



GB Seven Year Statement 2009

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Figure A.4.1 NGET Existing Transmission System, 2008/09

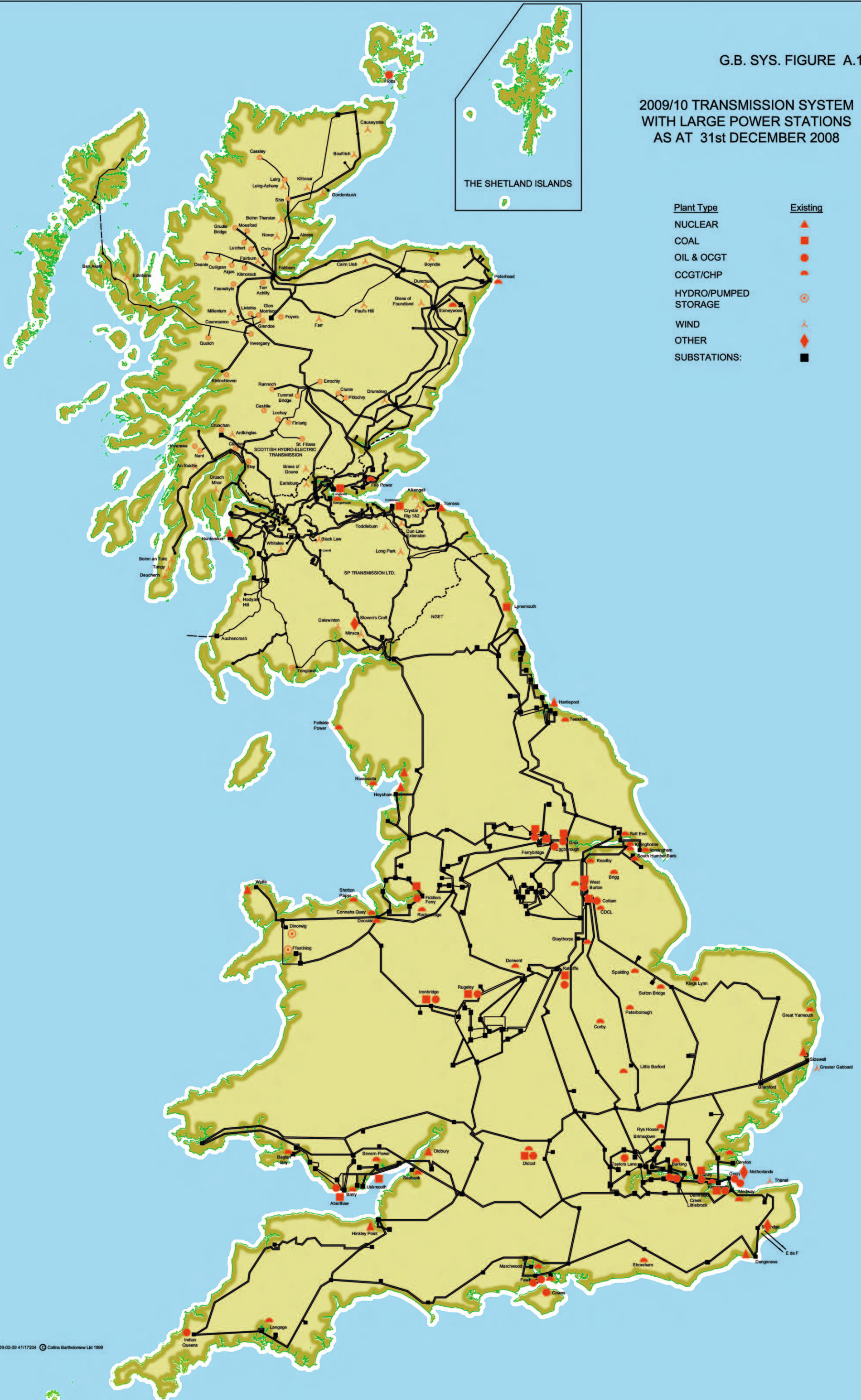
Figure A.4.2 NGET Generation Use of System Tariff Zones (Electrical), 2009/10

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2009/10 TRANSMISSION SYSTEM
WITH LARGE POWER STATIONS
AS AT 31st DECEMBER 2008



2009/10 TRANSMISSION SYSTEM AS AT 31st DECEMBER 2008



- 400kV Substations
- 275kV Substations
- 132kV Substations
- 400kV Circuits
- 275kV Circuits
- 132kV Circuits



Major Generating Sites Including Pumped Storage

- Connected at 400kV
- Connected at 275kV
- Hydro Generation



GB SYS FIGURE A.1.3
GB GENERATION USE OF SYSTEM
WIDER TARIFF ZONES 2009/10

400kV Substations	■
275kV Substations	■
132kV Substations	●
400kV Circuits	—
275kV Circuits	—
132kV Circuits	—

