
TENDER LETTER PROPOSAL

B99 Malthouse Block

Boiler House Replacement — Tender Submission

Prepared for	Grimshaw & Bolt Ltd
Prepared by	Built AI Ltd
Date	24 April 2026
Reference	KW-2026-4471

8.1 Cover Letter and Executive Summary

Built AI Ltd

24 April 2026 | Rev 1

The Commercial Manager

Grimshaw & Bolt Ltd

Dear Sir / Madam,

B99 Malthouse Block Boiler House Replacement — Kettlewick College | KW-2026-4471

We are pleased to submit our revised Tender Letter Proposal for the replacement of the heat source and associated mechanical, electrical, public-health and controls services at the B99 Malthouse Block boiler house, Kettlewick College, Somerset.

This submission supersedes any earlier draft. It reflects further commercial review undertaken with the Grimshaw & Bolt team (in particular discussions with Jamie), updated supplier verification through SBS Cambridge (Quote 18-SQ0023969 Ver 1, 24 April 2026), and our final commercial review of all scope items.

Headline commercial position:

- ▶ Fixed tender sum: £481,954.33 (exclusive of VAT).
- ▶ Programme: 14 weeks on-site, commencing within the Kettlewick College summer-term stand-down window (July–September 2026).
- ▶ Contract form: Mechanical, electrical and public-health sub-contract under JCT Intermediate 2016 with Contractor's Design Portion, executed between Built AI Ltd and Grimshaw & Bolt Ltd as Principal Contractor.
- ▶ Defects Liability Period: 12 months from Practical Completion.
- ▶ Tender validity: 90 Working Days from the date above.

Embedded scope decisions reflected in this tender sum:

- ▶ Grimshaw & Bolt Ltd is the Principal Contractor under CDM 2015 — Built AI Ltd is engaged as MEP sub-contractor only. CDM duties associated with the Principal Contractor role (Construction Phase Plan, F10 notification, site establishment, welfare, perimeter security, skip and waste management, daily cleaning, broadband) are excluded from this tender as they are within the Grimshaw & Bolt scope.



- ▶ Temporary heating and DHW continuity is being provided directly by Grimshaw & Bolt Ltd (confirmed by Jamie, GB, 24 April 2026) — temporary boiler hire, fuel, maintenance, gas-safety and changeover scope are excluded from this tender.
- ▶ Licensed asbestos removal and four-stage clearance is being undertaken by others under a separately-appointed Licensed Asbestos Removal Contractor (LARC). Built AI shall not commence intrusive strip-out until a Certificate of Reoccupation is issued.
- ▶ Internal redecoration of the boiler house is excluded from this contract.
- ▶ Building Management System / Controls scope (Section F6) is carried as a Prime Cost Sum, to be procured via specialist BMS sub-contractor on instruction.
- ▶ All preliminaries are set on a 14-week basis with no full-time Site Manager (Built AI Site Supervisor only).

Value Engineering options offered separately:

A schedule of six independently-electable Value Engineering options is presented in the dedicated VE Options tab of the Priced Bill of Quantities workbook. These offer aggregate potential savings of up to £56,736.86 if all six are accepted, comprising:

- ▶ VE 1 — Thermal Store Consolidation (1 × 6,000 L vs 3 × 2,000 L) — saving £9,122.00
- ▶ VE 2 — DHW PHE Consolidation (1 × vs 2 × 700 kW Stokvis) — saving £24,200.00
- ▶ VE 3 — Flue Fire-Resistance Rating (3-hr FR vs 4-hr FR) — saving £3,000.00
- ▶ VE 4 — DHW PHE Supplier Substitution (UKE for Stokvis, per PHE) — saving £9,401.42
- ▶ VE 5 — Heating PHE Format (UKE-5 bare for Stokvis packaged 250 kW) — saving £6,590.00
- ▶ VE 6 — Cold-Water Booster (DAB ESYTANK for Arrow Boost-A-Break) — saving £4,423.44

Each VE option may be accepted individually or in combination, subject to SES Ltd / Contract Administrator written sign-off.

Built AI Ltd is a Gas Safe registered, NICEIC approved contractor with a proven track record on heritage and Defence-estate mechanical installations. All works will be executed under our JSP 375 / JSP 317 / JSP 850-aligned safety management system, in coordination with Grimshaw & Bolt Ltd as Principal Contractor.

We look forward to supporting Grimshaw & Bolt Ltd in delivering this critical heat-source upgrade to Malthouse Block and remain available for tender clarification, post-tender interview or an accompanied pre-contract site walk-through at your convenience.

Yours faithfully

Built AI Ltd

Built AI Ltd

hello@builtai.io

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8.2 Introduction and Project Background

8.2.1 Project Identification

The Kettlewick College (Kettlewick College) at Kettlewick is a Grade II* listed, operationally-live officer-training establishment of the Royal Navy. The Malthouse Block (building reference B99) is a principal accommodation and administrative building on the estate, with heating and domestic hot water currently served by a dedicated boiler house containing five Wessex atmospheric cast-iron boilers, two direct-fired DHW generators, two Nalco pressurisation sets, associated primary distribution and a Main Control Panel — all of which have reached the end of their useful economic life.

Kettlewick Estates, on behalf of the Kettlewick Estates, has procured Grimshaw & Bolt Ltd as Principal Contractor for the delivery of this project. Built AI Ltd is engaged as the Mechanical, Electrical and Public Health sub-contractor, with single-point responsibility for the full plant-room replacement package excluding those scope elements specifically transferred to others or to Grimshaw & Bolt direct (asbestos, temporary heat continuity, internal redecoration, Principal Contractor preliminaries, BMS specialist procurement under PC Sum).

8.2.2 Contractual and Statutory Framework

The tender is priced on the basis of the following governing documents and standards:

- ▶ Services Design Solution Ltd — RIBA Stage 3/4 Mechanical, Electrical and Public Health design package, document reference 06642P.
- ▶ SOCOTEC Asbestos Refurbishment and Demolition Survey, report reference 257744-1004563.
- ▶ Grimshaw & Bolt Ltd Instruction to Tender and Scope of Works.
- ▶ JCT Intermediate Building Contract 2016 (with Contractor's Design Portion) as the form of sub-contract between Built AI Ltd and Grimshaw & Bolt Ltd.
- ▶ Construction (Design and Management) Regulations 2015 — Grimshaw & Bolt Ltd discharging Principal Contractor duties; Built AI as designer of the CDP element only.
- ▶ Control of Asbestos Regulations 2012 (CAR 2012) — asbestos removal undertaken by separately-appointed LARC.
- ▶ Gas Safety (Installation and Use) Regulations 1998.
- ▶ Electricity at Work Regulations 1989 and BS 7671:2018+A2:2022.
- ▶ JSP 375 (MOD Health & Safety), JSP 317 (Gas), JSP 850 (MOD Infrastructure Delivery).
- ▶ CIBSE Guides B1 and G, BSRIA BG 2/2010, BG 29/2020 and BG 9/2011, BS EN 12828, HSG 274 Part 2.
- ▶



8.2.3 Governing Document Hierarchy

In the event of conflict between source documents, the following hierarchy of precedence is adopted:

