



Hyas

**North Essex Local Plans
(Section 1)
Viability Assessment Update
Supplementary Information**

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The Supplementary Information set out in this note should be considered alongside the North Essex Local Plans (Section 1) Viability Assessment Update Main Report and Technical Appendix (Hyas, July 2019) which provide further information relating to the context, methodology and approach to assumptions. The information is provided "as is" without warranty of any kind. In no event shall the authors or publishers be liable for any claim, damages or other liability, whether in an action of contract, tort or otherwise, arising from, out of or in connection with, or the use of information set out in this study. The assessments are not intended to replace other viability assessment work required for valuation, compensation or wider purposes. The assessments are not formal RICS 'Red Book' valuations or should be relied upon as such.

1. Introduction & Overview

- 1.1 This North Essex Authorities (Braintree District Council, Colchester Borough Council and Tendring District Council) published additional evidence base documents in July 2019 in relation to the examination of the Shared Section 1 Local Plans. This included a “Viability Assessment Update Report” (Hyas, 2019, document reference EB/086) which considers the viability of the three proposed Garden Communities included in the shared Section 1 Local Plans prepared by the North Essex Authorities. This is an update of, and supplementary to, the previous Viability Assessment work published in 2017.
- 1.2 The Viability Assessment Update Report had been prepared to address the matters raised through discussions at the Examination in Public in 2018 and incorporated additional evidence that the North Essex Authorities had assembled in the intervening period. The study addressed the specific assumptions referenced by the Planning Inspector including the approach to contingencies, land costs, scheme financing and the pace of delivery.
- 1.3 This Supplementary Information has been prepared to address two matters raised by the Inspector following his initial review of the Viability Assessment Update Report (EB/086). This paper does not supersede the analysis or findings published in July 2019, but provides additional supplementary material to respond to the Inspectors requests. The two specific matters relate to the approach to viability assessments of the West of Braintree Garden Community, and the rate of delivery of housing across each of the Garden Communities.

Approach to West of Braintree Garden Community

- 1.4 In the Viability Assessment Update (Hyas, 2019, EB/086), the West of Braintree Garden Community has been assessed on the basis of both the area proposed in the NEAs Section 1 and the area proposed in the emerging Uttlesford District Plan (in total 685ha with a maximum capacity of 12,500 dwellings). The approach therefore tests the overall viability of the Garden Community including development proposed in both Uttlesford and Braintree. The viability work was supported by more detailed consideration of phasing, infrastructure requirements and their costs as set out in the AECOM Infrastructure Planning, Phasing and Delivery Report (EB/088) and the Gleeds Infrastructure Order of Costs Estimate Report (EB/087).
- 1.5 The Uttlesford District Council Local Plan was submitted for examination on 18 January 2019 and was subject to (stage 1) examination hearings which concluded in July 2019. The Uttlesford Local Plan includes the proposed part of the West of Braintree Garden Community within the Uttlesford District area.
- 1.6 The Uttlesford Local Plan was supported by viability evidence to consider the delivery of the Garden Community solely within the Uttlesford District Council area (Troy Planning & Three Dragons, June 2018). This analysis is less detailed than the evidence gathered by the NEAs (in terms of land use, itemised infrastructure requirements and phasing), but with a similar

residual land value methodology. The viability evidence indicated that the Garden Community proposal in UDC was viable.

- 1.7 The Inspector for the North Essex Authorities has advised that his role is to examine the soundness and legal compliance of the North Essex Section 1 Plan as submitted, and that Policies SP7 and SP10 of the submitted Section 1 Plan propose a West of Braintree Garden Community solely within Braintree District with a maximum capacity of 10,000 dwellings.
- 1.8 In order to enable the Inspector to assess the soundness of the proposal in the submitted Section 1 Plan, he has requested that additional viability work is undertaken to assess the West of Braintree proposal on the same basis as is proposed in the Section 1 Plan, i.e. to exclude the area of land in Uttlesford District, for a Garden Community with a maximum capacity of 10,000 dwellings.

