GT 3PM PORTFOLIO, PROGRAMME AND PROJECT MANAGERS

1 REGENT STREET

OUT-TURN COST AND PROGRAMME REVIEW

AUGUST 2022

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EXECUTIVE SUMMARY

TOTAL CONSTRUCTION COST (FINAL ACCOUNT)
£10,540,524

COST / M² = £3,417

COST / FT² = £317

- The following presentation has been set out to determine the out-turn costs & impact of the enhanced sustainability criteria on the 1 Regent Street Project

- The out-turn costs reflect as series of client changes and enhancement post RIBA Stage 4. In addition, it is noted that the pre-contract commercial negotiation secured an “abnormally low” position on contracts overheads and profits. Therefore, in the normalisation of the project out-turn cost this has been amended.

- A detailed programme review has been undertaken to ensure the appropriate risks of such schemes are recognized and all delay drivers identified.

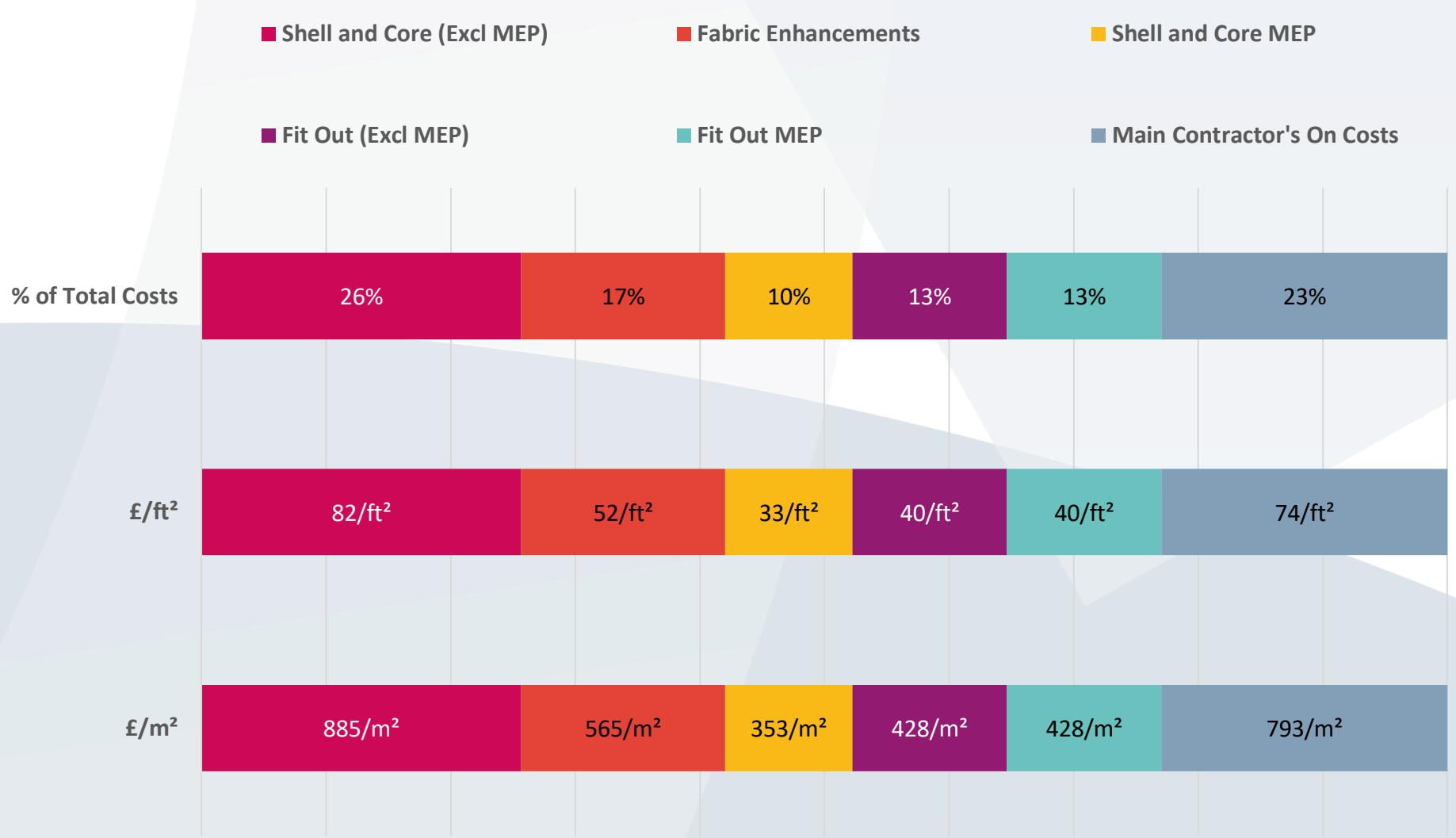
- A series of meetings have been held with UoC Estate Development to define the appropriate level of adjustment to be applied to the direct out-turn contract position. When normalising the data set, 1 Regent Street has an out-turn cost of which is comparable to commercial refurbishment projects.