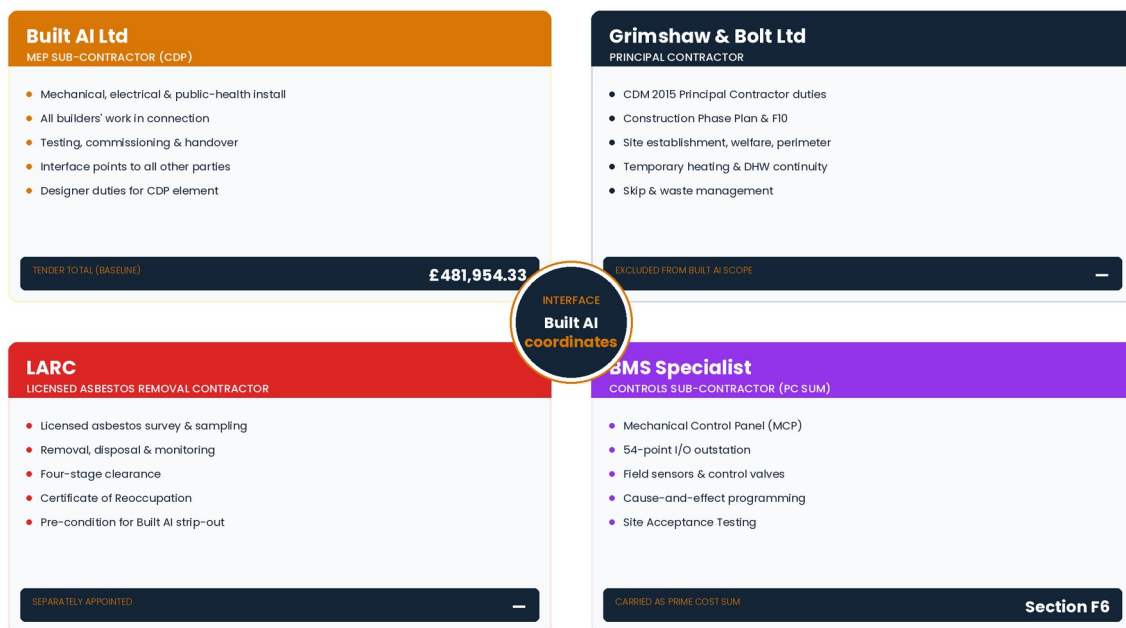
- ▶ 1. The executed sub-contract (JCT IC 2016 with CDP) between Built AI and Grimshaw & Bolt.
- ▶ 2. This Tender Letter Proposal and its accompanying Priced Bill of Quantities (Rev 1, 27 April 2026).
- ▶ 3. Grimshaw & Bolt Ltd Instruction to Tender and Scope of Works.
- ▶ 4. SDS Ltd RIBA Stage 3/4 design package (06642P).
- ▶ 5. Referenced British Standards, CIBSE Guides and industry codes of practice.

8.2.4 Roles and Responsibilities

Role	Party
Employer	Kettlewick Estates
Employer's Agent / Contract Administrator	Grimshaw & Bolt Ltd (or as nominated by Kettlewick Estates)
Principal Contractor (CDM 2015)	Grimshaw & Bolt Ltd
Principal Designer (CDM 2015)	As nominated by Grimshaw & Bolt / Employer
MEP Designer (RIBA Stage 3/4)	Services Design Solution Ltd
MEP / PH / Controls Sub-Contractor (CDP)	Built AI Ltd
Licensed Asbestos Removal Contractor	To be appointed by others
BMS Specialist (PC Sum drawdown)	To be appointed via PC Sum at Grimshaw & Bolt's direction
Temporary Heat Continuity Provider	Grimshaw & Bolt Ltd

Scope Boundaries — Who Does What

Single-page interface map for all parties on the project



Built AI provides the interface points (hydraulic, electrical, BMS) for all four parties. All scope-boundary risk sits with the Principal Contractor under the JCT IC 2016 sub-contract.

8.2.5 Client Reference and Confidentiality

This Tender Letter Proposal is issued in commercial confidence to Grimshaw & Bolt Ltd and the Employer and may not be reproduced or disclosed to third parties without the written consent of Built AI Ltd. All technical content is subject to the tender validity period of 90 Working Days from the date of submission.

8.3 Proposed Technical Solution — Overview

The solution strips out the redundant Wessex boilers, DHW generators and Nalco pressurisation equipment in the B99 boiler house and installs a new fully-condensing modular gas-fired cascade, packaged DHW and heating plate heat exchangers, thermal storage and a complete public-health package. The design basis is the Services Design Solution Ltd RIBA Stage 3/4 package (06642P), priced at the baseline specification in the main Bill of Quantities. Six independently-electable Value Engineering options are presented separately in the VE Options tab of the Priced BoQ.

8.3.1 Heat Generation

Three IDEAL Commercial EVO Max 2 — 150 kW fully-condensing, pre-mix gas-fired modular boilers configured as a back-to-back cascade, providing 450 kW combined firing capacity with turndown to approximately 11 kW on a single module. Manufacturer's cascade header, proprietary twin-wall V-band clamped flue (4-hour fire-rated baseline; 3-hour FR available as VE Option 3), OEM commissioning and a 5-year registered warranty.

8.3.2 Thermal Storage and DHW Generation

Baseline specification: three (3) × 2,000 L vertical thermal stores (PD 5500 Cat 3 carbon steel) on a bespoke 3-vessel steel support frame with individual insulation jackets. Domestic hot water is generated by a paired set of two (2) × Stokvis Econoplate H-Series packaged plate heat exchangers rated at 700 kW each, providing N+1 resilience. Space-heating secondary circuit is hydraulically separated from the boiler primary by a 250 kW Stokvis Econoplate packaged heating PHE skid.

VE Options offered: VE 1 (single 6,000 L thermal store consolidation), VE 2 (single 700 kW DHW PHE consolidation, foregoing N+1), VE 4 (UKE supplier substitution for Stokvis on DHW PHE), VE 5 (UKE-5 bare exchanger format on heating PHE).

8.3.3 Pumps and Ancillaries

Grundfos MAGNA3 D twin-head circulators for heating and DHW primary duties, MAGNA1 for DHW secondary recirculation, and AP50 submersible sump pump for condensate drainage. Flamco PressDS digital packaged pressurisation units (primary and secondary), Flamco Flexcon expansion vessels (2 × 425 L primary, 3 × 110 L secondary). Arrow Valves Boost-A-Break Tank Set (BTBS) provides WRAS Fluid Category 5 break and boosted cold water supply to the DHW PHE.

VE Option 6 offers a DAB ESYTANK PRO 500AG ESYTWIN substitute for the Arrow BTBS.

8.3.4 Gas, Safety and Combustion Air

New Gas Safety Panel with pressure-proving system (Merlin 1000 or equivalent), fail-safe solenoid valve (SBS GSV065 65 nb flanged PN16, 230 V AC coil, 360 mbar EN161-compliant), gas leak detection and emergency push-to-break button at the exit door. Gas pipework installed to BS EN 10255 by Gas Safe registered operatives with full certification.

8.3.5 Controls and BMS — Carried as Prime Cost Sum

The full Controls and BMS package (Section F6 of the Priced BoQ) is carried as a Prime Cost Sum to be procured via specialist sub-contractor at Grimshaw & Bolt's instruction. Allowance includes: new Mechanical Control Panel; Siemens-protocol BMS outstation servicing 54 points (32 AI + 3 AO + 14 DI + 5 DO); field temperature, pressure-differential and pocket sensors; motorised three-port mixing valves on each PHE; M-bus gateway and metering integration; Satchwell head-end network link; cause-and-effect programming, graphics update, Site Acceptance Testing and BMS commissioning records. Final specialist appointment and detailed scope to be agreed at PC Sum drawdown.

8.3.6 Electrical

New Schneider Merlin Gerin Acti 9 DB/BH 12-way 125 A TP&N distribution board fed from a new sub-main originating at the existing Malthouse Block main LV panel. LSZH-SWA sub-main cable sized for less than 3 % volt-drop. Full BS 7671:2018+A2:2022 compliance, NICEIC certification, LED task lighting to 200 lux, BS 5266 emergency lighting, supplementary bonding and fire-alarm loop extension via Apollo addressable devices to the existing Malthouse Block system.

8.3.7 Builders' Work, Strip-Out and Fire-Stopping

All strip-out, making-good, EI 120 fire-stopping (BS 9999), new reinforced-concrete plinths, sump pit, skylight remove-store-reinstate, chimney top repointing and ancillary builders' work delivered in-house. Licensed asbestos removal is excluded from this tender — undertaken by separately-appointed LARC under CAR 2012. Internal boiler-house redecoration is also excluded.

