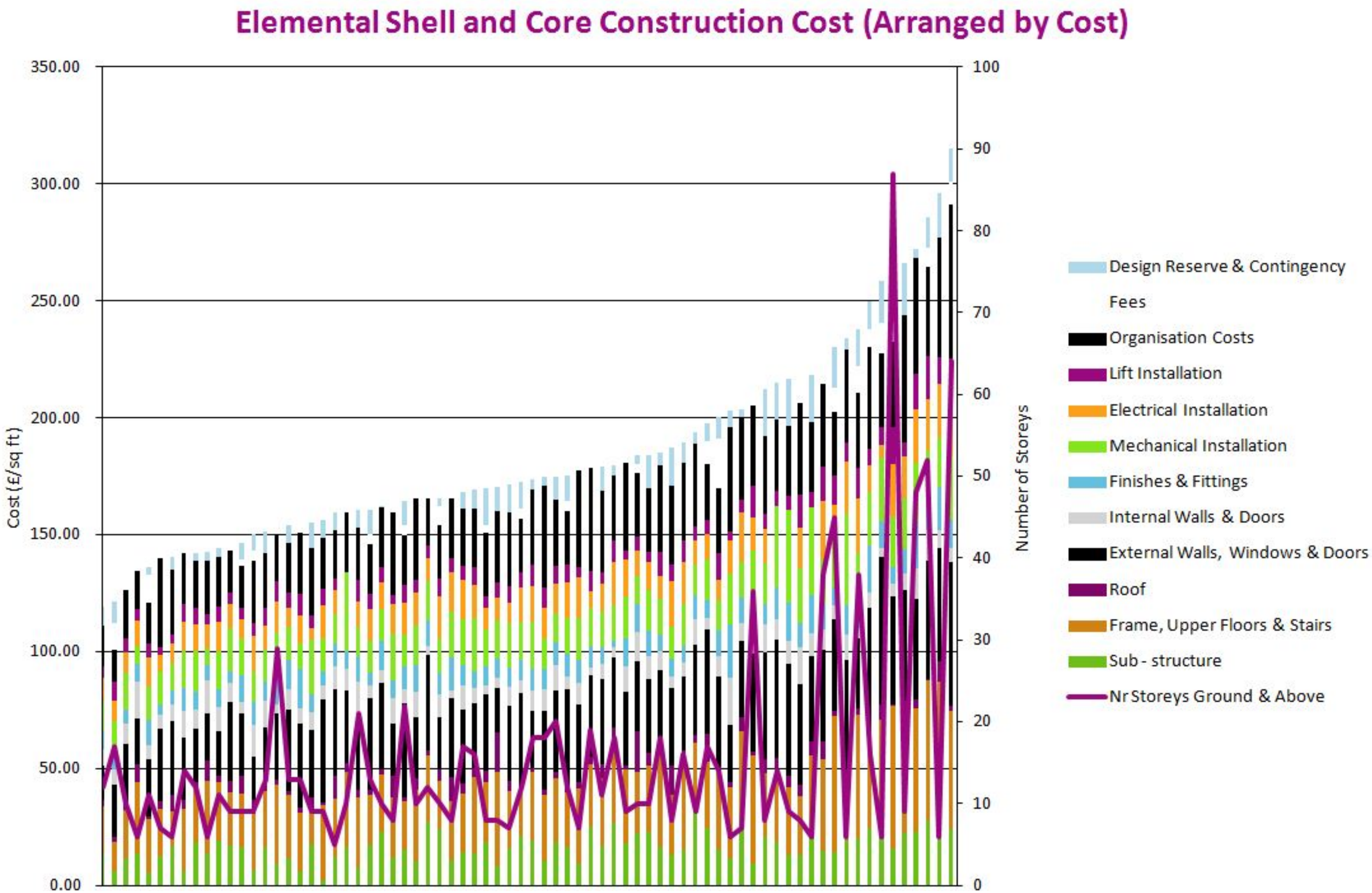
HEIGHT AND COST



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THE FINANCIAL CHALLENGES OF BUILDING TALL

Element	Offices		Residential	
	Low Rise (£/sf)	***High Rise (£/sf)***	***Low Rise (£/sf)***	***High Rise (£/sf)***
Substructures	13	20	10	13
Frame	28	50	25	30
Façade	35	45	38	45
Balconies / W/G	-	-	5	9
Walls & Finishes	14	22	10	13
Services	35	41	24	31
Lifts	10	18	5	8
On costs	40	50	28	41
Shell & Core	**175**	**250**	**140**	**190**
Typical Range	170 - 200	210 -275	130 – 150	170 – 210
% Increase for tall	25 to 40%		30 to 40%	

