



Elemental Cost Plan and Considerations

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Trinity Group Ltd

Table of Contents

Elemental Cost Plan Summary.....	2
Elemental Cost Plan.....	5
Tender Clarifications	6
Recommended Procurement Strategy	7
Recommended Form of Contract	7
Risk Management	9
Conclusion.....	11

Elemental Cost Plan Summary

The elemental cost plan has been prepared to provide the client, namely, ACE Capital Projects Ltd with an informed overview of the anticipated construction costs associated with the Proposed Construction Centre of Excellence. The cost plan has been developed in accordance with elemental cost planning principles and reflects the current project scope, proposed design intent and anticipated construction methodology. The elemental breakdown has been structured to provide transparency across the major building components and to support cost certainty throughout the tender evaluation process. The total projected contract sum for the development is estimated at £8,436,236.72.

The overall building subtotal is estimated at £4,872,044.62 with the most significant proportion of expenditure associated with the building services installations. This reflects the technical complexity of the project, particularly the integration of specialist environmental simulation systems, advanced mechanical and electrical services and specialist installations required replicate real life weather conditions within the facility. The allocation of £1.5 million under special installations demonstrates the specialist nature of the building and the importance of early coordination with specialist subcontractors and suppliers during the pre-construction phase.

Substructure costs have been estimated at £464,750.00 and include foundations, ground-bearing elements and associated excavation works. These costs have been developed based on assumed ground conditions and standard foundation solutions. Following intrusive site investigations, further allowances can be made dependant on the results.

The superstructure package represents a significant proportion of the construction cost at £1,089,994.22. This includes the structural frame, upper floors, roofing systems, internal partitions, external envelope systems and associated architectural

components. The cost plan reflects the employer's requirements to incorporate both traditional and modern construction method areas within the development, allowing direct comparison between different forms of construction for the end users studies.

The finishes package has been estimated at £289,971.00 and includes wall, floor and ceiling finishes throughout the facility. The allowances reflect the intended educational and demonstration function of the building while maintaining durability and operational practicality suitable for a high-usage training environment.

The services package is the most substantial cost element within the project at £2,704,229.40. This is driven by the extensive mechanical, electrical, ventilation, communications and specialist environmental systems required within the facility. Due to the complexity of these systems, early contractor involvement and specialist supply chain engagement will be critical to ensuring buildability, cost certainty and programme coordination.

A further allowance of £250,000 has been included for prefabricated buildings and building units for the modern method house to be incorporated into the build. From a Main Contractor perspective, the use of prefabricated or modular elements will also provide programme advantages through reduced onsite construction durations, improved quality control and reduced labour requirements. However, procurement lead times and supply chain coordination will require careful management during the pre-construction phase.

External works have been estimated at £538,486.50 and include site preparation, hard landscaping, drainage infrastructure, fencing and associated external works. These works are essential to supporting the operational functionality of the facility and ensuring compliance with access, drainage and external circulation requirements.

Preliminaries have been assessed at £1,808,372.52, reflecting the anticipated project duration, site management requirements, temporary works, welfare provisions, health and safety compliance and overall site establishment costs associated with delivering a technically complex development. Given the specialist nature of the facility, enhanced coordination, supervision and commissioning activities are anticipated throughout the construction period.

Main Contractor overheads and profit have been incorporated at approximately £361,000. This allowance reflects the commercial management responsibilities, project risk exposure and resource requirements associated with undertaking a complex specialist educational facility under a Design and Build procurement route.

In addition to the elemental construction costs, allowances have also been included for other project costs and client contingency provisions. A contingency allowance of

£250,000 has been incorporated to address residual project risks, design development and unforeseen construction issues that may arise throughout the project lifecycle.

Overall, the elemental cost plan demonstrates that the project is commercially feasible subject to effective procurement management, specialist contractor engagement and ongoing cost control throughout the design development and construction phases.

From my perspective as the Quantity Surveyor for Trinity Group, maintaining cost certainty while coordinating specialist installations, sustainability requirements will be fundamental to the successful delivery of the Construction Centre of Excellence.