8.3.8 Temporary Heat Continuity

Temporary heating and DHW continuity to Malthouse Block during the 14-week construction period is being provided directly by Grimshaw & Bolt Ltd as Principal Contractor. Built AI will coordinate the changeover sequencing under formal Shutdown Permit-to-Work issued by the Authorised Person (Heating), and provide all hydraulic / electrical / BMS interface points to the Grimshaw & Bolt temporary-boiler installation, but the temporary plant itself, fuel, maintenance, gas-safety checks and removal are not within Built AI's scope.



8.3.9 Insulation

All LTHW, DHW and gas pipework insulated to BS 5422 minimum thicknesses with closed-cell phenolic foam and proprietary valve / fitting boxes, with valves and large-bore equipment fitted with removable insulation jackets in accordance with the Stage 3/4 specification. F7 insulation rates have been refreshed in the BoQ to reflect realistic market rates for the larger-diameter and complex valve-box scope.

8.3.10 Testing, Commissioning and Handover

Hydraulic pressure testing, BSRIA BG 29/2020 chemical cleaning and dosing, gas tightness testing to IGEM/UP/1, electrical inspection to BS 7671 Part 6, BMS point-by-point commissioning (under PC Sum), witness-test programme and BG 1/2007-format O&M manuals. Operator training delivered to Kettlewick College Estates at handover. BMS summer commissioning revisit included within Section E.

8.4 Detailed Comprehensive Scope of Works

1. Introduction and Project Background

1.1 Project

The Works comprise the complete replacement of the existing heat source and associated mechanical, electrical, public-health and controls infrastructure within the B99 Malthouse Block boiler house at Kettlewick College, executed by Built AI Ltd as Mechanical, Electrical and Public-Health sub-contractor under Grimshaw & Bolt Ltd as Principal Contractor.

1.2 Site

Kettlewick College, Malthouse Lane, Kettlewick, Somerset, BA22 9KW. The site is a Grade II* listed, live-operational Defence estate with restricted access and site-specific safety rules administered by Kettlewick College Estates.

1.3 Contract Basis

Mechanical / electrical / public-health sub-contract under JCT Intermediate Building Contract 2016 with Contractor's Design Portion, executed between Built AI Ltd and Grimshaw & Bolt Ltd. Grimshaw & Bolt discharges Principal Contractor duties under CDM 2015; Built AI retains designer duties for the CDP only.

1.4 Governing Document Hierarchy

Precedence as set out in Section 8.2.3 of this Tender Letter Proposal.

1.5 Standards

As set out in Section 8.2.2 of this Tender Letter Proposal.

2. Contractor's General Obligations — Preliminaries

2.1 Principal Contractor Interface

Grimshaw & Bolt Ltd is the Principal Contractor under CDM 2015 Regulations 13–16. Built AI operates as a sub-contractor under the GB Construction Phase Plan, Site Rules and inductions. Built AI provides GB with all CDP-related design risk information, RAMS, COSHH assessments and pre-construction information necessary to discharge the PC role. F10 notification, the Construction Phase Plan, and the Health & Safety File are within the Grimshaw & Bolt scope and excluded from this tender.

2.2 Project Management and Site Supervision

Project management is delivered by an experienced part-time Project Manager aligned with the 14-week programme. Site supervision is delivered by a Site Supervisor (SSSTS / SMSTS) for the duration



of the on-site works. A full-time Site Manager is not provided — site control is administered through the Grimshaw & Bolt Principal Contractor establishment.

2.3 Temporary Works Coordination

A Temporary Works Coordinator (TWC) appointed in accordance with BS 5975:2019 covers all Built AI-instigated temporary works — heavy-plant lift-in rigging, scaffold access, temporary skylight removal, and concrete plinth formwork. Wider site-establishment temporary works are within the Principal Contractor's scope.

2.4 Site Establishment — Excluded from Built AI Scope

Site office, welfare, secure storage, perimeter HERAS fencing, compound signage, site electrical / water / sewer connection to accommodation, broadband, daily site cleaning and waste management are within the Grimshaw & Bolt Principal Contractor scope and excluded from this tender.

2.5 Programme and Reporting

A fully resource-loaded Gantt programme to GB format will be issued pre-start and updated weekly. Weekly progress reports, monthly commercial valuations and a weekly site-safety tour will be maintained throughout.

2.6 Quality Management

Built AI operates a documented quality management system aligned to BS EN ISO 9001:2015 principles. Inspection and Test Plans (ITPs) are prepared for each major work package, with hold-points agreed with the Contract Administrator. Working drawings, fabrication offsets, programme updates and as-built drawings are produced at a refined attendance level appropriate to the 14-week programme and the sub-contractor role.

2.7 Insurances

CAR; Employer's Liability £10m; Public Liability £10m; PI £5m on the CDP.

2.8 Environmental

Compliance with Environment Agency requirements: spill-kit provision at chemical-storage locations, bunded storage for chemical water-treatment reagents, noise / dust controls appropriate to the live Defence-estate environment.

2.9 Communications and Stakeholder Management

Single point of contact maintained with Grimshaw & Bolt and Kettlewick College Estates. Monthly progress meeting attended by PM, Site Supervisor, Commercial Manager and Commissioning Engineer as required.

2.10 O&M Documentation

BSRIA BG 1/2007 condensed-format O&M Manual production aligned to the 14-week programme — full BG 79/2020 specialist authoring is not included.



2.11 Out-of-Hours Emergency Response

24-hour named contact maintained throughout the construction period.

3. Surveys, Investigations and Pre-Procurement Verification

3.1 General

Stage 4a confirmatory surveys delivered prior to procurement commitment, set on a tightened-attendance basis appropriate to the 14-week programme.

3.2 Plant-Room Dimensional Survey

Pre-procurement laser scan of the boiler-house to verify as-designed plant footprints, access routes and heavy-plant lift-in envelope.

3.3 Incoming Gas Supply Verification

Working pressure, meter capacity and service-pipe diameter measured and recorded; manufacturer's minimum inlet-pressure envelope demonstrated to be met across cascade turndown range.

3.4 Incoming LV Supply Verification

Existing main LV panel spare capacity, Ze, prospective short-circuit current and earth fault loop impedance measured and recorded in liaison with the Employer's AP (Electrical).

3.5 Flue Route Survey

Internal diameter, structural integrity and condition of the existing chimney / flue void measured and photographed.

3.6 Risk-Tracker Verification (B2 series)

Verification of design assumptions against the SDS Risk Tracker — heating F/R temperatures (Risk 19), heating flow rate (Risk 20), DHW peak length (Risk 22), DHW recirc flow rate (Risk 23), MCWS main capacity (Risk 24), heating system volume (Risk 25), DHW system volume (Risk 26), sub-main re-use (Risk 27), existing wiring re-use (Risk 28), existing lighting re-use (Risk 29), existing fire alarm re-use (Risk 30) — undertaken at refined attendance level. Verification report issued to Contract Administrator.

3.7 Other Surveys

Tie-in points into retained Malthouse Block secondary heating circuits surveyed and sampled. Foul-drain route for neutralised condensate discharge confirmed.

4. Heating Continuity Interface (Temp Boiler Provided by Others)

4.1 Scope Boundary



Temporary heating and domestic hot water continuity to Malthouse Block during the 14-week construction period is being provided directly by Grimshaw & Bolt Ltd as Principal Contractor (confirmed by Jamie, GB, 24 April 2026). The temporary boiler plant, its temporary flue, fuel supply, gas-safety periodic inspection, hire-period maintenance, removal and decommissioning are not within Built AI's scope and excluded from this tender.

4.2 Built AI's Interface Coordination Role

Built AI retains responsibility for the hydraulic, electrical and BMS interface points between the Grimshaw & Bolt temporary boiler installation and the retained Malthouse Block secondary heating and DHW circuits — defining and providing tie-in points, providing temporary BMS interface points (status, fault, supply temperature), coordinating the changeover sequencing under formal Shutdown Permit-to-Work, capping-off and isolating Built AI's permanent installation pre-commissioning.

