

Appendix A

System schematics and geographic drawings

Contents

Appendix A includes a set of system schematics and geographic drawings of the current NETS, with the approximate locations of existing power stations and reactive compensation plants shown. The schematics also show the NETS boundaries and ETYS zones we have used in our analysis.

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Figure A1: GB Existing Power Stations

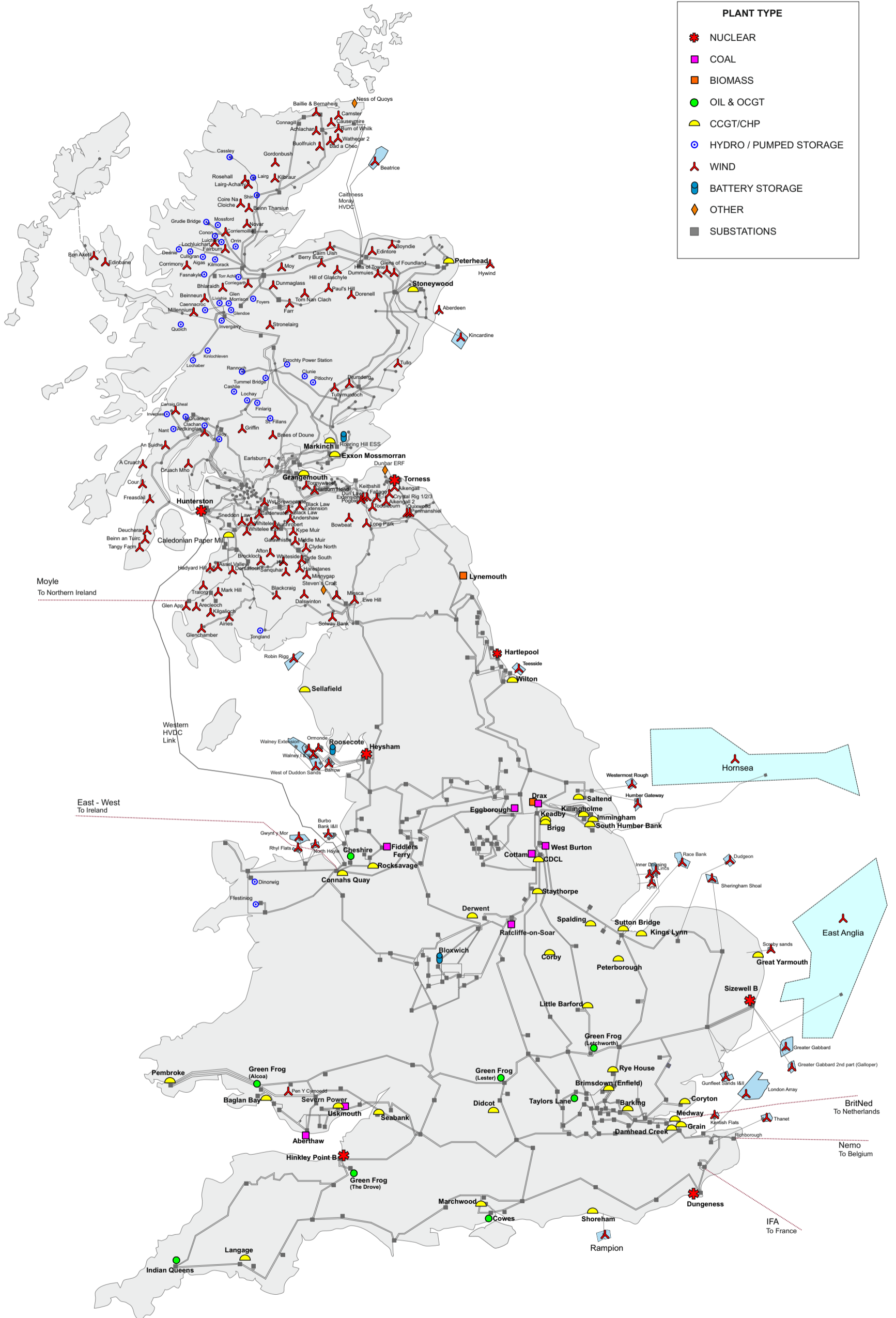


Figure A2: GB Existing Transmission System