Approach to Garden Community Delivery Rates

- 1.9 The Inspector has also noted that the viability assessments for each of the Garden Communities contained in EB/086 have been based on a maximum delivery of 300 dwellings per annum. In his letter of 8 June 2018 (IED/011) he had advised that while it was not impossible that one or more of the GCs could deliver at rates of around 300, he had considered it would be more prudent to plan, and carry out viability appraisal on the basis of an annual average of 250.
- 1.10 The NEAs have undertaken considerable additional evidence gathering on this matter and have submitted the “Build out rates in the Garden Communities Topic Paper” (EB/082) as part of the

broader body of evidence in July 2019. This was referred to in the Viability Assessment Update (EB/086) at paragraphs 4.15 and 4.16, and a rate of 300 has been adopted.

- 1.11 The NEAs still consider that a rate of 300 is appropriate for all the reasons set out in the Topic Paper. However, as the Inspector has requested additional viability assessments to be carried out based on a rate of 250, these have been undertaken for information purposes only.

Wider Considerations

- 1.12 It was set out and recognised within the Viability Assessment Update that any consideration of viability ought to fully recognise and appreciate a wide range of factors will influence viability over time. The overall scale and pace of delivery are examples of such considerations, but so are many other factors which may depress or enhance viability going forward.
- 1.13 The Viability Assessment Update identified a number of specific other matters such as changes in general economic conditions, infrastructure requirements, funding and costs, impacts of quality placemaking, value inflation outpacing cost inflation and others which would all have demonstrable impacts. There are potentially endless scenarios that could be modelled and ultimately a balanced judgement is required. This will need to be based upon a rounded consideration of all relevant and potential influences on the long-term viability of such projects to enable a view to be taken on whether there was ‘reasonable prospect’ of delivery.

2. Supplementary Information: West of Braintree Garden Community

2.1 The Scenarios as set out in the Viability Assessment Update (EB/086) have been re-run based upon a consideration of development within the Braintree District Council administrative area (only). The analysis has been based upon the methodology and assumptions as set out in the Viability Assessment Update (EB/086) with the following amendments:

- Land use assumptions have been revised to reflect the West of Braintree Concept Framework (EB/012) prepared by AECOM in May 2017, for land within the Braintree District Council only (in total 496 hectares, as per Figure 2.1).
- Residential density adjusted to equate to the delivery of 10,000 residential units overall.
- Affordable housing at 30% in line with the NEA Section 1 draft policy requirements.
- Income from land sales to accord with the revised range and quantum of land uses.
- Adjustments to certain infrastructure costs to reflect the lower scale of development.

2.2 Given the lower scale of development, infrastructure costs have been amended in line with the following key assumptions:

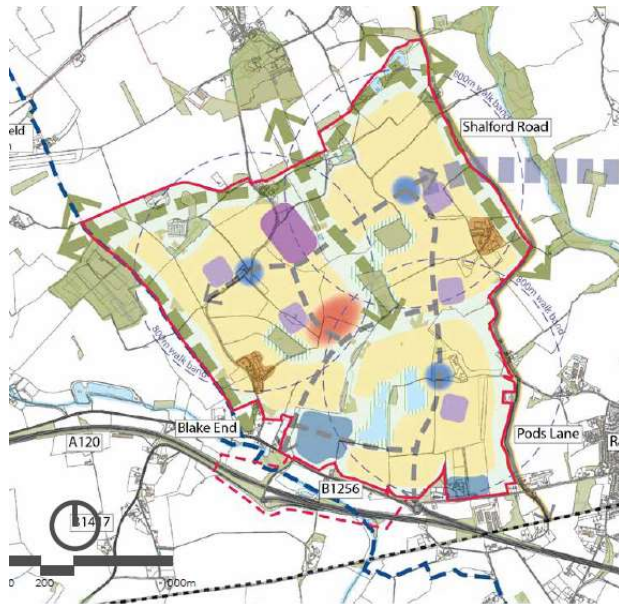
- Scheme Wide Enabling Works. The approach retains the cost per unit rates as per the Viability Assessment Update, applied over the lower overall quantum of units.

- Scheme Wide Community Infrastructure (Education, Community Health & Well Being, Open Space, Environmental). The approach retains the cost per unit rates as per the Viability Assessment Update, applied over the lower overall quantum of units.
- Scheme Wide Other Itemised Infrastructure. All items in this category have been retained at the same cost and phasing assumptions as per the 12,500 unit scenarios as set out in the Viability Assessment Update. There could be items in this category which may require less expenditure due to the lower quantum of development, but they are generally defined items (such as utilities works, road improvements, rapid transit, etc) and it is considered prudent to retain them in full for the purposes of the supplementary analysis.
- Other items. Items based on a per unit basis have been recalculated. The exception is costs for 'Investment in early phase public transport' which is retained at the same amount as the 12.500 scenarios, and reprofiled over first 10 years of delivery.