4.3 Combined Coordination Programme

Built AI issues a coordinated changeover programme to GB pre-start identifying the temporary-boiler-on / temporary-boiler-off cut-over windows.

4.4 Risk and Liability

Built AI's hot-works, drain-down and pressure-test risk envelope is bounded to the Built AI-installed permanent plant. Risks associated with the GB-installed temporary plant — including hire-period gas safety, fuel storage, fire risk and emissions compliance — sit with Grimshaw & Bolt as the temporary-boiler installer and operator.

5. Strip-Out, Removal and Preparation

5.1 General Principles

All strip-out works undertaken in a controlled, sequenced manner to maintain heating and DHW continuity via the GB-provided temporary boiler. No existing service shall be disconnected until the corresponding temporary provision has been commissioned and accepted. CSCS-carded operatives only; GB-administered induction.

5.2 Scope of Redundant Plant Removal

Carefully disconnect, decommission, drain, label and remove from site: 5 × Wessex atmospheric cast-iron boilers; 2 × Hamworthy DHW generators (DR-LP 60 G and DR-LA 95 G); 2 × Nalco buffer vessels; existing MCP and associated control wiring; all redundant primary / DHW / flue / condensate pipework, supports and insulation. Refined-attendance basis reflecting asbestos-removed pre-condition and GB temporary-boiler arrangement.

5.3 Asbestos-Containing Materials — Excluded from Built AI Scope

SOCOTEC report 257744-1004563 identifies ACMs in the works area. Removal, disposal and four-stage clearance is undertaken by separately-appointed LARC. Built AI shall not commence intrusive



strip-out until a Certificate of Reoccupation has been issued. CAR 2012 Reg 5 stop-and-notify if any unidentified ACM is uncovered.

5.4 Scrap Metal — Audit Excluded

A formal Scrap Metal Audit per JSP 375 SUA20 is excluded from this contract. Scrap arising from strip-out is removed via the GB-administered waste route. Should the Employer subsequently elect to capture scrap-credit value, this can be re-instated as an instructed variation.

5.5 Strip-Out Sequencing

Strip-out is sequenced to allow the GB temporary boiler to remain in service throughout. Pipework strip-out at refined attendance level.

5.6 Making Good Following Strip-Out

Boiler-house floor, walls and soffit swept, vacuumed and left clean. Redundant fixings cut flush and patched with non-shrink cementitious mortar. Internal redecoration is excluded.

6. Builders' Work in Connection

6.1 General

All BWIC delivered in-house to BS 8000 standards. Structural Engineer review / sign-off on plinth loading is excluded — design responsibility for plinth loading rests with the SDS Ltd MEP designer.

6.2 Penetrations and Fire-Stopping

Diamond-cored new penetrations fire-stopped to EI 120 per BS 9999 using Rockwool FIREPRO, Hilti CP 606 / CP 611A or equivalent. Each penetration labelled and recorded on as-built fire-stopping schedule.

6.3 Redecoration — Excluded

Internal redecoration of the boiler-house is excluded from this contract.

6.4 Skylight — Remove, Store and Reinstall

Skylight carefully removed, protected and stored during heavy-plant lift-in, and reinstated with new EPDM gasket, lead flashings and mastic pointing. Hose test on completion.

6.5 Chimney Top Repointing

Chimney top repointed in lime-based mortar colour-matched to the prevailing facade. Displaced coping reset or replaced like-for-like.

6.6 New Concrete Plinths

New C32/40 reinforced plinths formed for IDEAL cascade frame, 3 × thermal store steel frame, 2 × Stokvis DHW PHE skids, 1 × Stokvis 250 kW heating PHE, 1 × Flamco PressDS unit and 1 × Arrow Valves BTBS. A393 mesh top and bottom, 75 mm cover, level to ± 3 mm.



6.7 Services Diversion Below Skylight

Existing retained services diverted under shutdown permit and reinstated post-lift. Pressure-test and reinstate after plant lift.

6.8 Sump Pit Formation

New 400 × 400 × 300 mm concrete-lined floor sump with waterproof render, ductile-iron grate (2.5 kN rated).

6.9 Floor Protection

Continuous 9 mm hardboard over breathable dust-sheet protection.

6.10 Fittings Removal and Reinstatement

Fittings within the working area carefully removed, labelled, stored and reinstated. Photographic record retained.

6.11 Final Clean

Builders' clean of boiler-house and adjacent circulation areas prior to handover.

7. Mechanical and Public Health Services Installation — Baseline Scope

7.1 General

All M&PH works to SDS Ltd design 06642P, OEM literature, CIBSE Guides B1 / G, HSG 274 Part 2, BS EN 12828, BS 6700 / BS EN 806, WSR 1999 and GSIUR 1998.

7.2 Gas-Fired Boilers — IDEAL EVO Max 2 Cascade

3 × IDEAL EVO Max 2 — 150 kW pre-mix condensing modular boilers in back-to-back cascade (per SBS Quote 18-SQ0023969 Ver 1): boilers + frames + DN100 inline header + 450 kW PHE kit + insulation kits + 3 × UPMXXL 25 120 180 IB FR/HDR PHE pump kits + DN80/100 STD HGT insulation starter & continuation kits + open-flue kits + Varican gateway master + slaves + flow-sensor strap-on kit. OEM commissioning, 5-year warranty registered in Employer's name.

7.3 Primary LTHW Distribution

BS EN 10255 medium-grade black mild-steel pipework, flanged or socket-welded throughout, pressure-tested at 1.5 × working pressure for 2 hrs, chemically cleaned and dosed per BSRIA BG 29/2020, insulated with 40 mm closed-cell phenolic foam.

7.4 Thermal Storage — BASELINE

3 × 2,000 L vertical thermal stores (PD 5500 Cat 3 carbon steel) on bespoke 3-vessel steel support frame, individual insulation jackets per vessel, PRV discharge to tundish, 4 × PT1000 pocket sensors per vessel for stratification monitoring. VE Option 1 offers consolidation to a single 6,000 L vertical unvented store as an instructed alternative.

7.5 Domestic Hot Water Generation — BASELINE



2 × Stokvis Econoplate H-Series packaged plate heat exchangers, 700 kW each, providing N+1 resilience. Factory-assembled and pressure-tested, integral packaged controls, primary and secondary isolation valves, gauges, drain and vent points, 3-port motorised control valve interfacing the BMS PC Sum scope. Spare plate + tube assemblies provided. VE Options 2 (consolidation to single unit) and 4 (UKE supplier substitution) offered separately.

7.6 Space-Heating Plate Heat Exchanger — BASELINE

1 × Stokvis Econoplate 250 kW packaged heating PHE skid, factory-assembled. Spare plate + tube assembly. VE Option 5 offers UKE-5 66-plate bare exchanger format as an alternative.

7.7 Pumps

Grundfos MAGNA3 D 80 twin-head heating secondary; MAGNA1 DN50 bronze WRAS DHW recirculation; AP50 submersible condensate sump pump. Boiler shunt pumps (UPMXXL × 3) supplied within the IDEAL cascade kit.

7.8 Pressurisation

Flamco PressDS digital packaged pressurisation units — primary and secondary — each with integral expansion vessel, duplex fill pumps, transducer, dry-run protection, BMS volt-free contacts. Expansion vessels: 2 × Flamco Flexcon 425 L primary (upsized from 300 L per Stage 4 design verification, SBS Jamie Bedwell note 24.04.26) and 3 × Flamco Flexcon 110 L secondary, each at 6 Bar.

7.9 Cold Water Boosting — BASELINE

Arrow Valves Boost-A-Break Tank Set (BTBS), WRAS Fluid Cat 5 Type AB air gap, duplex stainless centrifugal pumps. VE Option 6 offers DAB ESYTANK PRO 500AG ESYTWIN substitute.

7.10 Flue System — BASELINE

Twin-wall CE-marked V-band clamped flue (EN 1856-1) achieving 4-hour FR. Pressure- and smoke-tested before commissioning. VE Option 3 offers 3-hour FR specification as alternative.