Note: Notional shell & core costs only (excluding fit out). Costs will inevitably vary according to location, site, etc.

TALL BUILDINGS - COST DRIVERS

- *Form, shape and technical complexity drive costs*
- *Iconic Architecture & Social Recognition* - The 'Hat & Boots' effect
- *Structure* – The lateral and vertical loads require additional restraints (outriggers, external bracing, enhanced cores, etc)
- *Facades* – Slenderness ratios typically drive additional costs on towers, as well as additional performance requirements to deal with wind loadings, mitigation of solar gain, etc)
- *Balconies (Resi)* – At height balconies become less desirable, with more expensive solutions such as recessed balconies and winter gardens being used.
- *Services* – The need to boost water supplies and pressurization of heating and cooling solutions generate further cost, whilst also reducing efficiency due to additional intermediate plant floors
- *Lifts* – Likely additional numbers and speeds
- *Logistics* – Typically in desirable locations, with high land values and restricted sites which has a profound effect on logistics, working restrictions, labour productivity and health and safety measures

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DESIGN ECONOMICS

HITTING THE SWEET SPOT

A few key thoughts…….

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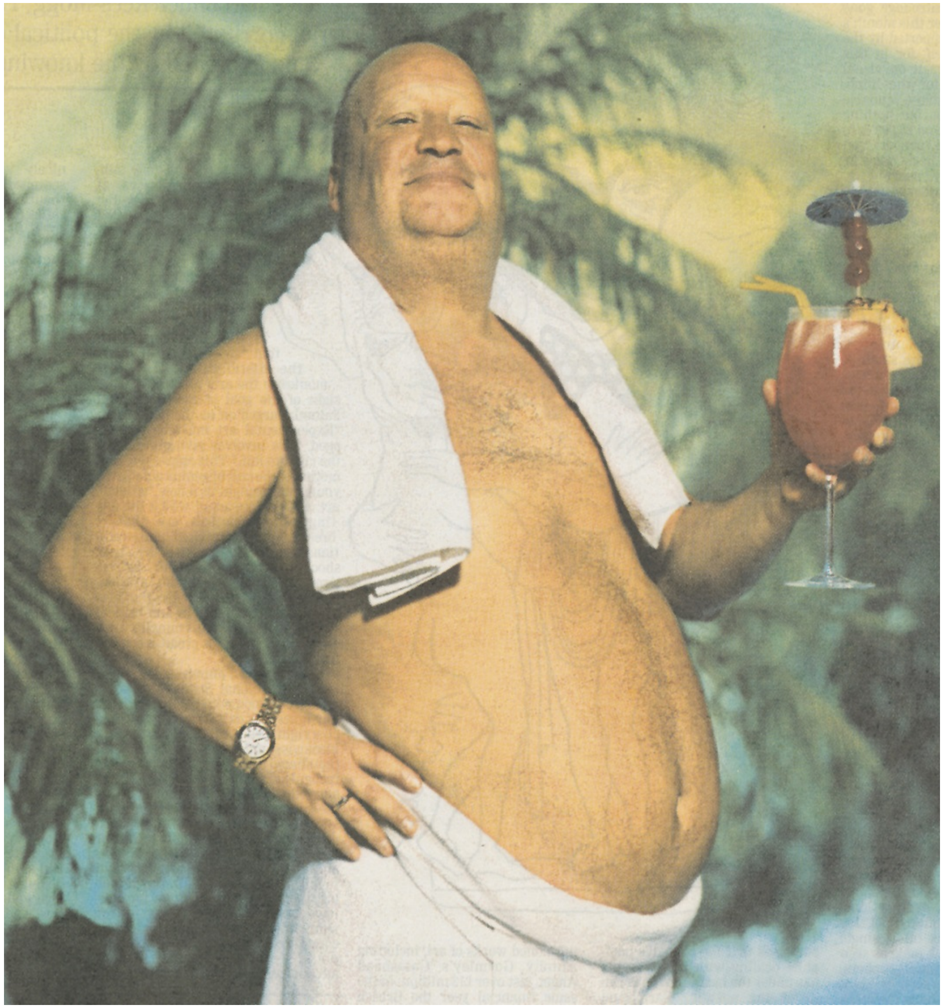
MAXIMISING FLOORPLATE DESIGN