- Specific contract clauses covering both COVID-19 and Brexit were negotiated which are considered an abnormal for atypical refurbishment scheme and therefore in the normalisation process have been identified and redacted.

- However, due to the high circular economy inputs required by the end user there are design elements which would not be typical of a normal refurbishment project such as:
  - Utilisation of Collect Eco a specialist collection service so that materials are removed and reused and not disposed offsite by the demolition contractor.
  - Replacement of windows to triple glazed. Typically, you would expect to reuse them with double glazed units.
  - Reuse of the existing raised access floor without any applied floor finishes.
  - Reuse of existing light fittings with a reduced warranty period.

COST ANALYSIS

1 REGENT STREET | BREAKDOWN OF TOTAL CONSTRUCTION COSTS



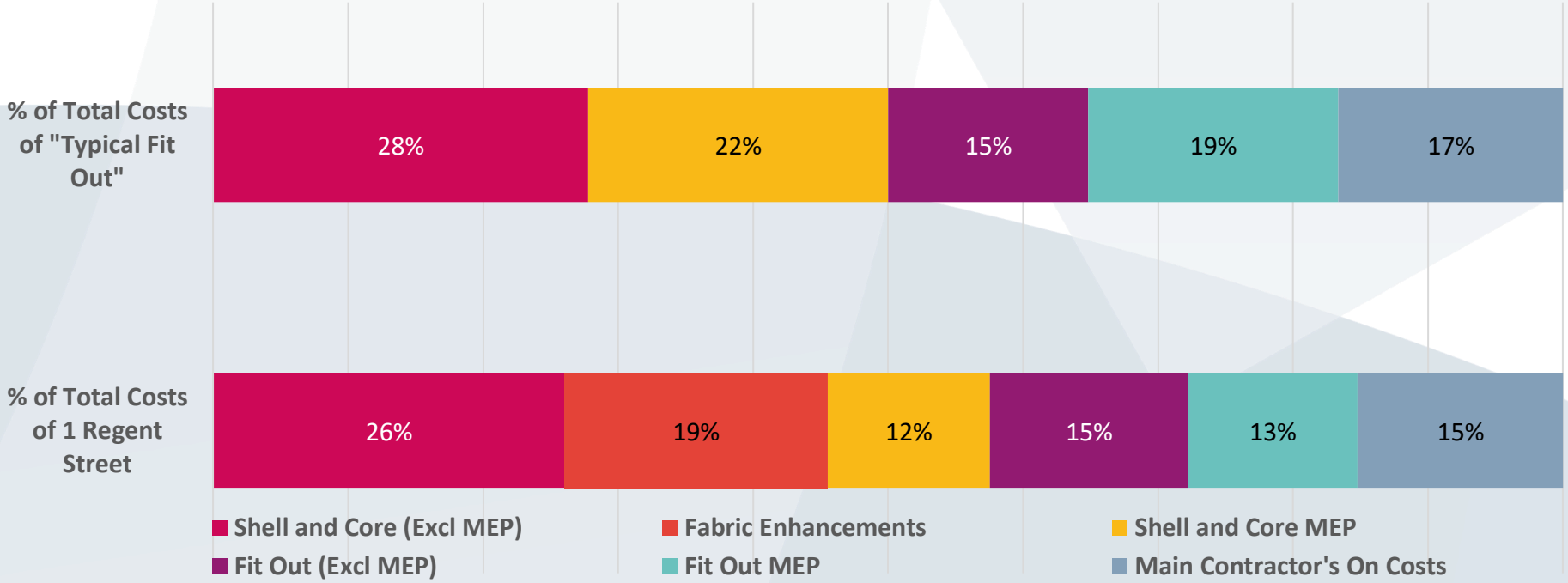
The below table normalises the total construction final account number to a baseline for comparison against