Major Generating Sites
Including Pumped Storage

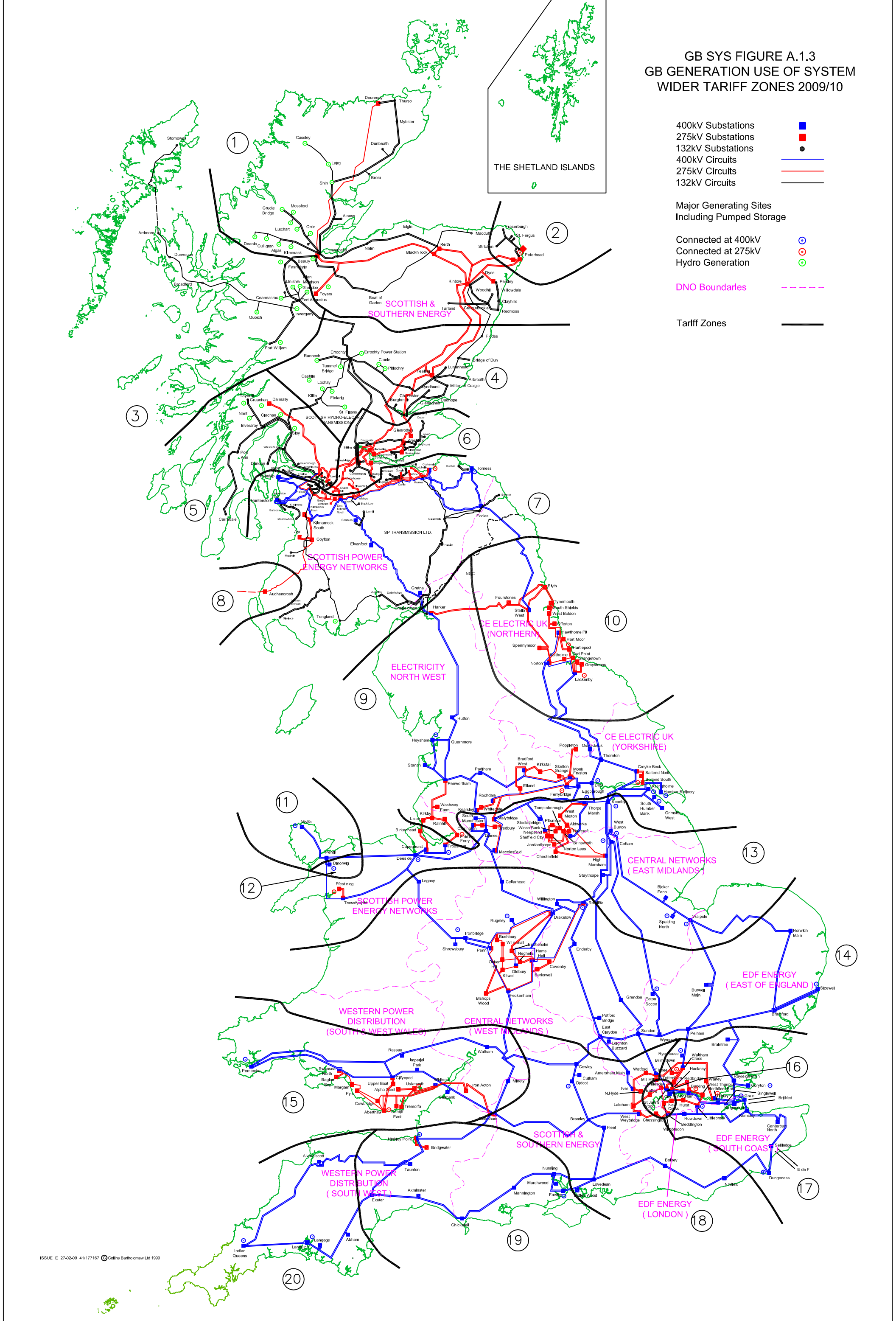
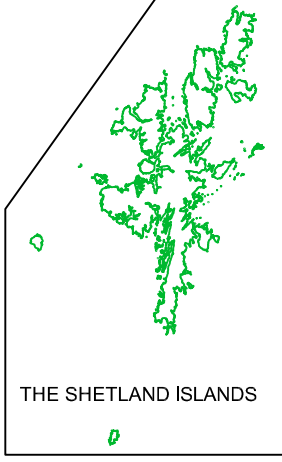
Connected at 400kV	○
Connected at 275kV	○
Hydro Generation	○