7.11 Gas Services

New Gas Safety Panel: SBS GSV065 65nb flanged PN16 gas solenoid valve (230 V AC, 360 mbar, EN 161-compliant); Merlin 1000 (or equiv.) gas-pressure proving; leak detection; emergency push-to-break; BMS volt-free. BS EN 10255 gas pipework, Gas Safe certification.

7.12 Valves, Ancillaries and Accessories

Full valve schedule per Albion Valves take-off (DWG 06642P-SDS-XX-XX-SC-M-6000-01) provided through SBS Quote 18-SQ0023969 Ver 1: butterfly valves DN65 / DN80 / DN100 (CORE140 series), bronze and CI strainers, wafer / swing check valves, ball valves, double check valves, AAVs, PRV, test points, commissioning sets and metering stations (SBS941 / SBS900 series), gas butterfly valves, drain cocks.



7.13 Thermal Insulation

Kingspan Kooltherm FM Pipe Insulation (or equivalent approved) to Part L2B / BS 5422 minimum. Exposed flanges/valves boxed with removable jackets. Intumescent collars at fire-stopped penetrations. Section F7 rates re-verified at realistic market levels.

7.14 Water Treatment

Chemical clean, flush, drain, refill and dose per BSRIA BG 29/2020 with approved corrosion inhibitor and biocide. Pre-clean and post-clean independent UKAS-laboratory water-sample analysis.

7.15 Public Health Services

Condensate neutralisation and drainage to sump pit; TPR / relief / pressurisation safe-discharge pipework; WRAS backflow prevention on mains cold water feed to BTBS.

8. Building Management System (BMS) — Carried as Prime Cost Sum

8.1 Scope Treatment

The full Controls and BMS scope (Section F6 of the Priced BoQ, all items F6.1 to F6.21) is carried as a Prime Cost Sum. BMS specialist sub-contractor procured at Grimshaw & Bolt's instruction at PC Sum drawdown. JCT 2016 cl. 5.3.2 governs drawdown; any sum drawn down in excess of allowance valued as variation.

8.2 Indicative BMS Scope

PC Sum allowance priced against: new MCP; BMS outstation 54 points I/O (32 AI + 3 AO + 14 DI + 5 DO); field temperature sensors (PT1000 pocket type for thermal store stratification, pipework pocket / strap-on, PHE controllers, external); field DP sensors; motorised three-port mixing control valves CV/B1/01 and CV/B1/02; control-valve reducers and flanges; M-bus gateway; BMS control cabling (ELV); network link to existing Satchwell head-end; BMS programming (cascade logic, weather compensation, alarm strategy, interlocks); BMS interface to packaged controllers; BMS Site Acceptance Testing; Gas Safety Panel fire-alarm interface.

8.3 Specialist Sub-Contractor Appointment

Built AI provides interface points (electrical hook-ups, hydraulic sensor pockets, conduit / containment to MCP location) under main BoQ; specialist appointed by Grimshaw & Bolt at drawdown; coordination with main M&E delivery programme.

8.4 Seasonal Commissioning

Summer / seasonal commissioning revisit included within Section E pricing.

9. Electrical Services

9.1 General



All works to BS 7671:2018+A2:2022, CIBSE Guide K, manufacturers' literature. NICEIC Approved Contractor certification.

9.2 New Distribution Board

Schneider Merlin Gerin Acti 9 DB/BH 12-Way 125 A TP&N fed from new sub-main from Malthouse Block main LV panel. Per-way RCBOs.

9.3 Sub-Main Cabling

LSZH-XLPE-SWA cable sized to < 3 % volt-drop; MCCB protection at origin; Zs measured and recorded.

9.4 Containmentment

Galvanised tray (power), basket (small power/data), conduit (final connections), 300 mm segregation per BS EN 50174-2.

9.5 Earthing and Bonding

Full supplementary bonding per BS 7671 Section 544; bonds tested and recorded on EIC. Final-connection labour refined per Section G4 hour adjustment.

9.6 Small Power and Lighting

LED task lighting BS EN 12464-1 (≥ 200 lux); BS 5266 emergency lighting; 2 × 13 A twin sockets; 2 × switched fused spurs.

9.7 Fire Alarm Integration

Apollo addressable loop extension; cause-and-effect witness-tested by existing system maintainer's nominated sub-contractor.

9.8 Lightning Protection

No alteration included; local continuity / earth-test for new roof penetrations certified within electrical testing.

9.9 Emergency Stop

Latching E-stop mushroom at exit door drops gas solenoid, pumps and boiler cascade; leaves lighting and BMS energised for fault diagnosis.

10. Testing, Commissioning and Witnessing

10.1 Pre-Commissioning

Hydraulic pressure testing at refined attendance; BSRIA BG 29/2020 chemical cleaning and flushing; gas tightness and purge per IGEM/UP/1; electrical inspection per BS 7671 Part 6.

10.2 Commissioning



Mechanical per BSRIA BG 2/2010 and OEM procedures; flows balanced $\pm 10\%$; DHW temperatures per HSG 274 Part 2 ($\geq 50^\circ\text{C}$ return); independent UKAS lab water-sample analysis pre- and post-clean.

10.3 OEM Specialist Attendance

IDEAL, Stokvis, Flamco, Arrow Valves (or DAB / UKE if VE 4 / 5 / 6 elected) commissioning attendances at refined-attendance level.

10.4 Witness Commissioning

Formal witness commissioning, 10 WD notice, covering boiler lead/lag, DHW peak, pressurisation make-up, gas safety functional, BMS point-by-point (under PC Sum), Legionella regime, electrical documentation.

10.5 Performance and Capacity Testing — Excluded

Discrete post-commissioning performance and capacity testing (boiler seasonal efficiency verification with combustion analysis, PHE heat-transfer rate verification, DHW peak functional test, thermal-store charge/discharge logging, BTBS performance test, performance verification report) is excluded per Built AI commercial review. Available as instructed variation.

10.6 Aftercare — Excluded

Post-handover aftercare attendance for first three months (reactive call-outs, weekly BMS trend review, set-point fine-tune, aftercare reports) is excluded per Built AI commercial review. Standard 12-month DLP response remains.

10.7 As-Built Documentation

Full record commissioning pack: test certificates, commissioning sheets, dosing lab reports, gas and electrical certification, fire-stopping schedule, M&T baseline, as-built drawings (CAD + PDF). BMS records under PC Sum specialist scope.

11. Handover, O&M and Training

11.1 Handover

Joint handover inspection with Employer, APs and incoming FM team; snagging list resolved within 2 weeks of PC.

11.2 O&M Manuals

BSRIA BG 1/2007-format draft manuals issued 4 weeks pre-PC; final bound and PDF at PC. BG 79/2020 specialist authoring is not included.

11.3 Training

2 $\times$ 4-hour training sessions to Kettlewick College Estates personnel. Video-recorded (with consent) and issued with handover pack.



11.4 Warranty and Defects Liability

12-month DLP from PC. Response: routine 5 WD; urgent NWD; heat / DHW emergency 24 hrs. Manufacturer warranties registered in Employer's name.

11.5 Reactive Defects Attendance — Excluded

Discrete priced break-fix attendance allowance is excluded — covered by standard JCT 2016 defects-rectification obligation under DLP.

12. Provisional Sums, Daywork Rates and Allowances

12.1 Provisional Sums (Doc 23 Table 18 — Client-Led)

I1.1 Tests and samples additional £1,500; I2.1 Plant selection changes £4,000; I3.1 Flue rejected by chimney £6,000; I4.1 Replacement lighting (Risk 29) £1,000; I5.1 Replacement fire alarm (Risk 30) £500; I6.1 Replacement sub-main (Risk 27) £2,000; I7.1 General contingency £2,500. Total £17,500. JCT 2016 cl. 5.3.2 — drawdown only on instruction; any drawdown in excess valued as variation; unused balance returns to Employer at Final Account.

12.2 Prime Cost Sum

Section F6 (Building Management System / Controls scope) is carried as a Prime Cost Sum per Section 8 of this scope. The PC Sum is included within the Section F tender total and is drawn down at Grimshaw & Bolt's instruction for the appointment of the BMS specialist sub-contractor.

