



- NOTES**
1. Banking compound connection at 400kV changed from previous National Grid connection at substation at 132kV
 2. Ground flare system for all hydrogen emissions during normal operations.
 3. Liquid nitrogen supplied by tanker.
 4. Solid waste e.g. spent catalyst / adsorbent disposed of off-site by specialist contractors.
 5. Electrolysis System consists of electrolyser stack, balance of stack, rectifiers and transformers. PEM electrolyser technology selected.
 6. Process wastewater from the HPF may be neutralised and reused in PPS demineralisation system, to be determined during the FEED.
 7. Theoretical compression and purification included in BFD for use in HEC only, offtaker boundary included to illustrate actual HPF interface with offtaker.
 8. Adiabatic cooling system considered as base case for project however cooling technology may be optimised during the FEED.
 9. Re-use of process water reject to be considered during FEED.

- REVISION NOTES**
- RFI 1. Backup Power Generator moved from Electrical Block. Diesel Input added.
- RFI 2. Raw Water and Fire Water Storage added to the Water Supply Block. Input and Output Raw Water streams added.
- RFI 3. Electrolyser Block changed to Electrolysis System Block. Lye system removed. See Note 5.
- RFI 4. Hydrogen Storage removed.
- RFI 5. Purge stream from adiabatic cooling to process drains added, see Note 6.
- RFI 6. Local Discharge changed Pembroke Power Station (PPS) Wastewater system and discharge, see Note 6.
- RFI 7. Harmonic filtering and Static Synchronous Compensator included
- RFI 8. Cooling concept selected as adiabatic rather than hybrid.
- RFI 9. Removal of hydrogen vent, hydrogen is intended to be directed to the flare in normal operation
- RFI 10. Notes updated to reflect design updates
- RFI 11. Hydrogen flare pilot fuel changed to permanent flow during normal operation

- LEGEND**
- Continuous Flow
- Intermittent Flow
- External Connection
- Process Block
- Operating Block
- Site Boundary
- RFI Revisions

C	23/04/25	ES	SD	TR
B	15/04/24	CW	GE	GE
A	11/03/24	CW	MB	GE

Revision description:
ISSUED TO SUPPORT HAR2 RFI SUBMISSION – UPDATE TO ARUP PRE-FEED BFD BY RWE

Rev	Date	Author	Checker	Approver
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Project Title

PEMBROKE GREEN HYDROGEN 1

Drawing Title

BLOCK FLOW DIAGRAM

Rev. C

Date: 23/04/2025