DNO Boundaries

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Tariff Zones

— — — — —

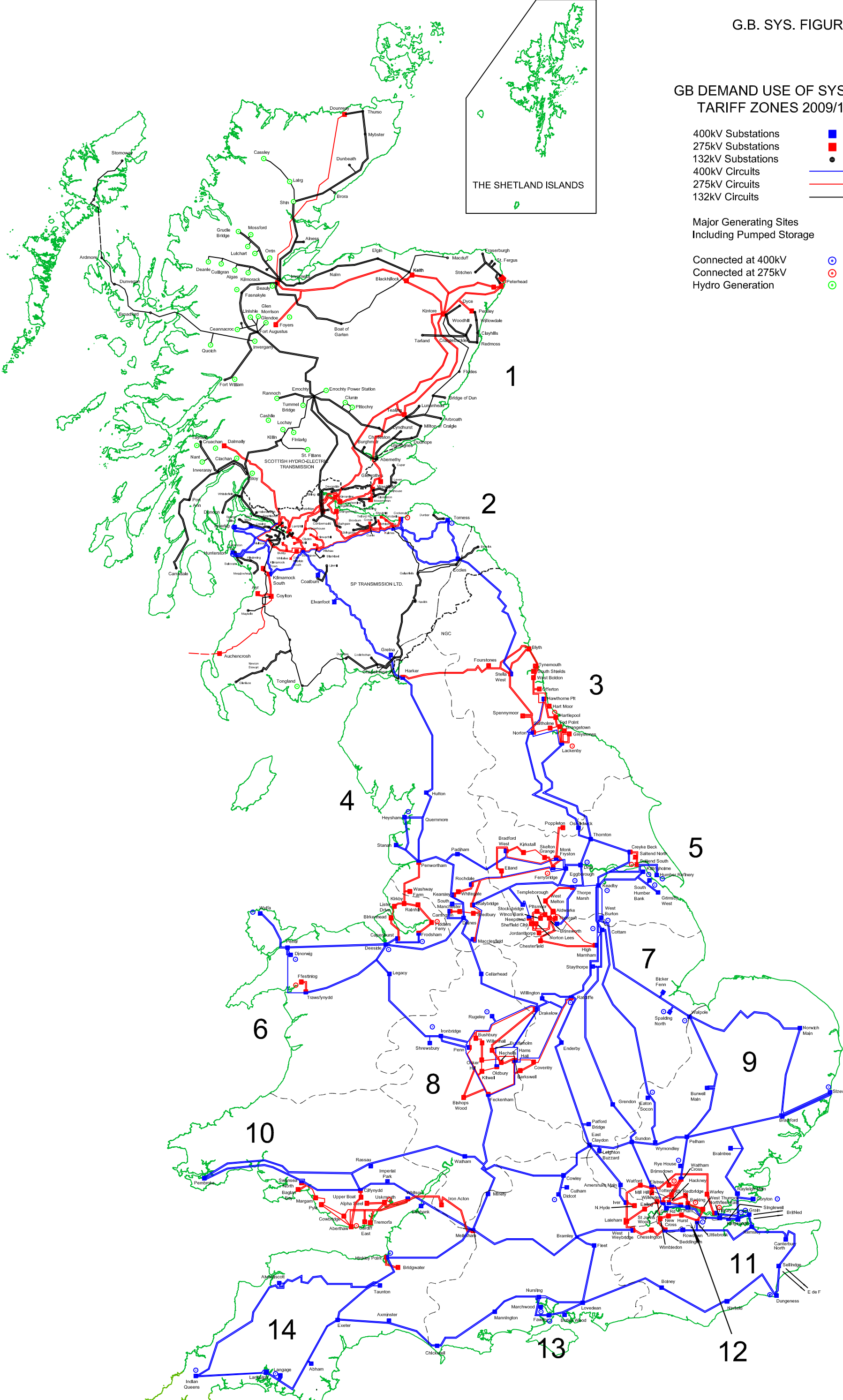
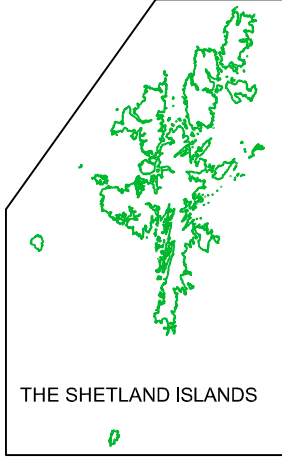


GB DEMAND USE OF SYSTEM
TARIFF ZONES 2009/10

- 400kV Substations ■
- 275kV Substations ■
- 132kV Substations ●
- 400kV Circuits —
- 275kV Circuits —
- 132kV Circuits —

Major Generating Sites
Including Pumped Storage

- Connected at 400kV ○
- Connected at 275kV ○
- Hydro Generation ○



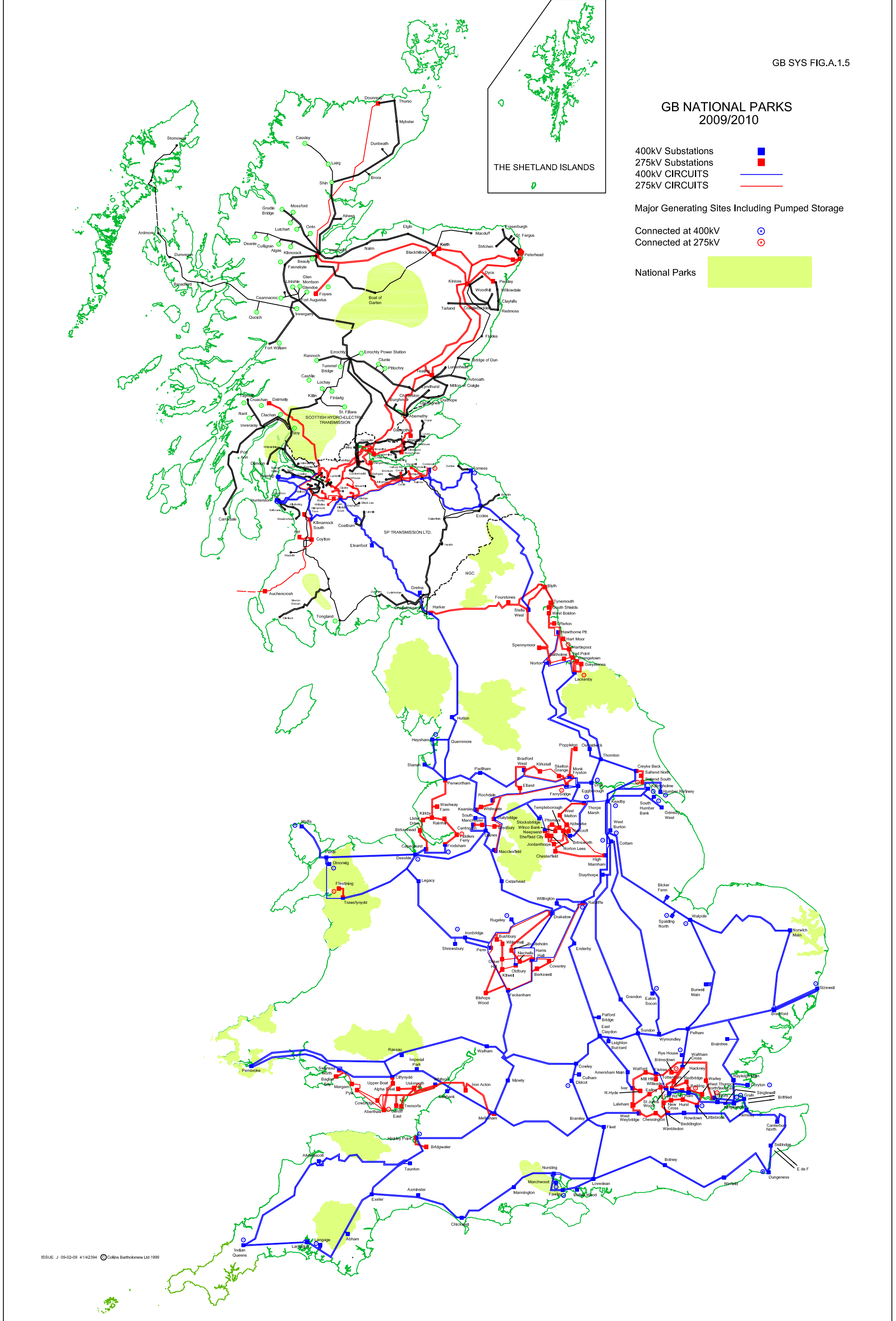
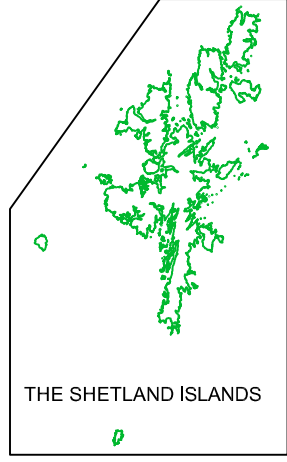
GB NATIONAL PARKS 2009/2010