2.3 Based upon the above amendments, the overall strategic infrastructure costs have reduced from £665m to £570m primarily due to the reduction in overall scale of development and associated requirements. However the equivalent cost per unit has increased from £53,000 to £57,000 as not all infrastructure costs have been adjusted downwards, therefore retaining the original costs to be now addressed by a lower quantum of

development. A full comparison of infrastructure cost assumptions between the 12,500 and 10,000 unit scheme is included at Appendix 1.

Figure 2.1: West of Braintree (BDC only)



Source: North Essex Garden Communities - West of Braintree Concept Framework (AECOM, 2017, examination document EB/012)

West of Braintree 10,000 unit scheme viability outcomes

2.4 The outcome of the Viability Assessment Update scenarios for the West of Braintree Garden Community based upon the delivery of 10,000 units within the Braintree District Area only is set out in

Figure 2.2. These illustrate the final residual land values calculated back to an equivalent value per acre.

Figure 2.2: West of Braintree 300 Units pa Scenarios: Maximum Residual Land Values (per gross acre)

	Scenarios		
	Reference	Grant	Inflation
10% Contingencies	£164,398	N/A	£705,356
20% Contingencies	£141,800	N/A	£673,184
40% Contingencies	£96,569	N/A	£608,841

2.5 The assessments indicate that under the Reference Scenarios residual land values range from £164k/acre with 10% contingencies to £97k/acre at 40% contingencies. Inflation Scenarios produce considerably higher residual values. Internal Rates of Return under the Reference based scenarios range from 8.3-8.5%, and for the Inflation scenarios 7.3%-7.4%.

2.6 When compared to the 12,500 scheme analysis, residual land values for the 10,000 BDC scheme are higher in the Reference Case scenarios (due in part to the adjustment to the affordable housing proportion) but slightly lower under the Inflation Case scenarios (due to a shorter delivery programme and reduced impact of compounded inflation). This analysis indicates that similar conclusions can be drawn in terms of the overall viability of the scheme with a lower quantum of development, as set out and explained further in the Viability Assessment Update report.

3. Supplementary Information: Amended Housing Delivery Rate

- 3.1 As set out earlier in this note, the Viability Assessment Update based upon a maximum delivery rate of 300 dwellings per annum remains the core evidence on the viability for each of the Garden Communities. In response to the request of the Inspector, all scenarios have been re-run based upon a maximum residential delivery rate of 250 units per annum and are provided for information purposes only.
- 3.2 The analysis has been based upon all the methodology and assumptions as per the Viability Assessment Update with the following amendments:
- Extended delivery period of the residential development at a maximum of 250 units per annum (commercial retained as per the original scenarios).
 - Income from land sales to accord with the revised programme of residential delivery.
- 3.3 The scope and cost of all infrastructure items has been retained in line with the previous analysis.
- 3.4 As the delivery of housing and therefore the build-up of population requiring services and facilities has been extended, so has the timing of the need for certain related infrastructure requirements. The timing of the delivery of the following infrastructure elements have been extended to accord with the longer delivery period:
- Education: extended in line with the revised trajectory to deliver specific new primary and secondary schools and early years facilities infrastructure at the same equivalent 'trigger points' in terms of the build-up of residential completions across the sites;
 - Community, Health & Well Being: as above extended but in line with original trigger points;
 - Open Spaces, Leisure & Sports: as above extended but in line with original trigger points;
 - Environmental / sustainability / waste: per unit contribution reprofiled to the updated trajectory;
 - Scheme wide other itemised infrastructure (transport & utilities): No changes to phasing if the specific costs were profiled within first 5 years of scheme delivery, as the influence of a changed delivery rate is marginal in the short term. Costs further into the future have been reprofiled to align with the equivalent number of residential completions as trigger points. The phasing of costs for the Rapid Transit System have not been adjusted to retain consistency with the timing information as set out in the Rapid Transit for North Essex Study (ECC/Jacobs, 2019, document reference EB/079).
 - Other items: where costs were calculated on a per unit basis then they have been reprofiled to the updated trajectory. The stewardship contributions have been extended in line with the revised trajectory, with lump sums maintained at the same trigger points.