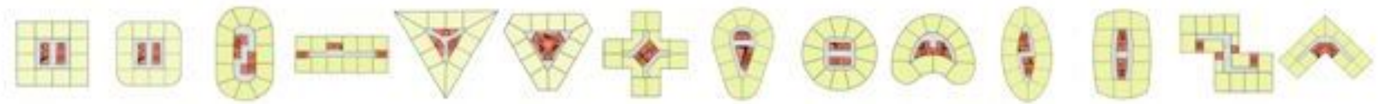
BIG IS BEAUTIFUL!

Maximize floorplate size

OPTIMISING FLOORPLATE DESIGN

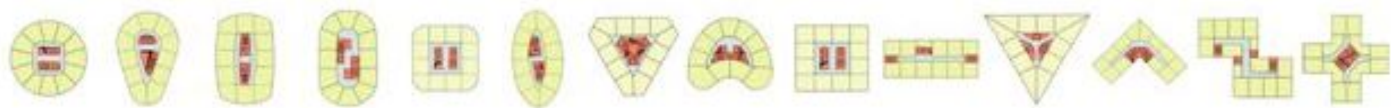
Efficiency

Net to Gross Ratio



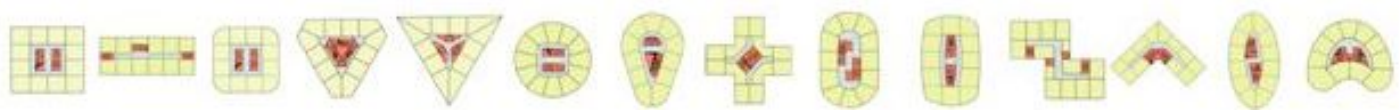
Façade Area

Wall to Floor Ratio



Cost

£/m² NSA



DESIRABLE **LESS DESIRABLE**

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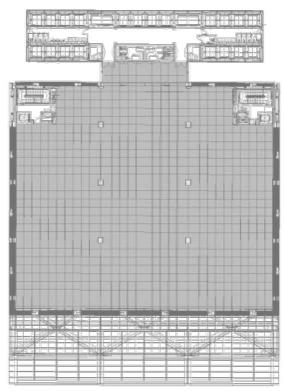
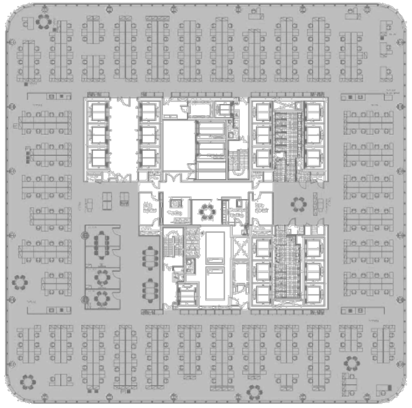
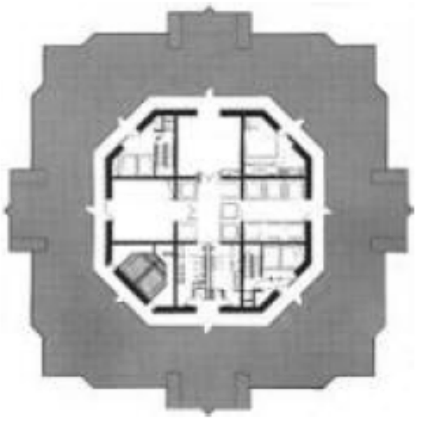
Note: Extract from a study conducted by Aedas Architects/Expedition Engineering/Davis Langdon