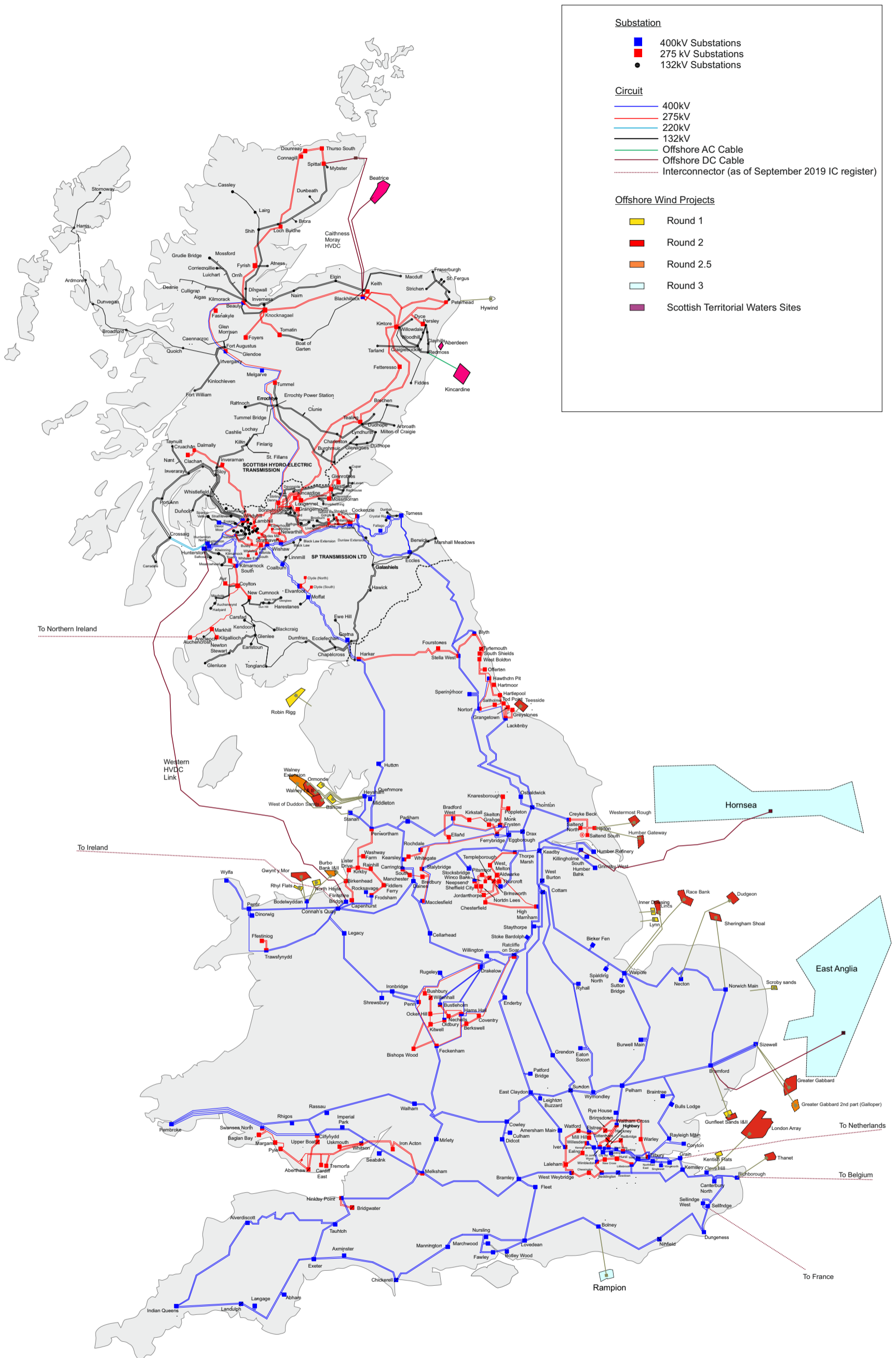


Figure A3: GB Transmission System Boundaries

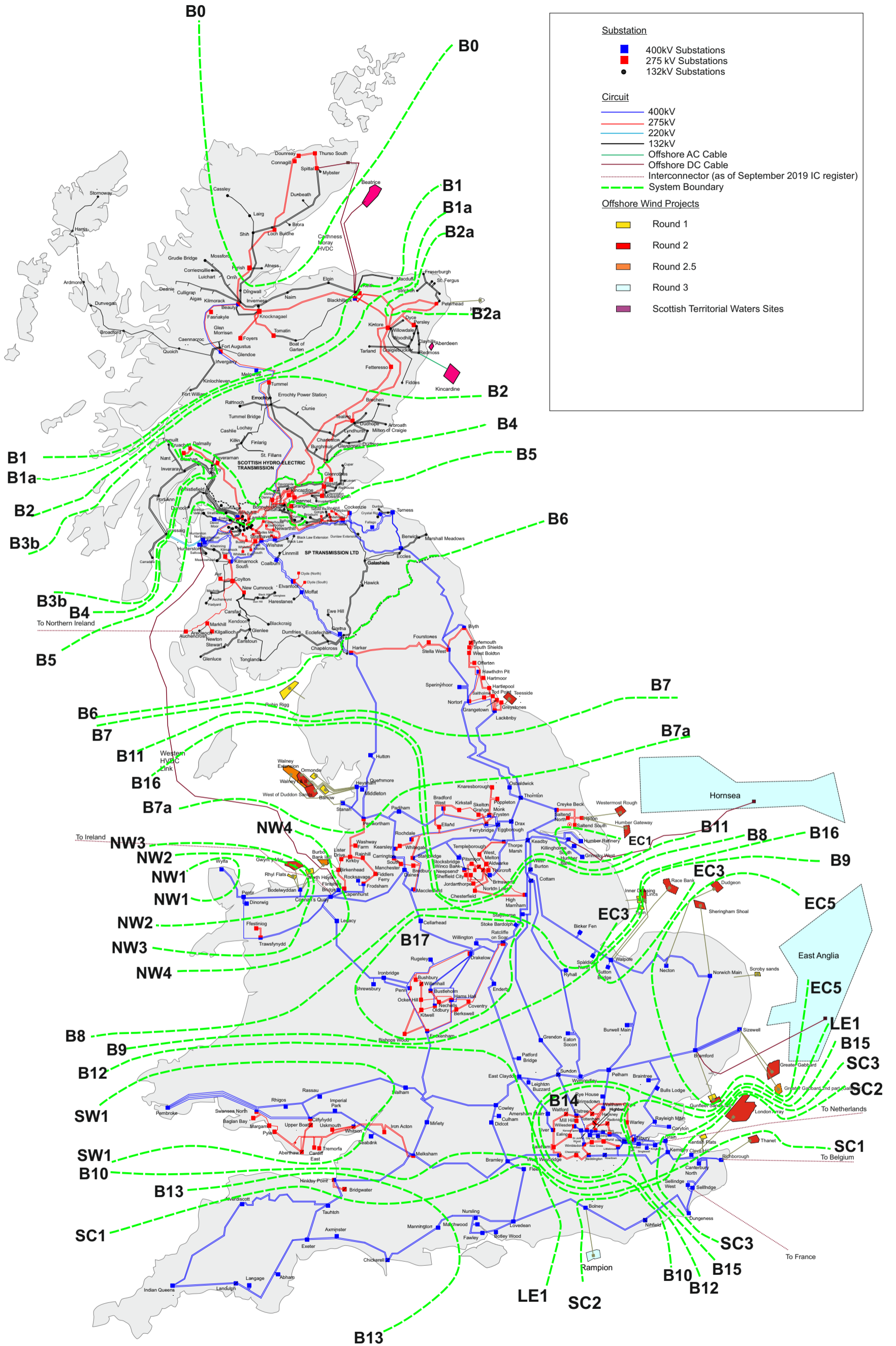
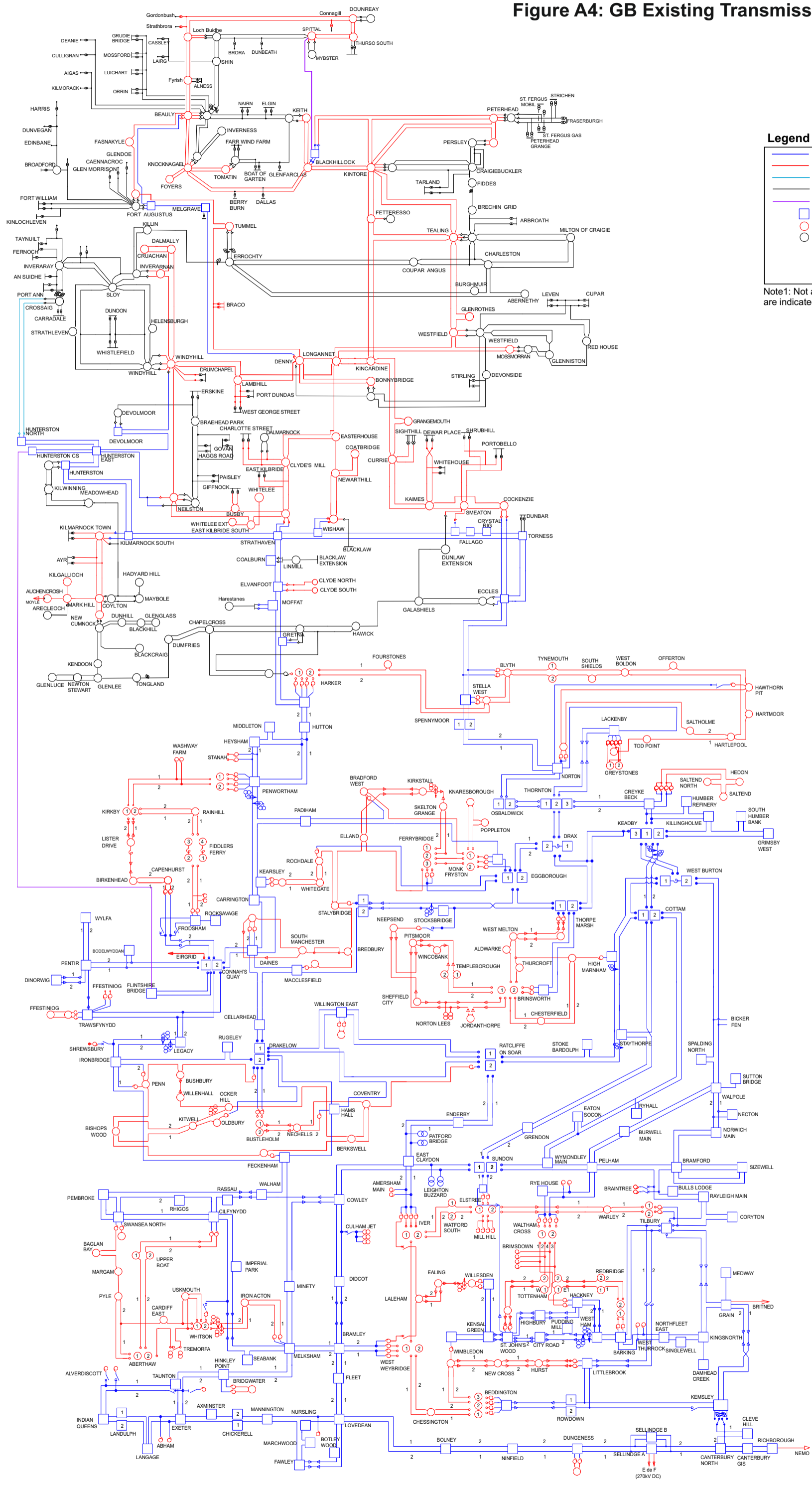