400kV Substations ■
275kV Substations ■
400kV CIRCUITS —
275kV CIRCUITS —

Major Generating Sites Including Pumped Storage

Connected at 400kV ○
Connected at 275kV ○

National Parks



GB TRANSMISSION BOUNDARIES AND SYS STUDY ZONES 2009/10

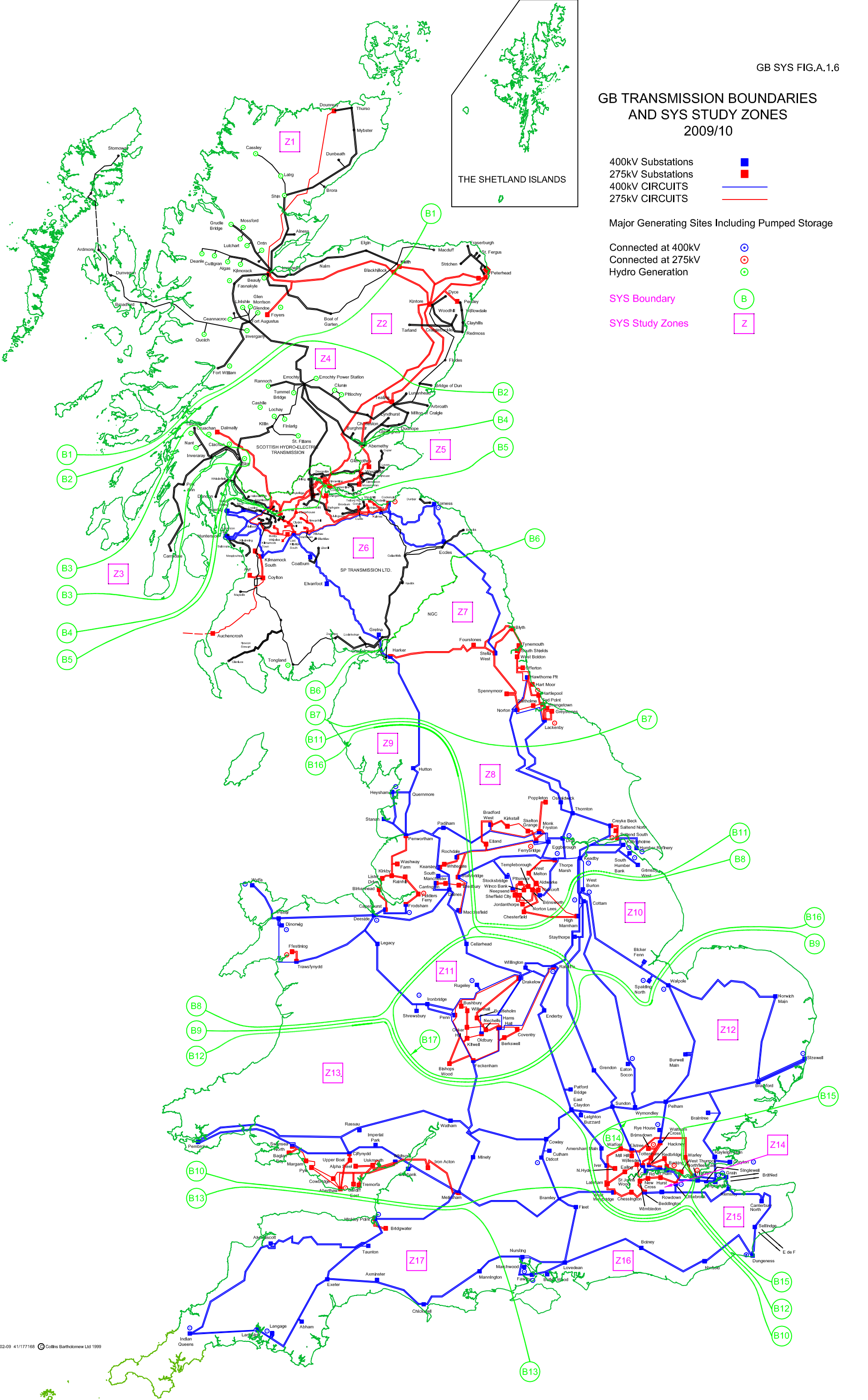
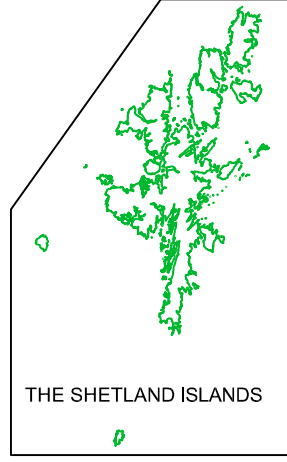
400kV Substations ■
 275kV Substations ■
 400kV CIRCUITS —
 275kV CIRCUITS —