OFFICE FLOORPLATE COMPARISON

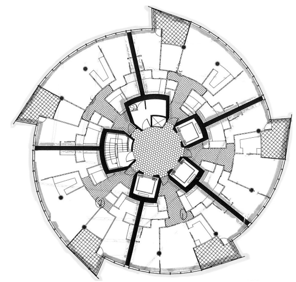


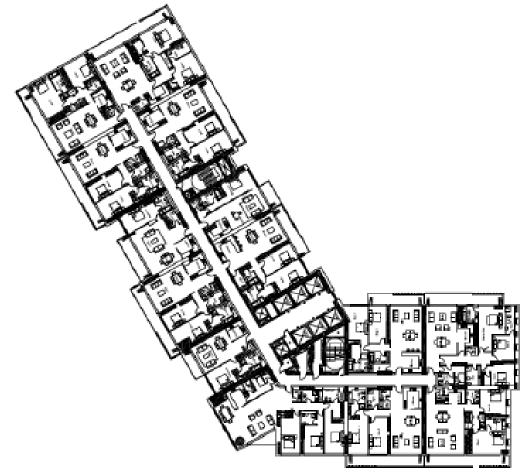




	City of London	Docklands	Far East
Example	*122 Leadenhall*	*HSBC, London*	*Jin Mao*
Floorplate	1,500 – 2,000	2,500 - 3,000	2,100 - 2,800
Wall: Floor Ratio	0.4 - 0.6	0.35 – 0.40	0.30 – 0.40
Storeys	35 - 50	40 – 50	70 – 100
Storey Height	4.0 – 4.2	4.0 – 4.2	3.7 – 4.2

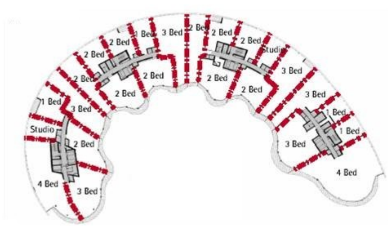
RESIDENTIAL FLOORPLATE COMPARISON

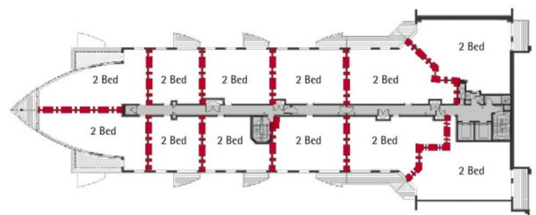
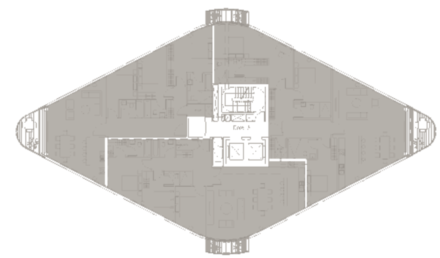




	UK Example	Middle East Example
Optimum Floorplate size (m^2)	650 - 750	1,500 - 2,500
Typical Floorplate Net to Gross (%)	79 - 84	79 – 83
Typical apartment size (m^2)	50 - 75	70 - 130
Wall to Floor Ratio	0.40 – 0.6	0.40 – 0.65
Typical Storey Height (m)	2.90 – 3.20	3.0 - 3.6
Nr of Cores	1	2

The Effect of £/m² GFA Based on £700/m² Average Façade Rate

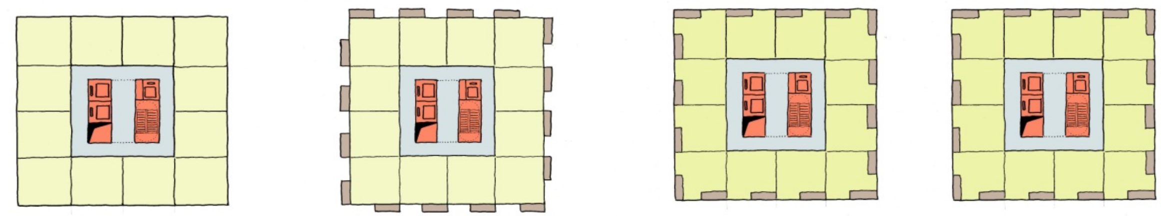


Wall to Floor	0.29	0.43	0.53	0.74
£/m² GFA	£200/m²	£300/m²	£370/m²	£520/m²
% Uplift	-	+50%	+86%	+160%

