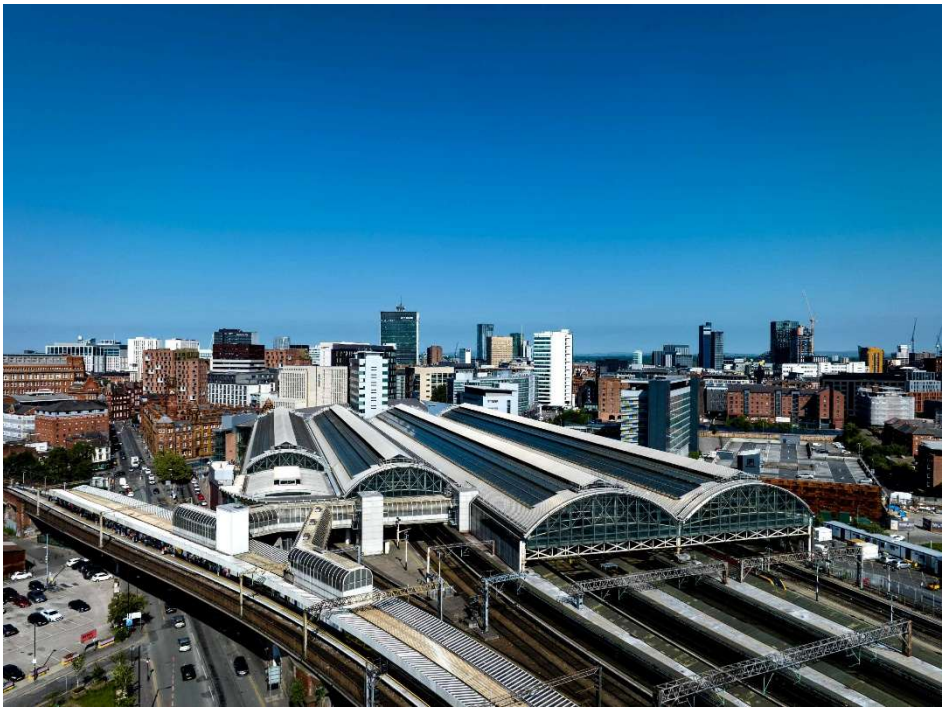
VITAL ENERGI UTILITIES LIMITED



Manchester Piccadilly Station
Boiler Removal Methodology

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Issued By	**Bradley Taylor**	**Project Engineer**	**Date**	**21/09/2026**
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1. Scope of works

The works comprise the isolation, purging and modification of the existing gas infrastructure serving Boiler 1, electrical disconnection, removal of Boiler 1 and associated flue system, and alterations to the flow and return pipework headers to facilitate future Air Source Heat Pump (ASHP) connections.
All works shall be undertaken by suitably trained and competent personnel in accordance with current legislation, site-specific RAMS, permit-to-work requirements, and VE Health & Safety procedures.

2. Gas pipework, isolation and removal

- Preparation of the area
- A pre-start briefing and review of permits will be completed with all operatives involved in the works.
- The work area will be segregated using barriers and warning signage to prevent unauthorised access.
- Gas detection equipment will be available throughout the operation.
- All gas works will be carried out by a suitably qualified VE Gas Safe registered engineer.

3. Isolation and purging

- The gas main supplying Boiler 1 will be isolated locally using the identified isolation valve.
- Isolation will be verified prior to commencing any intrusive works.
- A controlled gas purge will be undertaken by the VE Gas Safe engineer in accordance with relevant gas safety procedures.
- Confirmation of a gas-free system will be obtained before pipework dismantling begins.

4. Removal works

- Existing gas pipework between the gas main and gas booster will be dismantled and removed.
- The gas booster and all associated ancillary pipework, supports and fittings will be disconnected and removed.
- All removed materials will be removed in a controlled manner and transferred to the designated waste area.
- Permanent main Modification to be done at a later date
- A short spool piece incorporating a purge point connection will be installed onto the retained gas main.
- The purge point shall be securely plugged off following the installation.
- The installation will be visually inspected and tested as required prior to completion.

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5. Future gas main alterations

- Survey and Investigate exiting main within piccadilly train station.
- A VE Gas Safe engineer will undertake a detailed survey of the existing gas main infrastructure.
- Existing isolation arrangements will be identified and verified.
- Isolation points will be shut off, locked off and clearly labelled to prevent accidental operation.
- Installation of Additional Purge Points
- Existing gas mains will be assessed for the availability of suitable purge points.
- Where purge points are absent, a strap-on collar arrangement will be installed at agreed locations.

6. Live tapping

- Hot tapping works will be undertaken by suitably trained specialist operatives.
- The hot tap equipment will be installed in accordance with manufacturer instructions.
- Following successful drilling of the live main, the coupon will be safely retrieved and removed.
- The new purge point assembly will then be installed and tested.
- All works will be completed in accordance with applicable gas safety procedures and permit requirements.