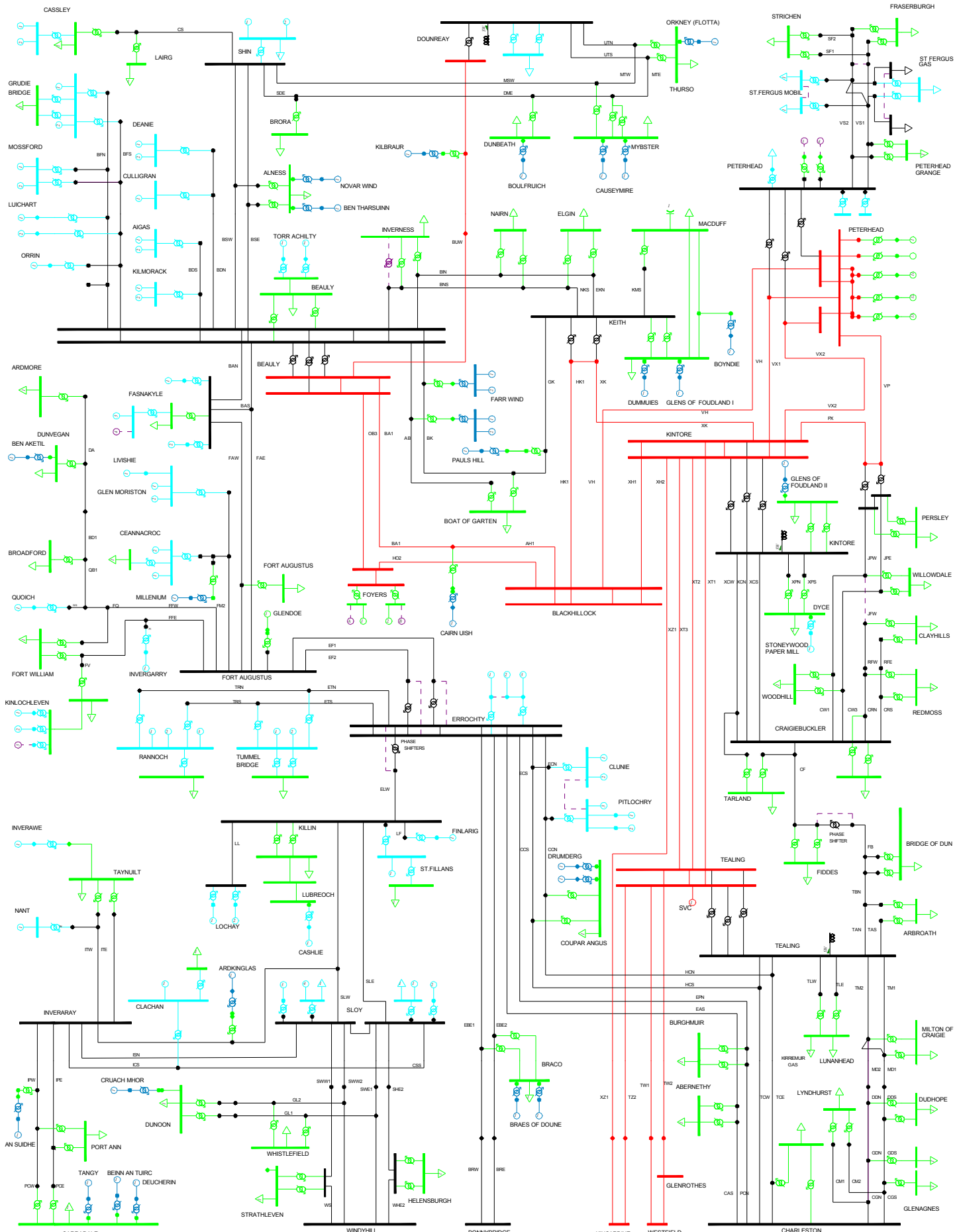
Major Generating Sites Including Pumped Storage

