VIABILITY QUERY REVIEW

ARTAL

HARRINGTON SQUARE

9 Jordan street

Knott Mill

Manchester

M15 4PY

DOCUMENT PRODUCED BY

The following document has been produced by Artal Ltd at the request of **Salboy Ltd.**

Prepared on behalf of Artal Ltd by:

Stuart Taylor
Managing Director

T: +44 (0)7545 371977
E: stuart@artal.uk.com

Should you have any queries or comments regarding the contents of this proposal, please do not hesitate to contact the above.

ARTAL INTRODUCTION

This report provides a focused review of two queries raised within the viability process regarding assumptions outlined in the cost plan; these being the allowances made for 1) Incoming power, and 2) Party wall. These allowances have been made within the abnormals section of the cost plan based on our previous experience for these types of works, albeit at this stage we cannot firmly estimate as these works are a risk item and a relative unknown until much later in the design and construction process.

Therefore, to address the queries raised we have split out the usual costs that could be anticipated under these amounts.

1. INCOMING POWER

An allowance of £400,000 was made within the abnormals section of the cost plan. We have since broken down the items that were intended to cover the allowances for the likely costs. The summary of these costs are shown under Appendix 1.

1. Electrical Infrastructure Installation

- Grid Connection Fee: This includes the cost of labour, materials, and any necessary upgrades to the local grid infrastructure.

2. Cabling and Trenching

- Main Cables: The cost of the main power cables running from the grid connection point to the development.
- Trenching: Digging and preparing trenches for laying the cables.

3. Meters and Distribution Boards

- Meters: Installation of individual electricity meters for each of the 12 bedrooms.
- Distribution Boards: Main distribution board installation and sub-distribution boards for each bedroom.

4. Labour Costs

- Labour for installation of all electrical infrastructure, including certified electricians, project managers, and other necessary personnel.

5. Regulatory and Inspection Fees

- Fees for obtaining necessary permits and inspections from local authorities to ensure compliance with building and electrical codes.

6. Sustainability and Future-Proofing

- Renewable Energy Integration: Cost of integrating renewable energy sources (like solar panels) and future-proofing the installation for smart grid compatibility.

7. Additional Items

- Backup Power Systems
  - Generators: Installation of backup generators for emergency power.

- Uninterruptible Power Supply (UPS): Systems to ensure continuous power during short outages.

8. Energy Management System (EMS)

- System to monitor and optimize energy usage across the development.

9. Surge Protection

- Whole-Building Surge Protectors: To protect electrical systems and sensitive equipment from power surges.
-

10. Earthing and Bonding

- Ensuring proper earthing and bonding of the incoming power to prevent electrical shocks and ensure safety.

8. PARTY WALL

An allowance of £250,000 was made within the abnormals section of the cost plan for works in connection with party wall, as a result of building closely to an adjoining inhabited property. We have since broken down the items this was intended to cover and allowances for the likely costs. The summary of these costs are shown under Appendix 2

1. Surveyor Fees

- Agreed Surveyor (if both parties agree to one)

2. Legal Costs

- Legal Advice/Representation
- Preparation of Awards

3. Construction Work

A. Pre-Construction and Demolition

- Site Preparation
  - Clearing the area around the existing wall.
  - Setting up temporary barriers and safety measures.
  - Pre-construction survey and documentation.

- Temporary Support and Protection
  - Installing temporary supports (e.g., props, shoring) to prevent movement.
  - Protection of adjacent property during construction (e.g., scaffolding, barriers).

B. Structural Reinforcement

- Foundation Reinforcement
  - Reinforcing existing foundations to handle additional loads and prevent subsidence.

- Steel Reinforcement Bars (Rebar)
  - Incorporating steel reinforcement within concrete foundations and walls.
  - Enhancing tensile strength and load-bearing capacity.