Elemental Cost Plan



Element	Total cost
01 Substructure	£ 464,750.00
02.01 Frame	£ 275,593.52
02.02 Upper Floors	£ 64,262.00
02.03 Roof	£ 182,683.00
02.04 Stairs	£ 34,100.00
02.05 External Walls	£ 104,282.20
02.06 External Windows and Doors	£ 166,300.00
02.07 Internal Walls and Partitions	£ 223,723.50
02.08 Internal Doors	£ 39,050.00
02 Superstructure	£ 1,089,994.22
03.01 Wall Finishes	£ 63,685.60
03.02 Floor Finishes	£ 154,990.00
03.03 Ceiling Finishes	£ 71,295.40
03 Finishes	£ 289,971.00
04 Fittings, Furnishings and Equipment	£ 73,100.00
05.01 Sanitary Installations	£ 29,448.10
05.02 Services Equipment	£ -
05.03 Disposal Installations	£ -
05.04 Water Installations	£ 111,592.80
05.05 Heat Source (Costs included elsewhere)	
05.06 Space Heating and Air Conditioning (Costs include other elements)	£ 317,729.50
05.07 Ventilating Systems	£ 49,596.80
05.08 Electrical Installations	£ 364,226.50
05.09 Fuel Installations	£ 3,099.80
05.10 Lift and Conveyor Installations	£ 110,000.00
05.11 Fire and Lightning Protection	£ 38,747.50
05.12 Communications and Security Installations	£ 147,240.50
05.13 Special Installations	£ 1,500,000.00
05.14 Builder's Work in Connection with Services (BWIC)	£ 32,547.90
05 Services	£ 2,704,229.40
06 Prefabricated Buildings and Building Units	£ 250,000.00
07 Work to Existing Building	£ -
Building Sub-total	£ 4,872,044.62
08.01 Site Preparation Works	£ 63,250.00
08.02 Roads, Paths, Pavings and Surfacing	£ 163,625.00
08.03 Soft Landscaping, Planting and Irrigation Systems	£ 22,000.00
08.04 Fencing, Railings and Walls	£ 115,500.00
08.05 External Fixtures	£ 11,000.00
08.06 External Drainage	£ 139,131.50
08.07 External Services (Costs include other elements)	£ 23,980.00
08.08 Minor Building Works and Ancillary Buildings	£ -
08 External Works	£ 538,486.50
00.01 Toxic/Hazardous/Contaminated Material Treatment	£ -
00.02 Major Demolition Works	£ -
00.03 Temporary Support to Adjacent Structures	£ -
00.04 Specialist Groundworks	£ -
00.05 Temporary Diversion Works (Costs included elsewhere)	£ -
00.06 Extraordinary Site Investigation	£ -
00 Facilitating Works	£ -
09 Preliminaries	£ 1,808,372.52
10 Main Contractor's Overheads and Profit	£ 360,945.18
Total Less Preliminaries	£ 5,771,476.30
Total (less Design Fees)	£ 7,579,848.81
11 Project/Design Team Fees	
12 Other Development/Project Costs	£ 606,387.91
13 Risk (Clients Contingencies)	£ 250,000.00
Total Contract sum	£ 8,436,236.72

Tender Clarifications

1. The tender sum is valid for a period of 30 days and is based on the information available at tender stage and is subject to further design development and coordination.
2. All costs are based upon current market conditions and material pricing at the time of tender submission.
3. Inflation beyond the tender validity period has not been included unless specifically stated.
4. The tender assumes a continuous workflow with uninterrupted access throughout the construction phase
5. Any client instructed variations or design changes following tender submission may result in adjustments to cost and programme accordingly.
6. Utility connection charges by statutory undertakers are excluded unless specifically identified within the elemental cost plan.
7. Professional fees, planning application fees and legal costs are excluded unless otherwise stated.
8. Trinity Group reserves the right to adjust provisional allowances following specialist subcontractor engagement and detailed design development.
9. The proposal is based upon outline design information and conceptual layouts provided by Trinity Group as part of this tender submission and are drafted by Tim Mills.
10. Detailed coordination of specialist weather simulation systems will be undertaken during RIBA Stage 3 to 4.
11. Final M&E coordination drawings will be subject to specialist contractor design input.
12. Any changes required due to statutory approvals, Building Regulations or planning conditions may affect cost and programme.
13. Acoustic, thermal and environmental performance requirements are assumed to comply with current UK Building Regulations.
14. The tender assumes ground conditions are consistent with available site investigation information submitted as part of the tender.
15. No allowance has been included for contaminated material remediation unless identified within the project documentation.
16. Archaeological investigations, asbestos removal or unforeseen obstructions are excluded unless specifically noted.
17. Existing underground services are assumed to be accurately identified within existing utility surveys.