Connected at 400kV ○
 Connected at 275kV ○
 Hydro Generation ○

SYS Boundary B

SYS Study Zones Z

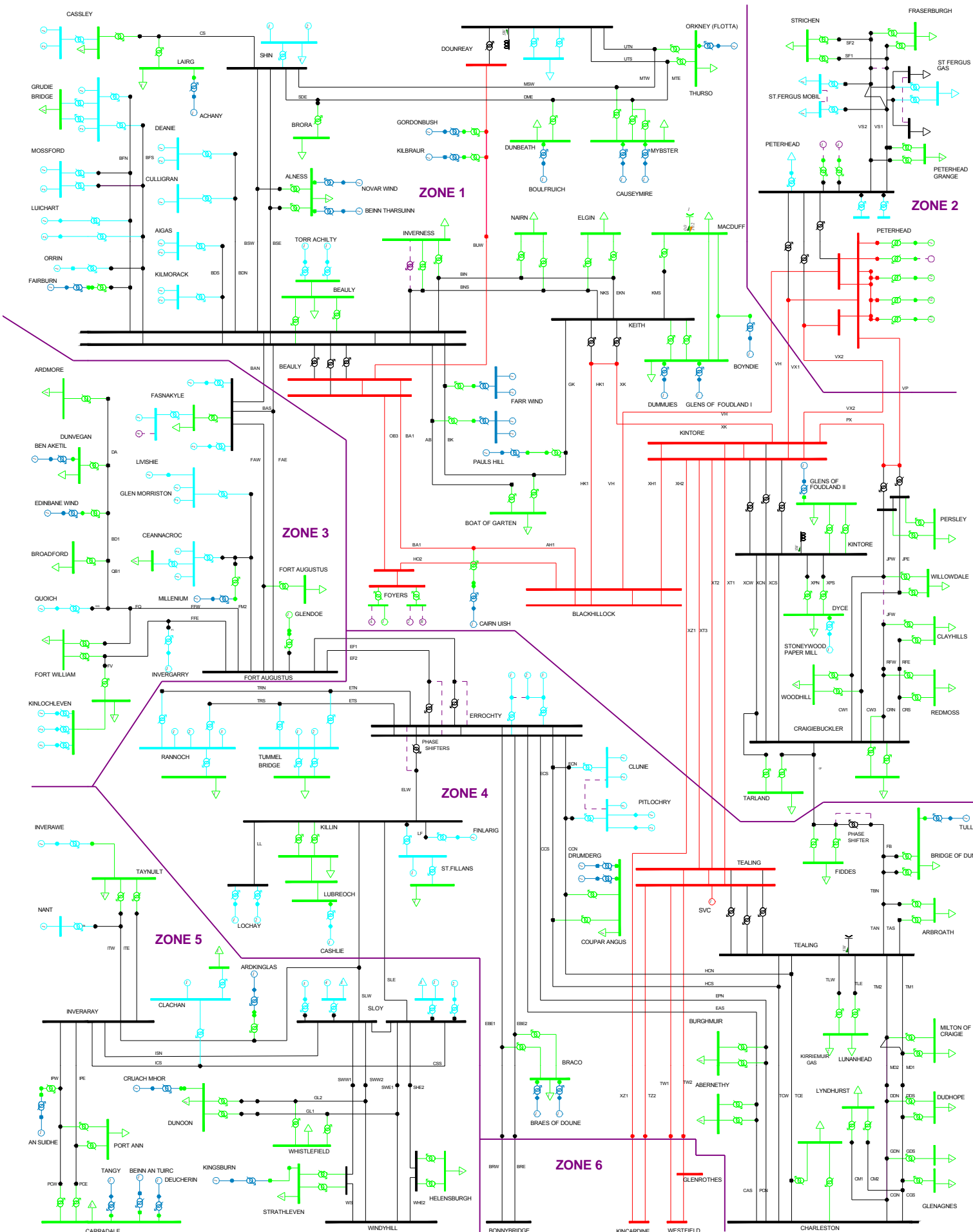




SCOTTISH HYDRO-ELECTRIC TRANSMISSION LTD
 SYS09 - YEAR 1 FIGURE A.2.1
 WED, APR 29 2009 11:56

Figure A.2.1 - SHETL Existing Transmission System, 2008/09

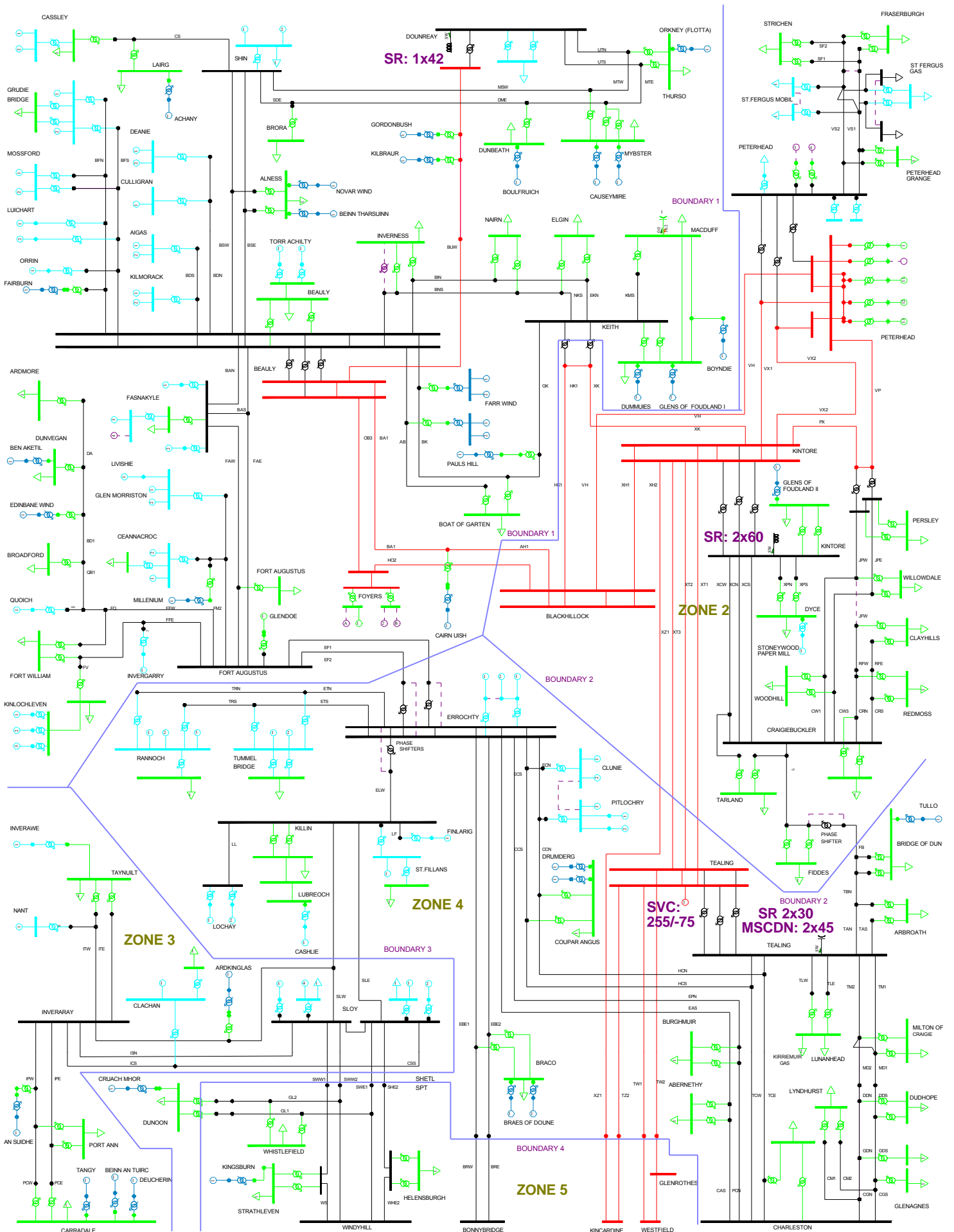
Bus - VOLTAGE (kV)
 Branch - MW/Mvar
 Equipment - MW/Mvar
 100.0% RATE A
 1.0000V 0.940UV
 KV: <=11.000 <=11.000 <=33.000 <=132.000 <=275.000



SCOTTISH HYDRO ELECTRIC TRANSMISSION LTD
 SYS09 - YEAR 1 FIGURE A.2.2
 WED, MAY 06 2009 11:17

Bus - VOLTAGE (PU)
 Branch - MW/Mvar
 Equipment - MW/Mvar
 100 % RATED
 1,060OV 0.940V
 kV: <=1,000 <=11,000 <=33,000 <=132,000 <=275,000

Figure A.2.2 - SHETL Generation Use of System Tariff Zones (Electrical), 2009/10



SCOTTISH HYDRO ELECTRIC TRANSMISSION LTD
 SYS09 - YEAR 1 FIGURE A.2.3
 WED, MAY 06 2009 11:22

Figure A.2.3 - SHETL Reactive Compensation Plant, 2009/10

Bus - VOLTAGE (PU)
 Branch - MW/Mvar
 Equipment - MW/Mvar
 100.0% PATEA
 1.0500V 0.940UV
 KV: <math>KV <= 1.000 <= 1.100 <= 33.000 <= 132.000 <= 275.000</math>