	TOTAL FINAL ACCOUNT	ADD INCREASED ISG OHP PROVISION	LESS CLIENT CHANGE & EXTERNAL MAINTENANCE WORKS	LESS ISG PROLONGATION COSTS	LESS PSC AND DESIGN FEES	LESS ISG COVID COSTS
SHELL AND CORE	£3,819,336	£3,819,336	£3,398,712	£3,398,712	£3,398,712	£3,398,712
FABRIC ENHANCEMENT	£1,741,520	£1,741,520	£1,741,520	£1,741,520	£1,741,520	£1,741,520
FITOUT	£2,534,524	£2,534,524	£2,433,128	£2,433,128	£2,433,128	£2,433,128
MAIN CONTRACTORS ON COSTS	£2,445,144	£2,616,225	£2,533,435	£2,305,605	£1,795,285	£1,360,690
TOTAL	**£10,540,524**	**£10,711,605**	**£10,106,795**	**£9,878,965**	**£9,368,645**	**£8,934,050**
£/FT²	£317	£323	£304	£298	£282	£269

A normal range of commercial refurbishment works, depending on the scope, would be between £200/ft² to £300/ft². Excluding replacement of the external envelope.

The graph below seeks to compare the component costs (as a % of total overall cost) of 1 Regent Street office refurbishment with a "typical" office refurbishment.

The key observation from this graph is that the additional investment in fabric enhancements (i.e. air tightness and U values) was largely offset by the simplification of the MEP systems within the building. In order to achieve this offset, an understanding of the end user experience is required to ensure the simplified system remains appropriate for the end user / occupier.



1 REGENT STREET | FABRIC ENHANCEMENT BREAKDOWN

Description	£/m² (GIA)	£/ft² (GIA)	Comments
Blowerproof	£24	£2.2	
Proclima contego solido tape	£10	£1.0	
Diathonite insulating breathable plaster	£141	£13.1	
Wraptherm insulation	£1.2	£0.1	
Gutex insulation	£73	£6.8	
Timber support to external wall	£152	£14.1	
Triple glazed windows	£210	£19.5	Window replacement may not be required in a traditional refurbishment, or single / double glazing may be suitable
Scaffolding	£67	£6.2	Requirement for window replacement. Traditional refurbishment windows would remain in-situ.
Existing building condition requiring further works for air tightness	£24	£2.2	
TOTAL	£702	£65	Inclusive of main contractors on costs and risk provisions

All costs in the above table are inclusive of main contractors on costs and risk provisions.

The above outlines the specific items that provided the fabric enhancement to 1 Regent Street which enabled the building to achieve its EnerPHit certification.

This fabric enhancement cost enabled the MEPH design to be simplified providing a saving which helps offset the cost of the fabric enhancement.

PROFESSIONAL FEES ANALYSIS

1. Professional fees are no different to a traditional refurbishment scheme and are linked to construction value and programme, assuming that the design team are well experience in sustainability and adopting a fabric first approach.

2. Key points are to ensure that the design team have worked with PassivHaus prior to starting to ensure that time is not lost and detailed are prepared appropriately.

3. Fees increased on this scheme due to prolongation in the overall programme & the change in procurement route from single stage to a two stage D&B procurement route.

4. However a suitable budget should be allowed for modelling as PassivHaus/EnerPhit requires modelling to ensure that the building is projected to be airtight and the electrical / mechanical load on the building does not exceed the limits of WELL and BREEAM criteria. At every change within the building, the model needs to be run to ensure the targets are kept.