12.3 Daywork Rates

Daywork rates as agreed and recorded in the executed sub-contract, applicable only to Employer-instructed variations requiring time-and-material execution. All daywork submissions supported by receipted invoices and operative time-sheets.

12.4 Exclusions Summary

Per Section 8.5 of this Tender Letter Proposal.

RACI — Responsibility Matrix

Who is Responsible, Accountable, Consulted, Informed for each activity

Activity	Built AI	Grimshaw & Bolt	SDS Ltd (MEP Designer)	LARC	BMS Specialist	Kettlewick Estates
Pre-construction submittals (RAMS, COSHH, CDP design)	R	A	C	—	—	I
Construction Phase Plan & F10	I	R/A	—	—	—	I
Licensed asbestos removal & 4-stage clearance	—	C	—	R/A	—	I
Temporary heating & DHW continuity	C	R/A	—	—	—	I
Strip-out of redundant boilers & DHW gen.	R	A	—	C	—	I
Builders' work, plinths, fire-stopping	R	A	C	—	—	I
Heavy-plant lift-in (boilers, TS, PHEs)	R	A	C	—	—	I
Primary LTHW / DHW pipework install	R	A	C	—	C	I
Gas pipework + Gas Safety Panel	R	A	C	—	C	I
Electrical sub-main + DB + BS 7671 install	R	A	C	—	C	I
BMS install + 54-point I/O + programming	C	A	C	—	R	I
BSRIA BG 29 chemical clean / flush / dose	R	A	C	—	—	I
Witness commissioning	R	A	I	—	C	C
Practical Completion & handover	R	A	I	—	C	C
12-month Defects Liability Period	R	A	I	—	I	C

R Responsible — does the work
 A Accountable — final sign-off
 C Consulted — provides input
 I Informed — kept in the loop

8.5 Assumptions, Clarifications and Exclusions

In the event of any conflict between this schedule and the Scope of Works at Section 8.4, this schedule shall take precedence for the purposes of commercial interpretation.

A. Assumptions

A.1 Programme and Site Access

A1.1 14-week on-site programme commencing within the Kettlewick College summer-term stand-down window (Jul–Sep 2026), with uninterrupted possession.

A1.2 Single-shift Mon–Fri 07:30–17:00. Evening / weekend / night work as priced variation.

A1.3 Grimshaw & Bolt Ltd as Principal Contractor administers site establishment, welfare, perimeter, vehicular access, lay-down area and waste management. Built AI integrates under GB CPP and Site Rules.

A1.4 Free vehicular access, reasonable compound lay-down (provided by GB), 26 t rigid delivery bay, use of identified roof lift position.

A1.5 Kettlewick College welfare and GB site office available to Built AI operatives at no cost.

A.2 Design and Technical

A2.1 SDS Ltd Stage 3/4 design (06642P) coordinated and buildable; minor Built AI design development priced.

A2.2 Stage 4a confirmatory surveys verify, not materially alter, the design.

A2.3 Baseline specification priced — three thermal stores, paired DHW PHEs, 4-hour FR flue, Stokvis and Arrow brand specifications, packaged-skid format. Six VE options offered separately.

A2.4 Incoming gas supply sufficient for 450 kW cascade at turndown; pre-commissioning tests verify.

A2.5 Incoming 11 kV / LV supply sufficient for new sub-main at Stage 4a-derived rating; reinforcement excluded.

A2.6 BMS / Controls scope carried as Prime Cost Sum — actual specialist appointment, head-end licensing and scope finalisation at GB instruction at PC Sum drawdown.

A.3 CDM, Roles and Responsibilities

A3.1 Grimshaw & Bolt Ltd is Principal Contractor under CDM 2015. Built AI discharges designer duties for CDP only.

A3.2 Built AI preliminaries priced on basis of GB-provided site office, welfare, perimeter, skips, broadband, daily cleaning, F10 and CPP.

A3.3 Grimshaw & Bolt Ltd providing temporary heating and DHW continuity (confirmed by Jamie, GB, 24.04.26).



A3.4 Licensed asbestos removal under CAR 2012 by separately-appointed LARC; Certificate of Reoccupation issued before intrusive strip-out.

A.4 Utilities and Interfaces

A4.1 Existing flue void sized and structurally adequate for new flue.

A4.2 Existing condensate / foul drainage adequate and free-running.

A4.3 Tie-in points to retained Malthouse Block secondary circuit accessible, isolable and material-compatible.

A.5 Commercial

A5.1 Payment: JCT IC 2016 with CDP; monthly interim valuations; 21 days payment.

A5.2 Retention 3 % (moiety at PC; balance end of DLP).

A5.3 Materials escalation beyond 90 WD tender validity excluded.

A5.4 3.5 % IDEAL price increase scheduled for end-May 2026 (per SBS Quote 18-SQ0023969 Ver 1) NOT included — order placement before 31 May 2026 assumed. Slippage triggers ~£900 variation.

A.6 Statutory, Compliance and Safety

A6.1 Planning, Listed Building, Heritage and MOD approvals in place by start.

A6.2 SOCOTEC asbestos survey complete and representative.

A6.3 Compliance with JSP 375 / 317 / 850 and Kettlewick College Safety Rules achievable within priced scope.

B. Clarifications

B.1 Scope Interpretation

B1.1 "Complete and working" means installed, commissioned, witness-tested, documented and accepted at PC; Built AI does not operate live plant beyond handover.

B1.2 Provisional Sums (I1.1–I7.1) are JCT 2016 cl. 5.3.2 allowances drawn down on instruction; values from Doc 23 Table 18 (client-led, fixed).

B1.3 Prime Cost Sum for BMS / Controls (F6) drawn down at GB instruction for BMS specialist appointment.

B1.4 Daywork Rates apply to Employer-instructed variations only.

B.2 Value Engineering Options

B2.1 Six VE options offered as alternatives to the baseline specification, presented in dedicated VE Options tab. Each may be elected individually or in combination, subject to SES Ltd / Contract Administrator written sign-off.



B2.2 Aggregate maximum saving if all six VE options accepted: £56,736.86.

B2.3 VE 4 (DHW PHE supplier substitution) is dependent on VE 2 — if VE 2 rejected, VE 4 saving doubles. VE Options tab quotes conservative single-PHE figure.

B.3 Interfaces

B3.1 Built AI ↔ GB Principal Contractor: Built AI integrates under GB CPP, Site Rules and inductions.

B3.2 Built AI ↔ LARC: Built AI does not commence intrusive strip-out until Certificate of Reoccupation issued.

B3.3 Built AI ↔ GB Temp Boiler Provider: Built AI provides hydraulic / electrical / BMS interface points; GB supplies, installs, fuels, maintains, removes.

B3.4 Built AI ↔ BMS Specialist (PC Sum): Built AI provides hook-ups, sensor pockets, conduit / containment ready for specialist appointed at drawdown.

B3.5 Built AI ↔ existing FA maintainer: cause-and-effect via priced sub-contract engagement.

B.4 Commercial Clarifications

B4.1 Contract Sum fixed for 12 months from order; reasonable fluctuations beyond on Contractor-risk-excluded delays.

B4.2 LADs accepted up to 10 % of Contract Sum (aggregate).

B4.3 Insurances: CAR / EL £10m / PL £10m / PI £5m (CDP).

B4.4 Performance Bond offered at 0.5 % p.a. if required (not in sum).

B4.5 Parent Company Guarantee offered at nil cost.

B4.6 Any PS drawdown in excess of stated allowance valued as variation under cl. 5.3.

C. Exclusions

C.1 Asbestos and Hazardous Materials

- ▶ Licensed asbestos removal, transport, disposal, monitoring and four-stage clearance (LARC scope).
- ▶ ACMs not identified in SOCOTEC 257744-1004563.
- ▶ Lead paint, PCB, radiological surveys.