3.5 All other assumptions have been retained and are fully explained within the main Viability Assessment Update Report (EB/068).

West of Braintree 250 Units Scenarios

3.6 Residual Land Values (RLVs) for the West of Braintree Garden Community based upon a maximum delivery rate of 250 units per annum are set out in Figure 3.1. These illustrate the final residual land values calculated back to an equivalent value per acre and cover both the 12,500 unit scheme as originally considered and the 10,000 scheme as per Section 2 of this document.

Figure 3.1: West of Braintree 250 Units pa Scenarios: Maximum Residual Land Values (per gross acre)

	Scenarios		
	Reference	Grant	Inflation
Original Scheme: 12,500 units (BDC & UDC areas)			
10% Contingencies	£97,335	N/A	£746,600
20% Contingencies	£76,046	N/A	£715,973
40% Contingencies	£33,458	N/A	£654,719
BDC Scheme: 10,000 units (BDC area only)			
10% Contingencies	£126,278	N/A	£733,111
20% Contingencies	£101,624	N/A	£697,639
40% Contingencies	£52,315	N/A	£625,113

3.7 The assessments reveal that for West of Braintree Borders 12,500 unit scheme under the Reference Scenarios the RLVs range from £97,335/acre at 10% contingencies to £33,458/acre at 40%

contingencies. Inflation scenarios produce considerably higher residual land values. Internal Rates of Return under the Reference scenarios range from 7.9-8.1%, and for the Inflation scenarios 6.8%.

3.8 The assessments reveal that for West of Braintree Borders 10,000 unit scheme under the Reference Case Scenarios the RLVs are higher, between £126,278/acre at 10% contingencies to £52,315/acre at 40% contingencies. Inflation scenarios again produce considerably higher residual land values. Internal Rates of Return under the Reference scenarios range from 8.2-8.3%, and for the Inflation scenarios 7.1%.

3.9 The RLVs across all scenarios are lower than those generated compared to a 300 dwelling per annum build out rate, due to the extended delivery programme and increased finance costs. The outcomes indicate that under all modelled scenarios the RLVs are comfortably in excess of Existing Use Values under the Reference Scenarios, with higher values for the BDC only (10,000 unit) scheme. Inflation Scenarios generate results not dissimilar to those set out in the Viability Assessment Update report.

Colchester Braintree Borders 250 Units Scenarios

3.10 The RLVs for the Colchester Braintree Borders Garden Community based upon a maximum delivery rate of 250 units per annum are set out in Figure 3.2. These illustrate the final residual land values calculated back to an equivalent value per acre.

Figure 3.2: Colchester Braintree Borders 250 Units pa Scenarios: Maximum Residual Land Values (per gross acre)

	Scenarios		
	Reference	Grant	Inflation
10% Contingencies	Less than EUV	£74,203	£638,055
20% Contingencies	Less than EUV	£57,656	£581,435
40% Contingencies	Less than EUV	£24,522	£467,939

3.11 The assessments reveal that for Colchester Braintree Borders under the Reference Case Scenarios the cashflow would still be negative and therefore not achieve Existing Use Values. Under the Grant scenarios RLVs would be between £74,203/acre at 10% contingencies £24,522/acre at 40% contingencies. Inflation scenarios again produce considerably higher RLVs. Internal Rates of Return under the Grant based scenarios range from 8.6-8.9%, and for the Inflation scenarios 6.6%.

3.12 The RLVs across all scenarios are lower than those generated compared to a 300 dwelling per annum build out rate, due to the extended delivery programme and increased finance costs. The outcomes indicate that under the Grant Scenarios the residual land values are all higher than Existing Use Values, and the Inflation based scenarios are considerably in excess - similar to those set out in the Viability Assessment Update report.

Tendring Colchester Borders 250 Units Scenarios

3.13 The RLVs for the Tendring Colchester Border Garden Community based upon a maximum delivery rate of 250 units per annum are

set out in Figure 3.3. These illustrate the final residual land values calculated back to an equivalent value per acre.