5. Specific enhancements should be allowed for the certification process (BREAAM, WELL and EnerPHit).

PROGRAMME ANALYSIS

1. A detailed review of the as-built programme against the baseline has been undertaken.

2. The overall planned duration of 60 weeks (RIBA Stage 1 to end RIBA Stage 3) was achieved with a + 2 week delay.

3. RIBA Stage 4 and procurement was achieved some 8 weeks less than the UoC internal baseline.

4. Following the negotiation of the construction period with ISG and after securing allowances for COVID-19 and Brexit the contract period was in line with the initial baseline.

5. COVID-19 / Brexit had an impact on the scheme of c.9 weeks this was accounted for at contract award.

6. Site durations were then extended by following:
    1. Asbestos (survey & removal) – 4 weeks
    2. Existing Building defects – 7 weeks
    3. Client Changes – 11 weeks
    4. Contractor delays – 7 weeks
    5. Sub-contractor insolvency – 8 weeks

7. Overall post contract prolongation was 37 working weeks

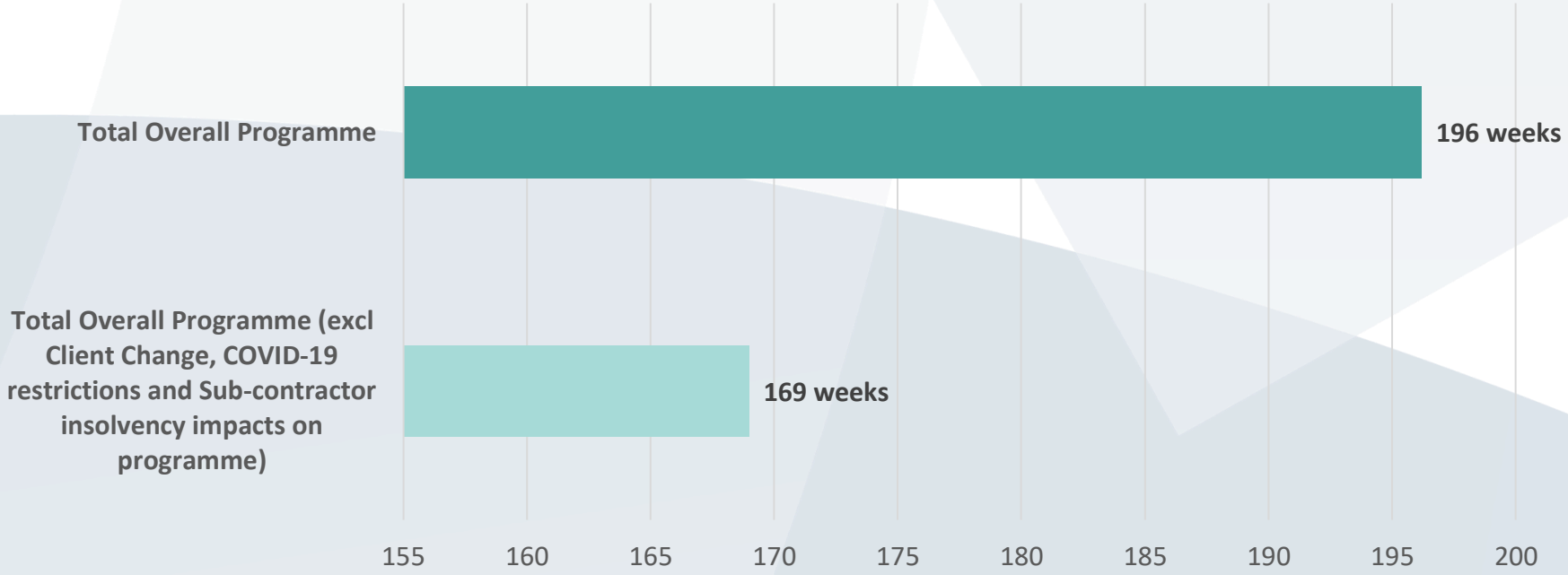
8. During the construction period the COVID-19 impact was managed by ISG however it was noted that both labour and material delays were experienced which account for the majority of the Contractor delays experienced.