Target Range 0.45 – 0.55

THE IMPACT OF BALCONIES & WINTERGARDENS



	No Balconies	External Balconies	Recessed Balconies	Winter Gardens
Gross Floor Area	760m^2	760m^2	700m^2	760m^2
Net to Gross Ratio	80%	80%	78%	80%*
Wall to Floor Ratio	0.45	0.45	0.60	0.45
Cost Uplift per sqm net area	-	+ 9%	+ 26%	+ 30%

EAT AWAY AT THE CORE……to maximize net to gross

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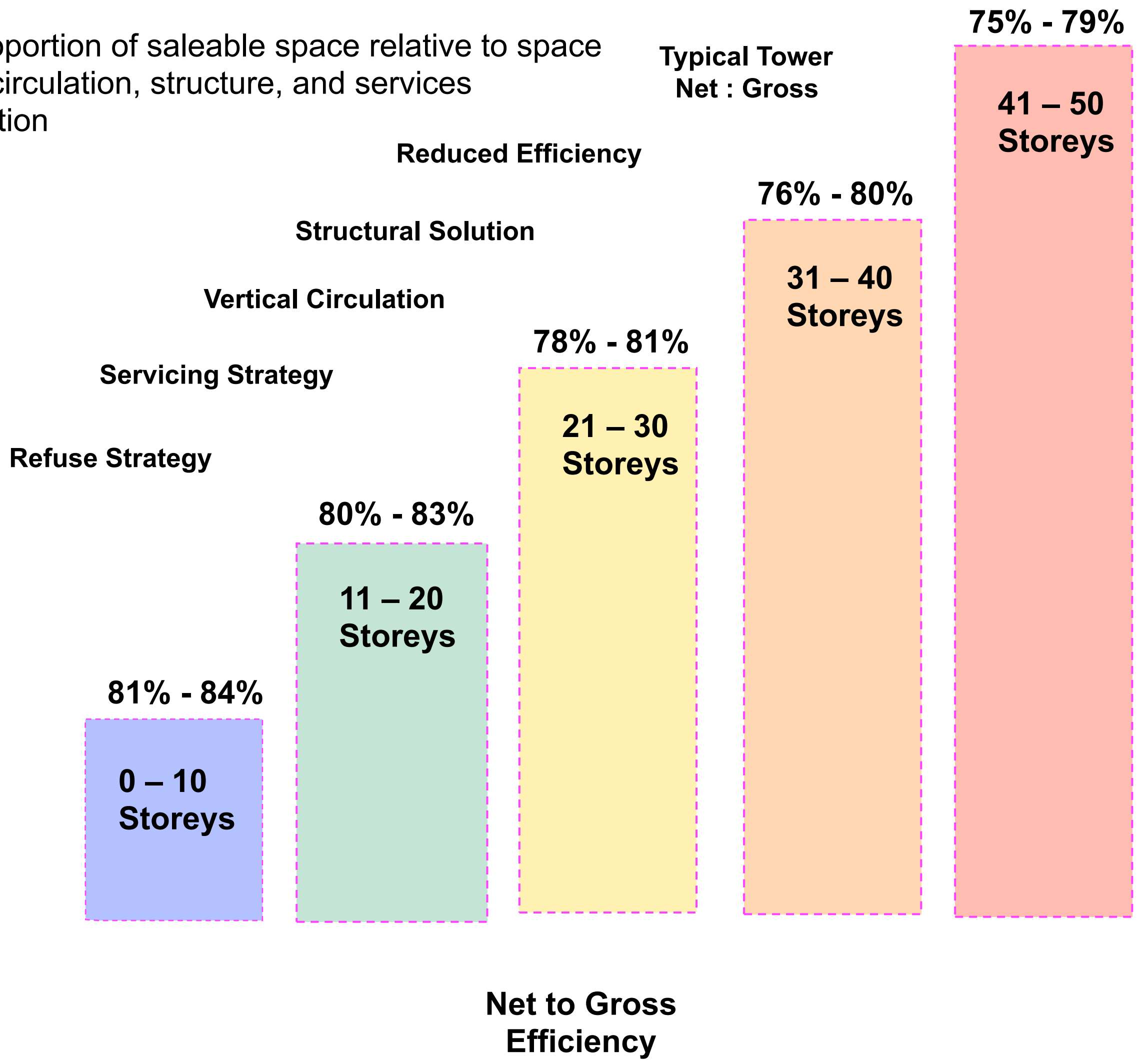
NET TO GROSS RATIO