Figure 3.3: Tendring Colchester Borders 250 Units pa Scenarios: Maximum Residual Land Values (per gross acre)

	Scenarios		
	Reference	Grant	Inflation
10% Contingencies	£44,634	£198,234	£369,528
20% Contingencies	£25,854	£190,801	£343,167
40% Contingencies	Less than EUV	£175,934	£290,233

3.14 The assessments reveal that for Tendring Colchester Borders under the Reference Case Scenarios RLVs range from £44,634/acre at 10% contingencies but do not achieve a positive residual at the highest level of 40% contingencies. Under the Grant scenarios, RLVs would be between £198,234/acre at 10% contingencies to £175,934/acre at 40% contingencies. Inflation scenarios again produce considerably higher RLVs. Internal Rates of Return under the Reference based scenarios range from 9.1-9.2%, under Grant based scenarios they are 8.8-9.0%, and for the Inflation scenarios 7.8-7.9%.

3.15 The RLVs across all scenarios are lower than those related to a 300 dwelling per annum build out rate. The outcomes indicate that under the reference case values would be above Existing Use Values under the 10% and 20% contingencies but not at 40% contingencies. Grant and inflation based scenarios generate results similar to those set out in the Viability Assessment Update report.

Appendix 1: West of Braintree Infrastructure Comparison

Development Phasing	Original (BDC+UDC)	BDC only	Comment
Cumulative Housing Completions	12,500	10,000	Amended to within BDC boundary only
Scheme Wide Enabling Works			
Site Preparation & Enabling Costs	£230.4 m	£184.3m	Retained same equivalent 'per unit' cost (£18,434). Lower overall cost due to reduced scale of development.
Scheme Wide Community Infrastructure			
Education	£105.9m	£84.7m	Retained same equivalent 'per unit' cost (£8,474). Lower overall cost due to reduced scale of development.
Community & Health	£23.3 m	£18.6m	Retained same equivalent 'per unit' cost (£1,861). Lower overall cost due to reduced scale of development.
Open Spaces, Leisure & Sports	£33.6 m	£26.9m	Retained same equivalent 'per unit' cost (£2,688). Lower overall cost due to reduced scale of development.
Environmental / sustainability / waste	£6.3 m	£5m	Retained same equivalent 'per unit' cost (£500). Lower overall cost due to reduced scale of development.
Scheme Wide other itemised infrastructure			
Utilities: New water plant to treat additional capacity (on site)	£7.7m	£7.7m	Unchanged for the purpose of this analysis.
Utilities: 1 medium to low pressure reducing station	£0.6m	£0.6m	Unchanged for the purpose of this analysis.

Utilities: Electricity: Primary Substation 132/11 kV with 2 x 45 MVA transformers	£11.2m	£11.2m	Unchanged for the purpose of this analysis.
Utilities: Electricity: 132 kV connection to Primary Substation from Braintree Grid	£9.2m	£9.2m	Unchanged for the purpose of this analysis.
Utilities: Electricity: Diversion Works	£2.0m	£2.0m	Unchanged for the purpose of this analysis.
Utilities: Potable Water: Connection to closest feasible supply & lowering main	£4.2m	£4.2m	Unchanged for the purpose of this analysis.
Utilities: Waste Water: upgrades to water course discharges & pumping to river	£3.6m	£3.6m	Unchanged for the purpose of this analysis.
Utilities: Gas: Extension to medium pressure network	£1.0m	£1.0m	Unchanged for the purpose of this analysis.
Utilities: Telecoms: fibre optic network access chambers and diversions	£3.6m	£3.6m	Unchanged for the purpose of this analysis.
Transport WoB1 : Improvements to existing A120 junction &	£7.4m	£7.4m	Unchanged for the purpose of this analysis.

connection with B1256			
Transport WoB2: New Western access from A120	£7.9m	£7.9m	Unchanged for the purpose of this analysis.
Transport WoB3: Full Junction upgrade to A120	£10.2m	£10.2m	Unchanged for the purpose of this analysis.
Transport WoB5: Provision of RTS (Route 3) on site	£16.9m	£16.9 m	Unchanged for the purpose of this analysis.
Transport WoB6: Provision of RTS network (Route 3 - off site)	£64.2m	£64.2 m	Unchanged for the purpose of this analysis.
Transport WoB7: Transit Hub & interchange facilities	£6.0m	£6.0m	Unchanged for the purpose of this analysis.
Transport WoB8, 9 & 10: Walking & cycling including greenways, footway to Rayne, Pods Lane connection	£15.7 m	£15.7 m	Unchanged for the purpose of this analysis.
Transport: WoB11 & 12: Upgrade existing & new pedestrian bridge	£10.9 m	£10.9 m	Unchanged for the purpose of this analysis.
Transport WoB 15: Bus only slips onto A120	£1.6 m	£1.6 m	Unchanged for the purpose of this analysis.
Other Items			
Transport WoB4: Contribution to off-site strategic highways	£31.3 m	£25.0m	Retained same equivalent 'per unit' cost (£2,500). Lower overall cost due to reduced scale of development.