18. Temporary traffic management outside the site boundary is excluded unless specifically required by the local authority. Traffic Management Plans for your consideration are included as part of this tender submission.
19. The proposed construction programme produced by the Trinity Group Site Management is based upon uninterrupted site access.
20. Adverse weather beyond standard seasons may affect programme durations.
21. Long lead-in specialist equipment procurement periods are subject to supplier confirmation.
22. Trinity Group assumes timely client approvals and design sign-off throughout the construction phase.

Recommended Procurement Strategy

Trinity Group recommends that the client consider a Two-Stage Design and Build procurement strategy for the Construction Centre of Excellence. The project included several specialist subcontract elements such as Weather simulation facilities, M&E Systems, traditional and modern construction houses and sustainability technologies and net zero initiatives.

Due to this complexity, early contractor involvement would provide significant benefits during the design development stage.

During Stage One, Trinity Group would be appointed based on preliminaries, overheads, profit, methodology and team capability. We would then collaborate with ACE Capital Projects Ltd to develop the design and establish package pricing.

Once design development and package procurement have progressed sufficiently, Trinity Group would agree the final contract sum with the client and execute the construction contract.

Recommended Form of Contract

From the perspective of Trinity Group as the Main Contractor, it is recommended that the Construction Centre of Excellence is procured using the NEC4 Engineering and Construction Contract (ECC) Option A. The NEC4 suite of contracts is widely recognised within the UK construction industry for promoting collaboration, proactive project management and effective risk management procedures between project stakeholders. Due to the technical complexity of the proposed development the NEC4 Option A contract is considered an appropriate contractual arrangement for the successful delivery of the project.

NEC4 Option A operates as a lump-sum contract whereby the Main Contractor is paid against completed activities identified within an agreed Activity Schedule. The contract

provides a high degree of cost certainty for the Client, as the contract sum is established at the outset of the project. From Trinity Group's perspective, this procurement arrangement provides clear commercial structure and valuation procedures throughout the construction phase. However, under Option A, the majority of cost risk remains with the Contractor, requiring robust cost management, detailed programme control and proactive supply chain coordination to ensure successful project delivery within the agreed contract sum.

A significant advantage of NEC4 Option A is the inclusion of structured early warning procedures and compensation event mechanisms. The early warning process encourages both the Client and Main Contractor to identify and communicate potential risks at the earliest opportunity in order to minimise their impact on cost, programme and quality. This collaborative management approach is particularly beneficial for a technically complex project such as the Construction Centre of Excellence, where specialist installations and evolving design coordination may introduce construction risks during the delivery phase.

In addition, the compensation event process provides a formal contractual mechanism for managing changes to the works, including Employer instructions, unforeseen site conditions and design developments. This creates greater transparency in the management of change and assists Trinity Group in maintaining commercial control throughout the construction period. Due to the specialist nature of the facility, including the integration of weather simulation systems and modern methods of construction, the likelihood of design coordination changes and specialist contractor input during construction is increased. Therefore, the structured change management procedures contained within NEC4 Option A are considered highly beneficial.

The NEC4 contract also places considerable emphasis on programme management and regular communication between project stakeholders. The requirement for an accepted programme and ongoing programme updates allows progress to be monitored effectively throughout the construction phase. From Trinity Group's perspective, this supports improved planning, sequencing and coordination of subcontractor activities, particularly in relation to specialist mechanical and electrical installations, prefabricated building elements and commissioning activities.

Furthermore, this contract aligns effectively with the proposed Two-Stage Design and Build procurement strategy recommended for the project. Early contractor involvement during the pre-construction phase would allow Trinity Group to contribute towards buildability reviews, value engineering exercises, procurement planning and specialist subcontractor coordination prior to finalisation of the contract sum. This collaborative approach would assist in improving cost certainty while reducing the potential for programme delays and construction inefficiencies.