The below table compares the baseline programme vs the out-turn programme of 1 Regent Street

Stage / Event	Initial Baseline			Out-turn Programme			Variance (wks)
	Start	Finish	Duration (wks)	Start	Finish	Duration (wks)	
RIBA Stage 1	July – 18	Oct – 18	12.7	July – 18	Oct – 18	14.9	+2.2
RIBA Stage 2	Oct – 18	Feb – 19	15.7	Nov – 18	Feb – 19	16.0	+0.3
RIBA Stage 3	Feb – 19	Sept – 19	31.6	Mar – 19	Sept – 19	27.3	-4.3
RIBA Stage 4	Sept – 19	Nov – 19	62.4	Oct – 19	July – 20	41.6	
Procurement / Funding				Aug – 20	Oct – 20	13.0	-7.8
RIBA Stage 5	Nov – 20	Oct – 21	46.6	Nov – 20	Aug – 21	38.0	
COVID-19 Uplift				Aug – 21	Oct – 21	9.0	
Asbestos (survey & removal)				Oct – 21	Nov – 21	4.1	
Existing building condition				Nov – 21	Jan – 22	7.0	
Client change				Jan – 22	Mar – 22	11.0	
Contractor delays				Mar – 22	May – 22	6.6	
Sub-contractor insolvency				May – 22	July -22	7.7	+36.8
RIBA Stage 6	Oct – 21			July - 22			
TOTAL DURATION (wks)			**169.0**			**196.2**	**+27.2**

1. Restrictions on site operational procedures as a result of COVID-19 impacted the construction programme by 5 weeks (this captured prior to entering into Contract).

2. During the construction period the COVID-19 impacts (other than any new restrictions) was a risk held and managed by ISG. It is noted that the labour force was impacted during the works due to infections and self isolations, as well as material supply.



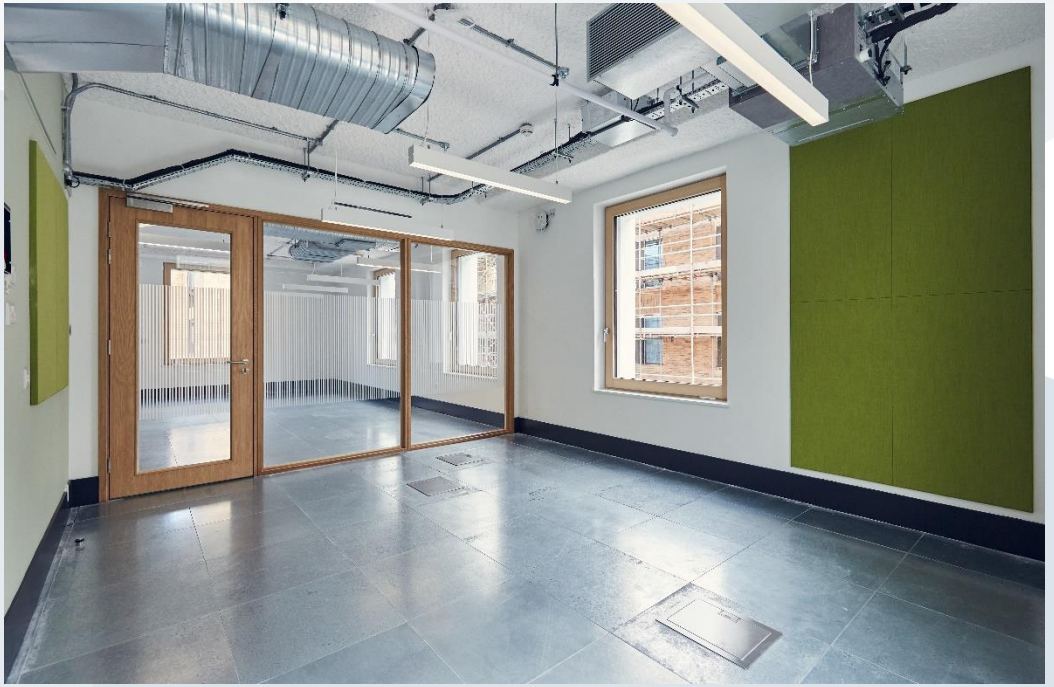
Adjustments exclude; Client Change, COVID-19 & Sub-contractor insolvency

END USER EXPERIENCE

1. The on floor office areas have exposed RAF with no floor finishes, exposed services with sonarspray finish, glazed partitions with painted walls and recycled / reused lights.