C.2 Principal Contractor Scope (with Grimshaw & Bolt)

- ▶ Construction Phase Plan, F10 notification, Health & Safety File.
- ▶ Site office, welfare cabin, secure storage, perimeter HERAS fencing, compound signage.
- ▶ Site electrical / water / sewer connections, broadband.
- ▶ Skip / waste management, daily site cleaning, hazardous-waste storage.



- ▶ Full-time Site Manager (Built AI provides Site Supervisor only).

C.3 Temporary Heating Continuity (with Grimshaw & Bolt)

- ▶ Temporary boiler hire, fuel, gas-safety check, PPM and reactive maintenance, removal, cap-off.

C.4 Builders' Work and Finishes

- ▶ Internal boiler-house redecoration (D8 / D9 / D10 series).
- ▶ External facade works beyond fire-stopping, weather-sealing, chimney-top repointing.
- ▶ Structural Engineer plinth-loading sign-off (D5.7).
- ▶ Replacement of rainwater goods / drainage stacks / foul drains beyond tie-in points.

C.5 Mechanical, Electrical and PH

- ▶ 11 kV / LV supply upgrades upstream of new sub-main origin.
- ▶ Works to Malthouse Block main LV panel beyond adding new way.
- ▶ Standby generation, UPS, harmonic filter, PFC, PV.
- ▶ External lighting, CCTV, access control, security.
- ▶ Works downstream of agreed tie-ins into retained Malthouse Block secondary.
- ▶ DHW distribution within Malthouse Block beyond DHW PHE secondary outlet.

C.6 Documentation, Specialist Authoring and Defects Allowances

- ▶ BSRIA BG 79/2020 specialist O&M authoring.
- ▶ Discrete reactive break-fix attendance allowance (covered by JCT DLP).
- ▶ Scrap metal audit per JSP 375 SUA20.

C.7 Testing and Aftercare

- ▶ Performance and capacity testing (boiler seasonal efficiency, PHE heat-transfer rate, DHW peak functional test, thermal-store charge/discharge logging, BTBS performance test, performance verification report).
- ▶ Initial 3-month aftercare attendance, weekly BMS trend review, set-point fine-tune.
- ▶ Factory witnessed tests (IDEAL, PHE skids, PUs, BTBS).

C.8 Out-of-Hours, Escalation and Abnormal Works

- ▶ Evening / weekend / public-holiday working unless instructed.
- ▶ Acceleration, programme compression, additional shifts.
- ▶ Inflation, tariff or duty escalation beyond 12-month fixed window.
- ▶ 3.5 % IDEAL increase if order slips past 31 May 2026.
- ▶ Unforeseen ground conditions, contaminated land, archaeological attendance.



C.9 Statutory and Consents

- ▶ Planning, Listed Building, Heritage, MOD or EA consents.
- ▶ Local Authority / service-provider fees or standing charges.
- ▶ Discharge consents for commissioning flush water beyond standard trade-effluent discharge.

C.10 Value Engineering Items (Carried Separately)

- ▶ VE 1 — Single 6,000 L thermal store consolidation.
- ▶ VE 2 — Single 700 kW DHW PHE consolidation.
- ▶ VE 3 — 3-hour FR flue (vs 4-hr).
- ▶ VE 4 — UKE substitute for Stokvis on DHW PHE.
- ▶ VE 5 — UKE-5 bare exchanger for Stokvis packaged 250 kW.
- ▶ VE 6 — DAB ESYTANK for Arrow Boost-A-Break.

C.11 Client-Side

- ▶ Decant, relocation, protection of Employer assets outside the working area.
- ▶ Employer client-side PM, cost consultancy, Principal Designer, CAR 2012 Supervisor fees.
- ▶ Clerk of Works attendance.
- ▶ Performance Bond (refer B4.4).

8.6 Detailed Bill of Quantities — Client-Facing Summary

The full client-facing Priced Bill of Quantities is issued as a separate workbook — B99_Hardy_Block_Priced_BoQ_Rev1_Client.xlsx — containing four tabs: Cover, Priced BoQ (7-column line-by-line schedule), Section Summary, and VE Options (six independently-electable VE options).

Section Narratives

Section A — Preliminaries (Sub-Contractor Basis)

Condensed preliminaries scope reflecting Built AI's role as MEP sub-contractor under Grimshaw & Bolt as Principal Contractor: part-time PM, Site Supervisor (no full-time Site Manager), TWC, refined-attendance QM, condensed BG 1/2007 O&M, programme management, weekly progress reporting. Excludes: CPP, F10, site establishment, welfare, perimeter, skips and waste, daily cleaning, broadband, BG 79/2020 authoring, break-fix defects allowance.

Section B — Surveys and Investigations

Stage 4a confirmatory surveys at refined attendance — plant-room dimensional, gas / LV supply verification, flue route, B2 Risk-Tracker verifications (Risks 19–30). Excludes: B6 series asbestos sampling (LARC scope).

Section C — Strip-Out, Removal and Preparation

Decommissioning and removal of 5 × Wessex boilers, 2 × Hamworthy DHW generators, 2 × Nalco buffer vessels, existing MCP and pipework. Refined attendance reflecting asbestos-removed pre-condition and GB-provided temp boiler. Excludes: licensed asbestos removal (LARC), C7/C8/C9/C10/C11 enclosure / removal / clearance series, scrap metal audit, hazardous waste consignment.

Section D — Builders' Work in Connection

EI 120 fire-stopping, skylight remove/store/reinstate, chimney top repointing, services diversion, sump pit, floor protection, fittings, builders' clean. RC plinths for IDEAL cascade, 3 × thermal store frame (baseline; refer VE 1), 2 × Stokvis DHW PHE (baseline; refer VE 2), 1 × heating PHE, Flamco PressDS, Arrow BTBS. Excludes: D8/D9/D10 redecoration series, Structural Engineer plinth sign-off (D5.7).

Section E — Testing and Commissioning

Hydraulic pressure testing at refined attendance, BSRIA BG 29/2020, gas tightness IGEM/UP/1, electrical inspection BS 7671 Pt 6, OEM commissioning at refined attendance, hydraulic balancing, witness commissioning. Excludes: factory-witnessed tests (E2/E3/E4/E5), performance / capacity testing (E19), aftercare 3-month (E20).

Section F — Mechanical and Public Health Services (Baseline)



Major plant package: 3 × IDEAL EVO Max 2 — 150 kW boilers in cascade per SBS quote; 3 × 2,000 L thermal stores (baseline); 2 × Stokvis Econoplate 700 kW DHW PHEs (baseline); 1 × Stokvis 250 kW heating PHE; Grundfos pump suite; 2 × Flamco Flexfiller 225DS; expansion vessels (425L × 2 + 110L × 3); Arrow BTBS; 4-hour FR twin-wall flue (baseline); Gas Safety Panel; full Albion Valves take-off (DWG 06642P-SDS-XX-XX-SC-M-6000-01) per SBS. F6 BMS scope carried as PC Sum.

Section G — Electrical Services

New Schneider Merlin Gerin Acti 9 12-Way 125 A TP&N DB, LSZH-SWA sub-main, BS 7671 + NICEIC, containment, full bonding, LED lighting + emergency, Apollo FA loop extension, latching E-stop. G4 final-connection labour refined.

Section H — Statutory Notifications and Permits

No proposed statutory works (per SDS Doc 23 Table 17 — nil). Gas Safe and Electrical certifications administered within Section E.

Section I — Provisional Sums (Doc 23 Table 18 — Client-Led)

Client-led PS allowances per SDS Ltd Doc 23 Table 18, drawdown only against Employer's instruction; any excess valued as variation. I1.1 Tests and samples £1,500; I2.1 Plant selection £4,000; I3.1 Flue rejected £6,000; I4.1 Replacement lighting £1,000; I5.1 Replacement FA £500; I6.1 Replacement sub-main £2,000; I7.1 General contingency £2,500. Total £17,500.