Figure A4: GB Existing Transmission System

SHE TRANSMISSION

SP TRANSMISSION

NATIONAL GRID



Legend

- 400kV Circuit
- 275kV Circuit
- 220kV Circuit
- 132kV Circuit
- HVDC Circuit
- 400kV Substation
- 275kV Substation
- 132kV Substation

Note1: Not all radial 132kV circuits are indicated on this diagram

E de F (270kV DC)

Figure A5: GB Transmission System ETYS Zones

SHE TRANSMISSION

SP TRANSMISSION

NATIONAL GRID

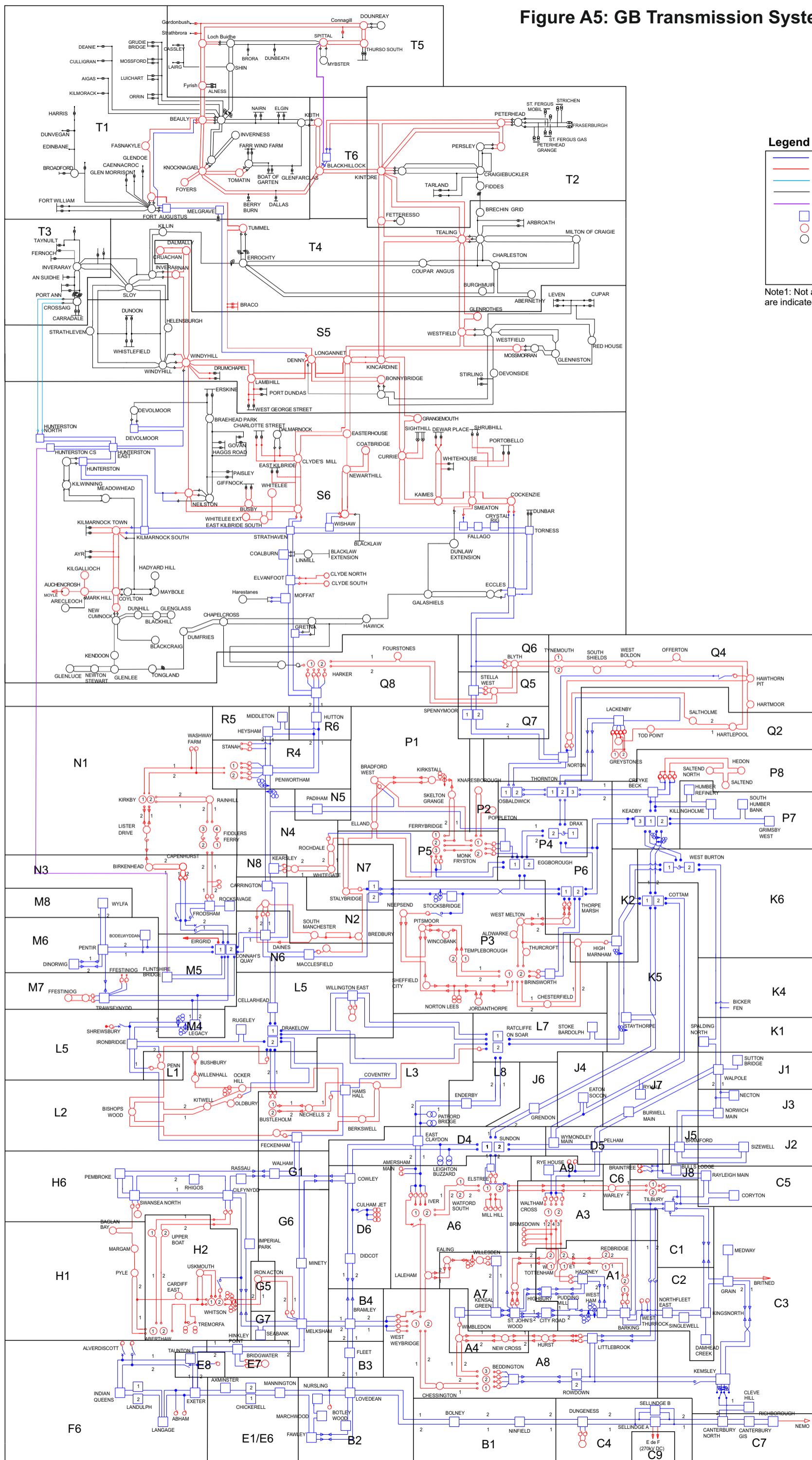
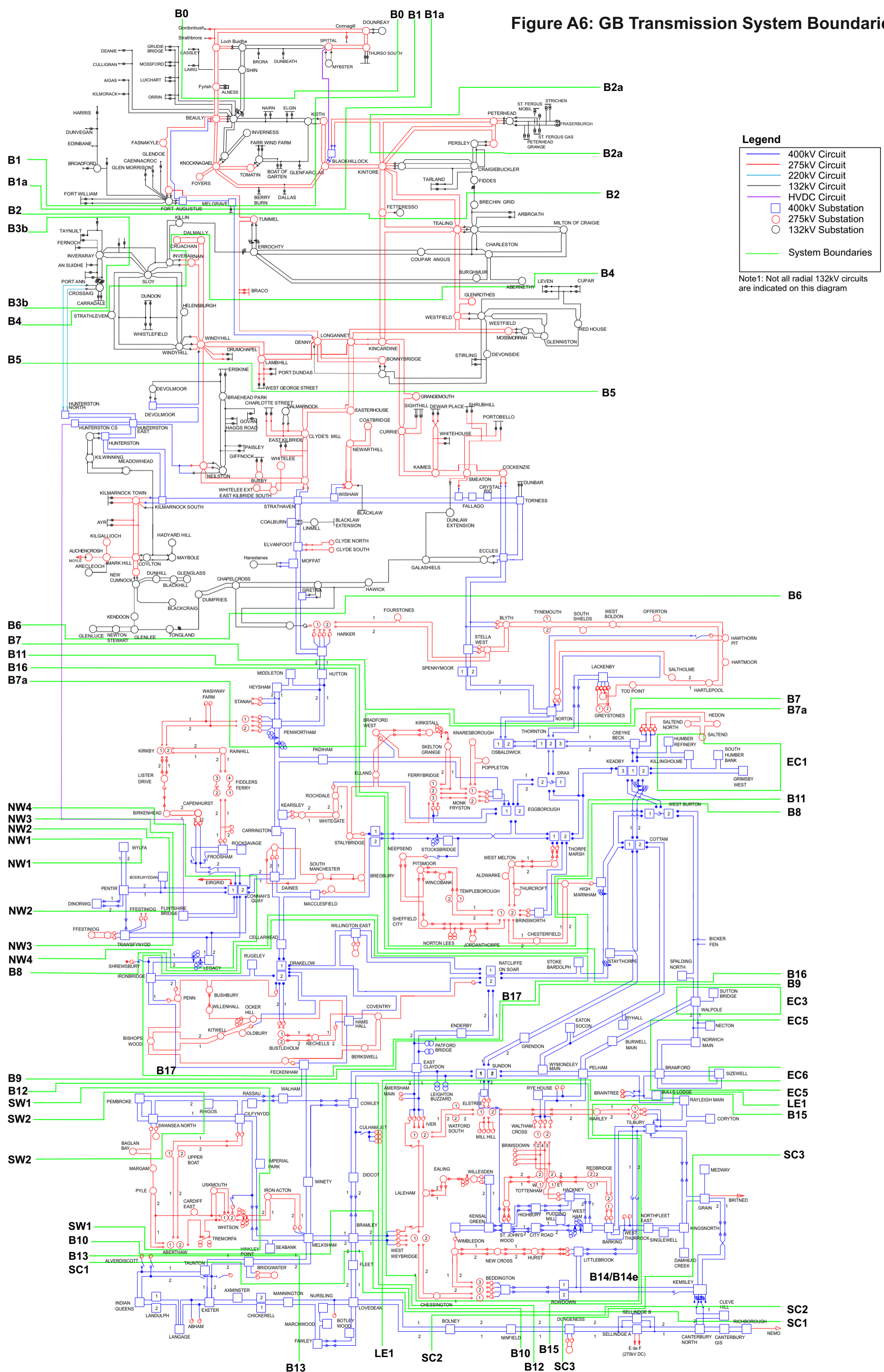