Although this contract places greater commercial responsibility upon the Main Contractor compared to some traditional procurement routes, the contract's collaborative management philosophy and clearly defined procedures are considered advantageous for a complex educational and specialist facility. The contract encourages early identification of risk, proactive problem solving and continuous communication between the Client, Project Manager and Contractor, all of which are essential to the successful delivery of this scheme.

Risk Management

Effective risk management is fundamental to the successful delivery of the Construction Centre of Excellence due to the technical complexity, specialist installations and sustainability requirements associated with the project. The development incorporates a range of construction, commercial and operational risks which have the potential to impact cost certainty, programme performance and overall project delivery if not proactively managed throughout the pre-construction and construction phases.

One of the primary risks identified by Trinity Group relates to ongoing inflation and volatility within the UK construction market. Fluctuations in material prices, labour costs and supply chain availability continue to present significant commercial uncertainty across the industry. Key construction materials, specialist mechanical and electrical components and prefabricated systems may experience cost escalation or procurement delays during the project lifecycle. As the majority of cost risk under the proposed NEC4 Option A contract would sit with Trinity Group, robust procurement management, early supplier engagement and contingency planning would be required to minimise the impact of market volatility on the agreed contract sum which we believe greatly benefits ACE Capital Projects Ltd.

Another significant risk relates to the procurement and coordination of specialist weather simulation systems required within the facility. The development includes advanced environmental testing and simulation capabilities which will require specialist subcontractor involvement. Delays in specialist design development, manufacturing lead times or commissioning activities could adversely affect both programme and cost performance. To mitigate this risk, Trinity Group would seek early contractor involvement with specialist suppliers during the pre-construction phase to improve buildability, programme sequencing and procurement certainty.

Ground conditions and unforeseen site constraints also present potential construction risks. Although preliminary site investigations may provide an indication of expected ground conditions, unforeseen obstructions, poor ground bearing capacity or underground service conflicts could result in additional excavation, foundation redesign

or programme delays. Trinity Group would therefore recommend that intrusive ground investigations and utility surveys are completed prior to commencement on site in order to reduce the likelihood of unforeseen issues.

Design development and client-driven changes during the construction phase represent another key project risk. Due to the specialist and evolving nature of the facility, there is potential for ongoing design coordination and amendments to the employer's requirements throughout the project lifecycle. Such changes could impact programme durations, subcontractor coordination and overall project costs. Under NEC4 Option A, these risks would be managed through the contract's compensation event procedures; however, Trinity Group would seek to minimise unnecessary design changes through early design coordination meetings, structured approval processes and proactive stakeholder engagement.

Labour availability and subcontractor performance remain ongoing risks within the UK construction industry and may affect the delivery of specialist packages. The requirement for skilled labour associated with the various trades required may create resource pressures during key stages of the programme. Trinity Group would seek to mitigate this risk through early supply chain engagement, careful subcontractor selection and detailed programme management procedures.

Health and safety risks are also considered a major priority due to the complexity of the construction activities and specialist installations associated with the development. The coordination of mechanical and electrical services, structural works, specialist environmental systems and working on a live site with university students in the surrounding areas introduces additional construction hazards which must be carefully managed in accordance with CDM Regulations and Trinity Group's internal health and safety procedures. Detailed construction phase planning, risk assessments and ongoing site supervision would therefore be essential throughout the delivery phase.

From a programme perspective, delays associated with statutory approvals, utility connections or specialist equipment procurement could significantly impact the overall project completion date. As NEC4 Option A places considerable emphasis on programme management, Trinity Group would utilise detailed programme monitoring, regular progress reviews and early warning notifications to proactively identify and manage any potential delays before they escalate into critical programme issues.

Overall, the successful delivery of the Construction Centre of Excellence will rely upon proactive risk identification, collaborative project management and robust commercial control procedures. Early contractor involvement, detailed planning and effective communication between all project stakeholders will be fundamental in mitigating project risks and maintaining cost certainty, programme performance and quality throughout the construction lifecycle.

Conclusion

From the Main Contractor's perspective, the Construction Centre of Excellence is considered financially and operationally viable provided that robust cost planning, procurement management, risk management and sustainability strategies are implemented from the outset. The project has strong potential to deliver long-term educational, commercial and environmental benefits while supporting innovation within the UK construction industry.