- Underpinning and proppping adjacent land/foundations

C. Damp Proofing and Waterproofing

- Damp Proof Membranes
  - Installing damp proof courses and membranes to prevent moisture ingress.
  - Ensuring continuity of damp proofing between the new and existing structures.

- Waterproofing Adjacent Structures
  - Applying waterproofing to areas where the new wall interfaces with the existing property.

D. Damage Mitigation and Repair

- Vibration Monitoring
  - Monitoring vibrations during construction to prevent damage to adjoining property.
  - Installing sensors and conducting regular inspections.

- Repairs to Adjoining Property
  - Repairing any damage caused during construction (e.g., cracks, cosmetic damage).
  - Touch-up work to ensure the adjoining property is restored to its original condition.

E. Structural Integrations

- Seamless Jointing
  - Creating seamless joints between the new wall and existing structures.
  - Using specialized construction techniques to ensure stability.

- Expansion Joints
  - Installing expansion joints to accommodate thermal expansion and contraction.
  - Preventing cracks and structural damage.

F. Load-Bearing Enhancements

- Lateral Bracing
  - Adding lateral bracing elements to prevent horizontal movement.
  - Ensuring stability under lateral loads such as wind and seismic activity.

G. Special Considerations for Adjacent Structures

- Vibration Control Measures
  - Implementing measures to control vibrations during construction.
  - Using dampers and isolators to protect the adjoining property.

- Load Transfer Systems
  - Installing systems to transfer loads away from the adjoining property.
  - Using transfer beams or slabs to distribute loads effectively.

APPENDICES

Appendix 1

Incoming Power

	Category	Sub-Item	Total
1	Electrical Infrastructure Installation	Grid Connection Fee	£ 150,000
2	Cabling and Trenching	Main Cables	£ 50,000
		Trenching	£ 20,000
3	Meters and Distribution Boards	Meters (main)	£ 5,000
		Distribution Boards	£ 15,000
4	Labour Costs	Labour for installation of all electrical infrastructure	£ 50,000
5	Regulatory and Inspection Fees	Fees for obtaining necessary permits and inspections	£ 25,000
6	Sustainability and Future-Proofing	Renewable Energy Integration	£ 20,000
7	Backup Power Systems	a. Generators	£ 30,000
		b. Uninterruptible Power Supply (UPS)	£ 25,000
8	Energy Management System (EMS)	Energy Management System (EMS)	£ 15,000
9	Surge Protection	Whole-Building Surge Protectors	£ 10,000
10	Earthing and Bonding	Proper earthing and bonding of the incoming power	£ 5,000
	TOTAL		**£ 420,000**

Appendix 2

Party Wall

	Category	Sub-Item	Total
1	Surveyor Fees	Agreed Surveyor	£ 8,000
2	Legal Costs	Legal Advice/Representation	£ 15,000
		Preparation of Awards	£ 8,000
3	Construction Work	A. Pre-Construction and Demolition	
		Site Preparation	£ 3,000
		Temporary Support and Protection	£ 20,000
		B. Structural Reinforcement	
		Foundation Reinforcement	£ 30,000
		Steel Reinforcement Bars (Rebar)	£ 15,000
		Underpinning and proppping adjacent land/foundations	£ 50,000
		C. Damp Proofing and Waterproofing	
		Damp Proof Membranes	£ 10,000
		Waterproofing Adjacent Structures	£ 15,000
		D. Damage Mitigation and Repair	
		Vibration Monitoring	£ 10,000
		Repairs to Adjoining Property	£ 15,000
		E. Structural Integrations	
		Seamless Jointing	£ 11,000
		Expansion Joints	£ 8,000
		F. Load-Bearing Enhancements	
		Lateral Bracing	£ 10,000
		G. Special Considerations for Adjacent Structures	
		Vibration Control Measures	£ 8,000
		Load Transfer Systems	£ 15,000
	4. Miscellaneous Costs	Permit Fees and Approvals	£ 5,000
	TOTAL		**£ 256,000**