Figure A6: GB Transmission System Boundaries

SHE TRANSMISSION

SP TRANSMISSION

NATIONAL GRID



Legend

- 400kV Circuit
- 275kV Circuit
- 220kV Circuit
- 132kV Circuit
- HVDC Circuit
- 400kV Substation
- 275kV Substation
- 132kV Substation
- System Boundaries

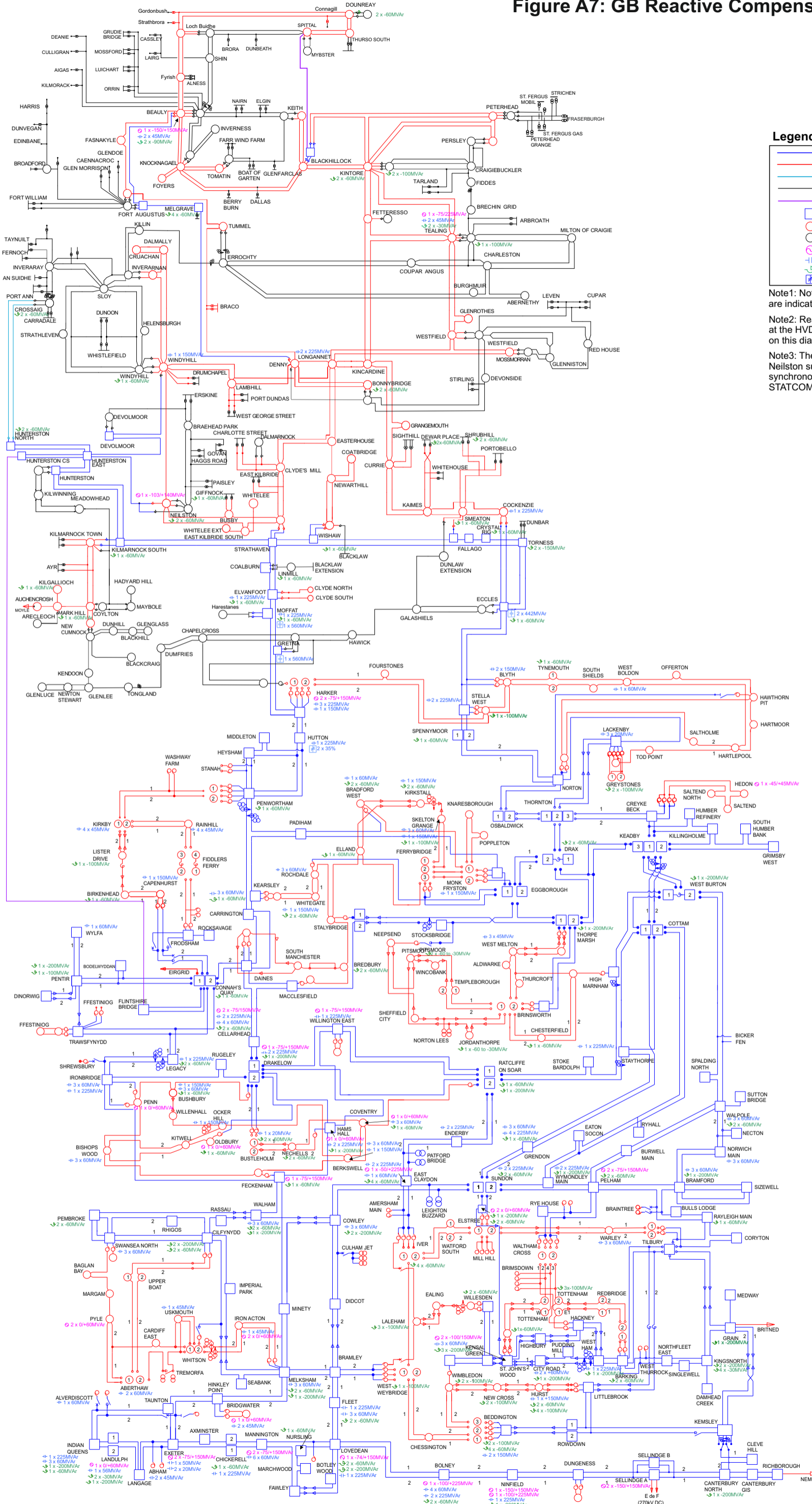
Note1: Not all radial 132kV circuits are indicated on this diagram

Figure A7: GB Reactive Compensation Plant

SHE TRANSMISSION

SP TRANSMISSION

NATIONAL GRID



Legend

- 400kV Circuit
- 275kV Circuit
- 220kV Circuit
- 132kV Circuit
- HVDC Circuit
- 400kV Substation
- 275kV Substation
- 132kV Substation
- SVC
- MSC
- Reactor
- Series Capacitor

Note1: Not all radial 132kV circuits are indicated on this diagram

Note2: Reactive compensation plants at the HVDC terminals are not listed on this diagram

Note3: The 103+140 Mvar at Neilston substation is a hybrid synchronous compensator and STATCOM