Tall Buildings – Overall Typical Net to Gross Ratio Above Ground

The proportion of saleable space relative to space lost to circulation, structure, and services distribution



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Understanding the next threshold and design within it

e.g. when will an additional lift or intermediate plant floor need to be introduced

QUESTION FUTURE FLEXIBILITY

- Should Offices be designed for higher occupancy densities ?

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FINAL THOUGHT !

A DSIGNR KNWS HE HS ACHVD PRFCTN NT WHN THR IS NTHNG LFT TO AD, BT WHN THR IS NTHNG LFT TO TK AWY.

-Antoine de Saint-Exupery

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Thank You

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TOWERS AND THE HEIGHT PREMIUM IN LONDON

By David Butler and Jennet Siebrits, Residential Research

OVERVIEW

The necessity to build up rather than out has encouraged a resurgence of high rise living. But unlike the tower blocks of the 1960's tower developments now symbolise luxury living and can add substantial value. Towers are often designed to be provocative and iconic in a way that enhances their brand and therefore their value. Of the six towers we studied, we estimate they carry a premium of 36% over their local new build markets. Attributes like view, aspect, privacy and exclusivity are all enhanced by storey height and therefore within schemes pricing increases from floor to floor. We estimate that prices increase by an average of 1.5% per floor.

TOWERS IN LONDON

London was traditionally a low rise city, in large part due to building regulations following the Great Fire of 1666. London first residential towers arrived in the 1960's, built by local authorities to house social tenants. They were heralded as housing of the future but soon came to symbolise all that was wrong with public sector housing.

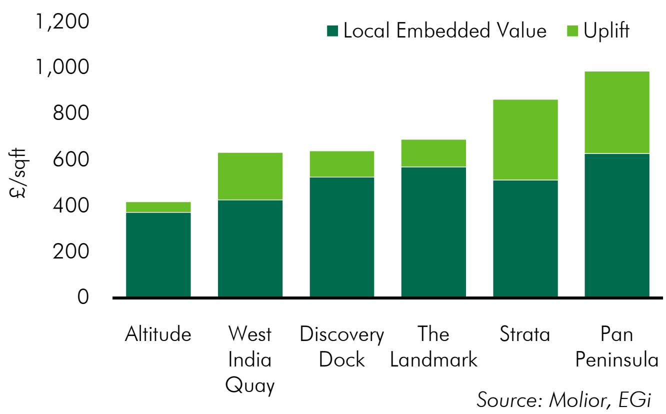
In the last 10 years there has been a strong resurgence of residential tower building in London, led by the private sector and built by famous architects looking to make a statement. This pattern has recently accelerated as demand from South East Asian investors has become a driving force in the market. These investors have long had a love affair with high rise living, and London developers have responded accordingly.

PRICING STRATEGIES WITHIN TOWERS

Height premiums are an important element of pricing strategies for high-rise residential developments; with extra height comes better views, exclusivity and privacy.

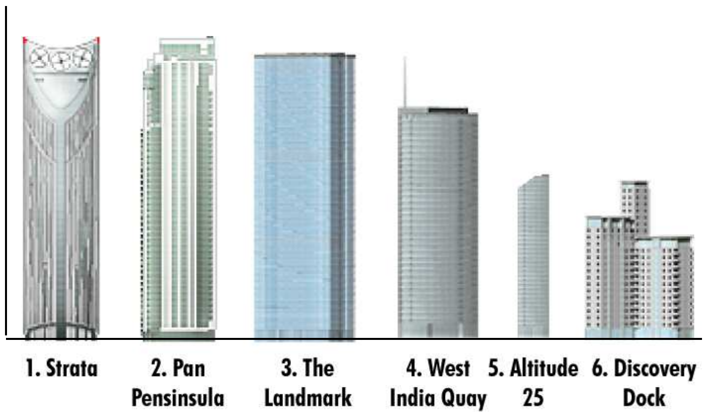
However, other factors also impact on price. For example, there might be additional price uplifts at certain levels due to the height and proximity of surrounding buildings.