Tender Summary Table

Sec	Description	Section Total (£)
A	Preliminaries (sub-contractor basis)	51,525.60
B	Surveys and Investigations	8,298.32
C	Strip-Out, Removal, Demolition	26,376.53
D	Builders' Work in Connection	29,596.31
E	Testing and Commissioning	27,601.09
F	Mechanical and Public Health Services (incl. F6 PC Sum)	296,990.48
G	Electrical Services	24,066.00
H	Statutory	—
I	Provisional Sums (Doc 23 Table 18)	17,500.00
	FIXED TENDER TOTAL (ex VAT)	£481,954.33

Maximum Achievable Saving via VE Options

VE	Option	Saving (£)
☐	CS	
☒	TLP	
☐	PDP	
☐	BoQ	
☐	PRG	

1	Thermal Store Consolidation (1 × 6,000 L vs 3 × 2,000 L)	9,122.00
2	DHW PHE Consolidation (1 × vs 2 × 700 kW Stokvis)	24,200.00
3	Flue Fire-Resistance Rating (3-hr vs 4-hr FR)	3,000.00
4	DHW PHE Supplier Substitution (UKE for Stokvis, per PHE)	9,401.42
5	Heating PHE Format (UKE-5 bare for Stokvis packaged)	6,590.00
6	Cold-Water Booster (DAB ESYTANK for Arrow BTBS)	4,423.44
	Maximum Potential VE Saving	£56,736.86

Tender total if all VE options accepted: £425,217.47.

8.7 Detailed Pricing Summary

Project Identification

Project	B99 Malthouse Block Boiler House Replacement
Site	Kettlewick College, Somerset, BA22 9KW
Client	Grimshaw & Bolt Ltd (on behalf of Kettlewick Estates)
Project Ref	KW-2026-4471
Tenderer	Built AI Ltd (MEP / PH / Controls Sub-Contractor)
Principal Contractor	Grimshaw & Bolt Ltd
Tender Date	24 April 2026
Revision	Rev 1
Tender Validity	90 Working Days
Sub-Contract Form	JCT IC 2016 with Contractor's Design Portion
Construction Programme	14 Weeks on-site

A. Tender Sum — Section Summary (Baseline Specification)

Ref	Section	Tendered Sum (£)
A	Preliminaries (sub-contractor basis; PC duties with GB)	51,525.60
B	Surveys, Investigations and Stage 4a Verification	8,298.32
C	Strip-Out, Removal and Preparation (asbestos by LARC)	26,376.53
D	Builders' Work in Connection (re-decoration excluded)	29,596.31
E	Testing, Commissioning and Witnessing (factory tests / aftercare excluded)	27,601.09
F	Mechanical and Public Health Services (incl. F6 BMS as PC Sum)	296,990.48
G	Electrical Services Installation	24,066.00
H	Statutory Notifications and Permits	0.00
I	Provisional Sums and Defined Allowances (Doc 23 Table 18)	17,500.00
	FIXED TENDER TOTAL (Baseline Specification)	£481,954.33

B. Commercial Basis of the Tender

Item	Basis
CS	TLP
PDP	BoQ
PRG	

Tender Sum	Fixed lump sum at the baseline specification (excl. VAT)
Daywork rates	As agreed in the executed sub-contract, applicable only to Employer-instructed variations
Retention	3 % (moiety at PC, balance end of DLP)
Defects Liability Period	12 months from Practical Completion
Payment terms	Monthly interim valuations; 21 days payment
Insurances	CAR; EL £10m; PL £10m; PI £5m on CDP
Performance Bond	Offered at 0.5 % p.a. if required (not in sum)
Parent Company Guarantee	Offered at nil cost if required
Liquidated Damages	Accepted up to 10 % of Contract Sum (aggregate)

C. Provisional Sums (Doc 23 Table 18 — Client-Led)

Ref	Provisional Sum Item	Allowance (£)
I1.1	Tests and samples additional	1,500.00
I2.1	Plant selection changes (Risk Tracker assumptions)	4,000.00
I3.1	Flue rejected by chimney — alternative routing	6,000.00
I4.1	Replacement lighting (Risk 29)	1,000.00
I5.1	Replacement fire alarm (Risk 30)	500.00
I6.1	Replacement sub-main and re-wiring (Risk 27)	2,000.00
I7.1	General project contingency	2,500.00
	Total Provisional Sums	£17,500.00

Drawdown only against written instruction (JCT 2016 cl. 5.3.2). Values fixed by SDS Ltd Doc 23 Table 18. Any drawdown in excess of the allowance is valued as a variation. Unused balance returns to the Employer at Final Account.

D. Prime Cost Sum (BMS / Controls Specialist)

Section F6 (Building Management System / Controls package — specialist sub-contractor procurement) is carried as a Prime Cost Sum within the Section F tender total. The BMS specialist is appointed at Grimshaw & Bolt's instruction at PC Sum drawdown. Indicative scope per Section 8 of the Scope of Works (54-point I/O outstation, MCP, sensors, control valves, programming, head-end integration, SAT). Actual specialist scope and value finalised at PC Sum drawdown.

E. Value Engineering Options (Separate Election — Refer VE Options Tab)



VE	Option	Saving £
1	Thermal Store Consolidation (1 × 6,000 L vs 3 × 2,000 L)	9,122.00
2	DHW PHE Consolidation (1 × vs 2 × 700 kW Stokvis)	24,200.00
3	Flue Fire-Resistance Rating (3-hr FR vs 4-hr FR)	3,000.00
4	DHW PHE Supplier Substitution (UKE for Stokvis, per PHE)	9,401.42
5	Heating PHE Format (UKE-5 bare for Stokvis packaged 250 kW)	6,590.00
6	Cold-Water Booster (DAB ESYTANK for Arrow BTBS)	4,423.44
	Maximum Potential VE Saving	£56,736.86

Each VE option may be accepted individually or in combination, subject to SES Ltd / Contract Administrator written sign-off. VE 4 saving doubles if VE 2 is rejected.

F. Headline Tender Sum

Scenario	Tender Sum (£)
Baseline Specification (no VE accepted)	£481,954.33
With VE 1 + 2 + 3 (the original three VEs)	445,632.33
With ALL six VE options accepted	£425,217.47

TOTAL FIXED TENDER SUM (BASELINE)

£481,954.33

(Four hundred and eighty-one thousand, nine hundred and fifty-four pounds and thirty-three pence)

Exclusive of VAT.

G. Key Exclusions Summary (full schedule at Section 8.5)

- ▶ (i) Licensed asbestos removal, disposal and four-stage clearance — LARC scope.
- ▶ (ii) Principal Contractor preliminaries (CPP, F10, site establishment, welfare, perimeter, skips, broadband, daily cleaning) — Grimshaw & Bolt scope.
- ▶ (iii) Temporary heating and DHW continuity (boiler hire, fuel, maintenance, removal) — Grimshaw & Bolt scope.
- ▶ (iv) Internal boiler-house redecoration.
- ▶ (v) Performance and capacity testing; aftercare during first 3 months; factory-witnessed tests.
- ▶ (vi) BSRIA BG 79/2020 specialist O&M authoring; scrap metal audit; reactive break-fix defects allowance.

-
- ▶ (vii) 11 kV / LV supply alterations upstream of the new sub-main origin.
 - ▶ (viii) Kettlewick College IT / VPN / firewall approvals for BMS remote access (BMS delivered IP-ready).
 - ▶ (ix) Planning, Listed Building, Heritage or MOD consents.
 - ▶ (x) Acceleration, overtime, out-of-hours working unless instructed.
 - ▶ (xi) 3.5 % IDEAL price increase if order placement slips past 31 May 2026.
 - ▶ (xii) Performance Bond.

End of Tender Letter Proposal — Rev 1

PRODUCTION NOTE

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What makes this different

- **Consistent across the document family**
 - all five files share a single source of truth for client/site data.
- **Visualisations generated, not drawn**
 - charts, dashboards and schematics are programmatic outputs.
- **Audit-ready**
 - every figure is traceable back to the underlying BoQ or programme.
- **Iteration-ready**
 - change a price, regenerate the pack.