7. Electrical disconnection

- Isolation Procedures to be presented to network rail
- A qualified electrician will locally isolate Boiler 1 via the dedicated isolator.
- Isolation will be completed in accordance with the site's Lock Out Tag Out (LOTO) procedure.
- A safety padlock and warning tag will be fitted to prevent inadvertent re-energisation.
- Dead testing will be conducted to verify isolation before commencement of electrical disconnection works.

8. BMS & controls preparation

- Prior to isolation, the BMS engineer will carry out all necessary system adjustments and preparations to ensure plant operation is not adversely affected.
- Once authorised, electrical supplies from the local isolator to Boiler 1 will be disconnected and made safe.
- Redundant cabling and associated containment will be removed where specified.

9. LTHW pipework alterations

- Isolation of boiler 2 and Drain Down of LTHW headers.
- The return header will be isolated at the DRV.
- The flow header will be isolated at the flow valve local to Boiler 1.
- Warning tags will be applied where necessary.
- Utilising the drains on top of the of Boiler 1 ancillary pipework located between the flow and return headers will be drained down in a controlled manner.

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- Drainage water will be collected and disposed of in accordance with site environmental requirements.

10. Removal of existing pipework

- Existing pipework connections serving Boiler 1 will be disconnected and removed.
- The DN150 shall be retained and securely blanked off following disconnection.
- The existing DN150 pipe section between the return header DRV and flow header will be cut out and removed using appropriate mechanical cutting methods.

11. Installation of new pipework

- A new DN150 spool piece will be installed to the return header at the DRV location. Please refer to drawing No. 50902-VE-PS-XX-DR-M-5612
- The new spool arrangement shall incorporate connections for the future ASHP installation and a DN125 future branch connection.
- A new DN150 isolation valve will be installed on the end of the spool piece assembly.
- A DN200 x DN125 reducer will be installed onto the flow header to facilitate future ASHP connection works.
- All pipework modifications shall be aligned, supported and installed in accordance with project specifications.

12. Testing and inspection

- All new pipework assemblies will be visually inspected.
- Pressure testing and commissioning requirements shall be undertaken in accordance with project specifications.
- Any temporary blanks installed during the works shall remain clearly identified for future connection works.

13. Flue removal (boiler house only)

- Following confirmation that Boiler 1 has been fully isolated and disconnected, the associated flue system will be dismantled.
- The working area beneath the flue removal zone will be segregated to establish an exclusion zone.
- Low-Level Removal
- Accessible low-level flue sections will be dismantled from ground level using suitable access equipment and hand tools.
- Components will be lowered safely to prevent damage or injury.
- High-Level Removal
- The upper flue sections will be removed using a mobile aluminium tower scaffold.
- The tower will be erected, inspected and tagged by a PASMA-trained operative.
- Work at height operations will be carried out by trained personnel using suitable fall prevention measures.
- Flue sections will be dismantled progressively and lowered in a controlled manner.

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- VE waste Management plan to be followed
- Removed flue sections will be transferred to the VE compound.
- Materials will be segregated and disposed of through approved waste streams in accordance with VE waste management procedures.

14. Boiler Removal

- Prior to removal, Boiler 1 will be fully disconnected from all gas, water, electrical and control systems.
- A lift plan and movement assessment will be completed by the appointed lift and shift contractor.
- Routes will be inspected to ensure suitability for moving the boiler safely to the designated exit point.

15. Removal Process

- The contracted lifting company will be responsible for the below:
- The boiler will be carefully jacked using suitable lifting equipment.
- Heavy-duty skates will be positioned beneath the boiler to facilitate movement.
- The boiler will then be transferred along the agreed route under controlled conditions.
- Movement will take place through the Network Rail corridor under agreed access arrangements and supervision.
- Boiler removal works will be carried out in a controlled manner to prevent damage to the building fabric. Where necessary, the boiler will be dismantled into smaller, manageable components to facilitate safe removal through existing access routes. Particular care will be taken within areas containing historic or sensitive materials, with suitable protection measures such as padding and temporary barriers systems implemented for the duration of the works. All activities will be undertaken to preserve and protect historic building elements, finishes, and features, ensuring no adverse impact to the fabric of the structure during the removal process.
- The boiler will be skated into the designated Network Rail car park loading area.

16. Disposal

- The boiler will be loaded onto suitable transport by the appointed contractor.
- The unit will be transported to a licensed waste disposal or recycling facility.

17. Upon completion of all works

- All systems will be left in a safe condition.
- Temporary barriers, waste materials and surplus plant will be removed.
- Final inspections will be carried out by the Site Supervisor.
- Relevant test certificates, waste records and handover documentation will be provided to the client.

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18.REVIEWER COMMENTS

Date Received:		**Date for Return:**	

Distribution for Review:	**End Date for Review:**	**Comments:**	**Initials:**

General Comment:

	Date Returned to Contractor:	

Signed:	**Status**	**A - Acceptable.** **B - Acceptable as marked, revise document and reissue.** **C - Unacceptable, resubmit.**
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19.APPENDICES



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