2. It is noted that a focus on the circular economy impacts on the end user experience if a meaningful impact is to be made.

3. Consideration to be given to:
   - Warranties availability and duration
   - Storage of materials
   - Condition of retained materials
   - Refurbishment cost and time
   - Overall aesthetic



The picture on the right highlights the finished product of a exemplar sustainable retrofit whilst ensuring circular economy principles are central to the project. This photo shows the reused light fittings, recycled paint and exposed RAF.

RISK ANALYSIS

- At contract award a detailed independent due diligence exercise was undertaken by UoC Estate Development. This highlighted that the key risks and uncertainty of the enhanced sustainability aspects were generally covered through the initial design stages

- Specific contract clauses were included to mitigate UoC's exposure to COVID-19 and Brexit impacts on the works. These risks were accepted by ISG on a time no cost basis. The Client retained existing building risk on the basis that ISG had not been afforded full opportunities to open up the structure pre-contract (constrained by COVID-19 issues).

- As part of the due diligence findings enhanced QSRA techniques were employed.

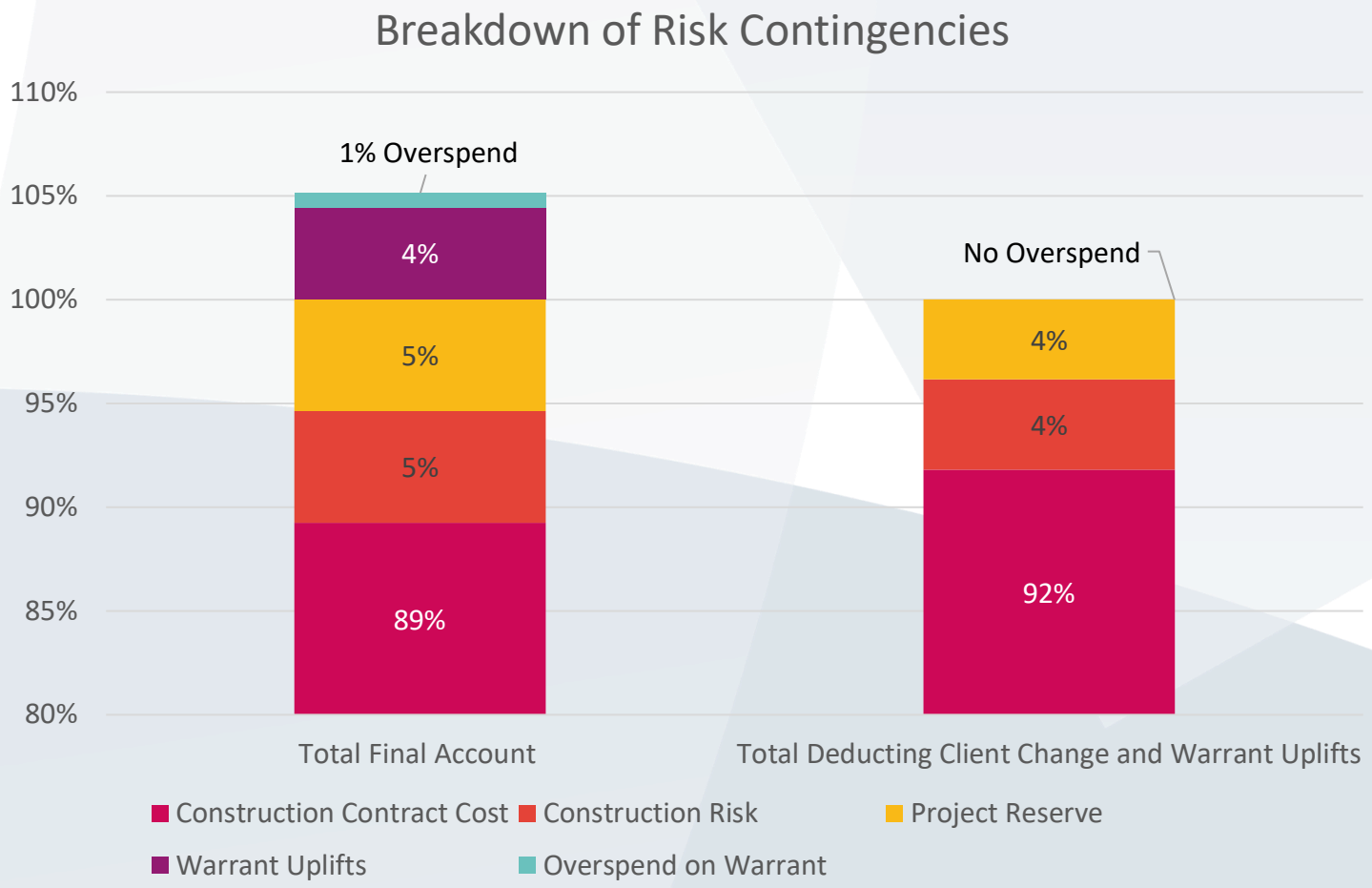
- The risk allowances for this project at the outset were:
- Construction risk at 6%
- Project Reserve at 6%