Transport WoB13: Travel plan measures	£6.3 m	£5.0m	Retained same equivalent 'per unit' cost (£500). Lower overall cost due to reduced scale of development.
Transport WoB14: Investment in early phase public transport	£5.4 m	£5.4m	Unchanged for the purpose of this analysis.
Other: Funding for employment & economic development activities	£12.5 m	£10.0m	Retained same equivalent 'per unit' cost (£1,000). Lower overall cost due to reduced scale of development.
Other: Long term stewardship endowment	£26.2 m	£21.0m	Retained same equivalent 'per unit' cost (£2,100). Lower overall cost due to reduced scale of development.
Infrastructure Cost: Total	£665.1m	£569.9m	Lower cost overall due to amendments above.
Infrastructure Cost: Per unit	£53,000	£57,000	Cost per unit has increased due to the costs for the 'Scheme Wide other itemised infrastructure' items being maintained at the same level, but with a lower number of units for them to be apportioned over.

Appendix 2: Cashflows (scope)

The following cashflows are available in the accompanying (separate) document.

West of Braintree Garden Community – 10,000 units scheme

West of Braintree (UDC & BDC areas)	
Reference 10% contingencies	WoB 10K 1A REFERENCE C10%
Reference 20% contingencies	WoB 10K 1B REFERENCE C20%
Reference 40% contingencies	WoB 10K 1C REFERENCE C40%
Inflation 10% contingencies	WoB 10K 3A INFLATION C10%
Inflation 20% contingencies	WoB 10K 3B INFLATION C20%
Inflation 40% contingencies	WoB 10K 3C INFLATION C40%

All Garden Communities – 250 dwelling per annum

West of Braintree (10,000 Units BDC area only)	
Reference 10% contingencies	WoB 10K 1A REFERENCE C10% 250
Reference 20% contingencies	WoB 10K 1B REFERENCE C20% 250
Reference 40% contingencies	WoB 10K 1C REFERENCE C40% 250
Inflation 10% contingencies	WoB 10K 3A INFLATION C10% 250
Inflation 20% contingencies	WoB 10K 3B INFLATION C20% 250
Inflation 40% contingencies	WoB 10K 3C INFLATION C40% 250
West of Braintree (12,500 units, BDC and UDC areas)	
Reference 10% contingencies	WoB 1A REFERENCE C10% 250
Reference 20% contingencies	WoB 1B REFERENCE C20% 250
Reference 40% contingencies	WoB 1C REFERENCE C40% 250
Inflation 10% contingencies	WoB 3A INFLATION C10% 250
Inflation 20% contingencies	WoB 3B INFLATION C20% 250
Inflation 40% contingencies	WoB 3C INFLATION C40% 250

Colchester Braintree Borders	
Grant 10% contingencies	CBB 2A GRANT C10% 250
Grant 20% contingencies	CBB 2B GRANT C20% 250
Grant 40% contingencies	CBB 2C GRANT C40% 250
Inflation 10% contingencies	CBB 3A INFLATION C10% 250
Inflation 20% contingencies	CBB 3B INFLATION C20% 250
Inflation 40% contingencies	CBB 3C INFLATION C40% 250
Tendring Colchester Borders	
Reference 10% contingencies	TCB 1A REFERENCE C10% 250
Reference 20% contingencies	TCB 1B REFERENCE C20% 250
Grant 10% contingencies	TCB 2A GRANT C10% 250
Grant 20% contingencies	TCB 2B GRANT C20% 250
Grant 40% contingencies	TCB 2C GRANT C40% 250
Inflation 10% contingencies	TCB 3A INFLATION C10% 250
Inflation 20% contingencies	TCB 3B INFLATION C20% 250
Inflation 40% contingencies	TCB 3B INFLATION C20% 250



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