Graph 1: Towers premium over local embedded value



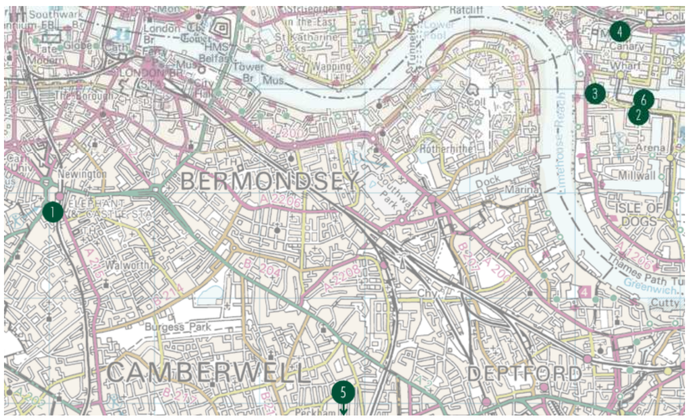
Source: Molior, EGi

Graph 2: Recently built London towers



Source: Skyscrapernews.com

Map1: Tower locations



Source: Ordnance Survey

DID YOU KNOW..?

Before lifts, storey height carried a discount. This quickly reversed after 1857 the first passenger elevator was installed at 488 Broadway in New York City.

TOWER PREMIUM

Well designed towers create a strong brand which enhances desirability and the premium it commands above surrounding lower rise developments. We sought to quantify this by looking at six recently completed towers and found that on average there was a 36% premium. For example 43 storey Strata in Elephant and Castle achieved a premium of 68.4% over the embedded value of the surrounding area. Pan Peninsula in Canary Wharf achieved a premium of 57.1% over the local embedded value. The uplift in Pan Peninsular is arguably more impressive given the larger number of comparable schemes on its doorstep that it has to compete with.

ISOLATING THE HEIGHT PREMIUM

When analysing the height premium, it is important to have a large sample of units across a range of buildings. Only that will allow us to unpick the extra value that height brings, independent from issues particular to the scheme itself like view or specification. To do this we analysed all 1,226 units in the six recently completed London towers.

Table 1: Unit by unit height premium

REF	SCHEME NAME	BUILDER	HIGHEST STOREY	UPLIFT PER FLOOR
1	Strata	Brookfield	43	2.0%
2	Pan Peninsula	Ballymore	48	1.9%
3	The Landmark	Chalegrove	44	1.3%
4	West India Quay	HOK International	34	1.8%
5	Altitude 25	Plumdean	25	2.2%
6	Discovery Dock	Capital & Provident	24	1.3%
			Average	1.5%

Source: Molior, EGi

Graph 3: Values against storey for individual units

On each scheme we worked out the average value per square foot for each floor and observed the floor by floor change. We indexed the values and the averaged across all schemes and saw the prices grow by around 1.5% per floor.

1.5% is the average but this varies according to view and location; the premiums varied within a fairly narrow range from 1.3% to 2.2%. The biggest floor premium was at Altitude 25 in Croydon with the smallest difference in The Land Mark and Discovery Dock, both in Canary Wharf.

CONCLUSION

Towers are landmarks by their very nature. Units within them carry a premium over lower level developments for a variety of reasons. Towers are often designed to be provocative and iconic in a way that enhances their brand. Of the six towers we studied, we estimate they carry a premium of 36% over their local new build markets. Attributes like view, aspect, privacy and exclusivity are all enhanced by storey height and therefore within schemes pricing increases from floor to floor. We estimate that prices increase by an average of 1.5% per floor.

For more information regarding the ViewPoint, please contact:

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