- The construction risk allowance used for this project were lower than the typical allowances that are outlined in the PDM of 8-15%, which recognised the funding constraints in place at this stage.

- The project reserve fell within normal levels of contingency stated in the PDM.

- We utilised a QRA analysis tool at pre-agreed quarterly periods to ensure that the remaining allowance fell within the standard deviation of what allowance would ensure the project was deliverable.

- When adjusted for Client change the proposed risk provisions would've been sufficient and accommodated the additional risks of the existing building.


Breakdown of Risk Contingencies
110%
105%
100%
95%
90%
85%
80%
1% Overspend
4%
5%
5%
89%
No Overspend
4%
4%
92%
Total Final Account
Total Deducting Client Change and Warrant Uplifts
Construction Contract Cost
Construction Risk
Project Reserve
Warrant Uplifts
Overspend on Warrant

Risk Theme	Cost Risk	Time Risk	Mitigation
Existing building perimeter / wall performance	H	M/L	Early intrusive surveys required
Basement waterproofing	M	M/L	Early intrusive surveys required
Asbestos in existing estate	M	M/H	Early intrusive surveys required
EnerPHit / Passivhaus experience	M	H	Proven expertise recommended or cover off learning curve
Thermal comfort range due to mixed mode approach	L	L	End user acceptance & understanding
Design continuity	L	M	Continuity of EnerPHit treatment is fundamental. Non-novation requires extensive due diligence of the design strategy. This introduces a delay in the design process
EnerPHit certification	L	M	Limited availability of independent certification bodies, early awareness & securing resource is important
Design life of retained elements	M	M	No checks undertaken on residual base build life span
Quantities of combustible materials			Design guide seeks avoidance which conflicts with desire for enhanced bio-based materials to improve carbon metrics
Market availability of materials and supply chain maturity of use	M	M	Specific materials not off the shelf and limited market availability
The supply of triple glazed windows	H	M/L	Early supply chain engagement and procurement of windows

Opportunity Theme	Cost Opp	Time Opp	Opportunity / Benefit
Circular economy	M	L	Requires contractor engagement and individuals buy-in / proactive approach by individuals
Reduced energy cost OpEx and potential CapEx	H	L	Both end user and estate stakeholders potentially gain a cost benefit
Construction will achieve higher EPC ratings on commercial buildings	M	L	2020 legislation to be made mandatory by 2030

KEY TAKEAWAYS

- **There is significant opportunity in existing building refurbishments to make a big difference and positive impact to the energy performance and overall sustainability of the building.**

- **The cost is not prohibitive to delivery, but requires an experienced design team and contractor, and a good understanding of all implications of the design principles to be applied to achieve highly sustainable objectives.**

- PassivHaus / EnerPHit schemes which have proven record of lowering the operational costs of the building in comparison to a traditionally built scheme. It is noted that this building has not been in operation long enough as yet to report on this, but this will be closely monitored.

- Early access and surveys on the existing building can allow for designing to achieve on high fabric performance aspirations and securing the best possible fixed price.

- As part of the post contract soft landings, and post occupation monitoring, the benefits of the reduced running / operation costs can be identified and there is an opportunity to reflect these back into the original business case.

- A review of the PDM standards and how they are applied to refurbishment projects would be beneficial to be undertaken, and how they respond to a highly sustainable brief.

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