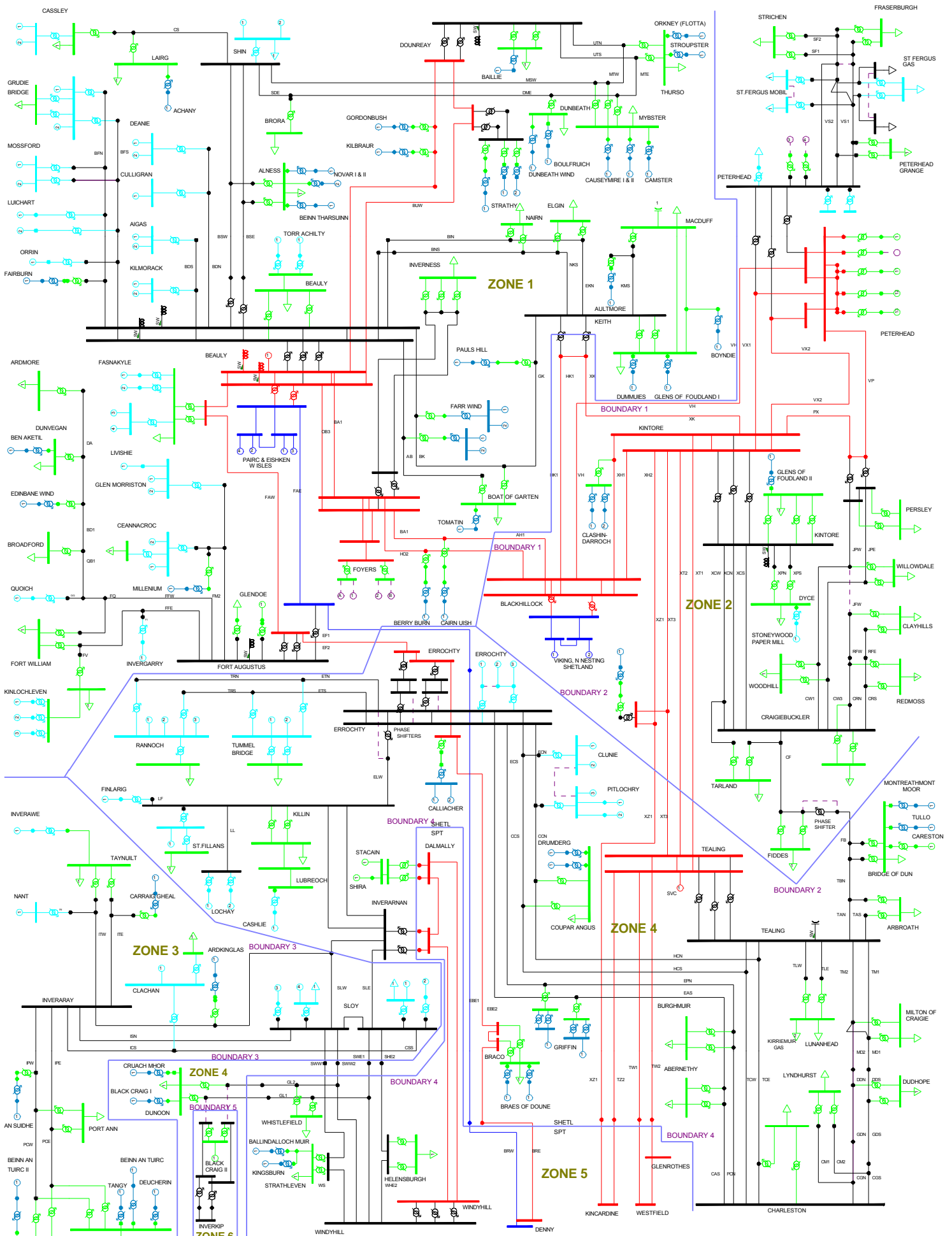
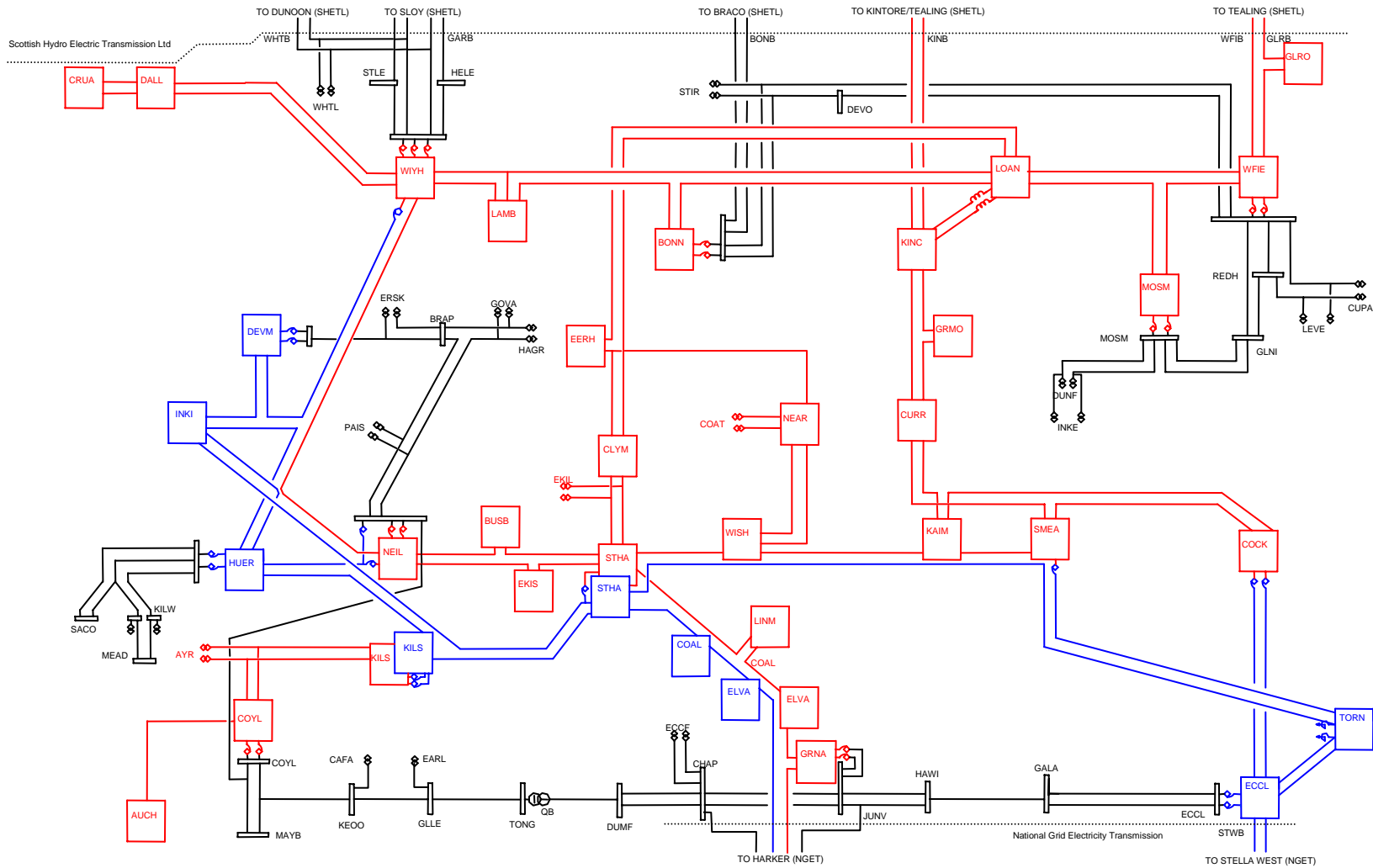


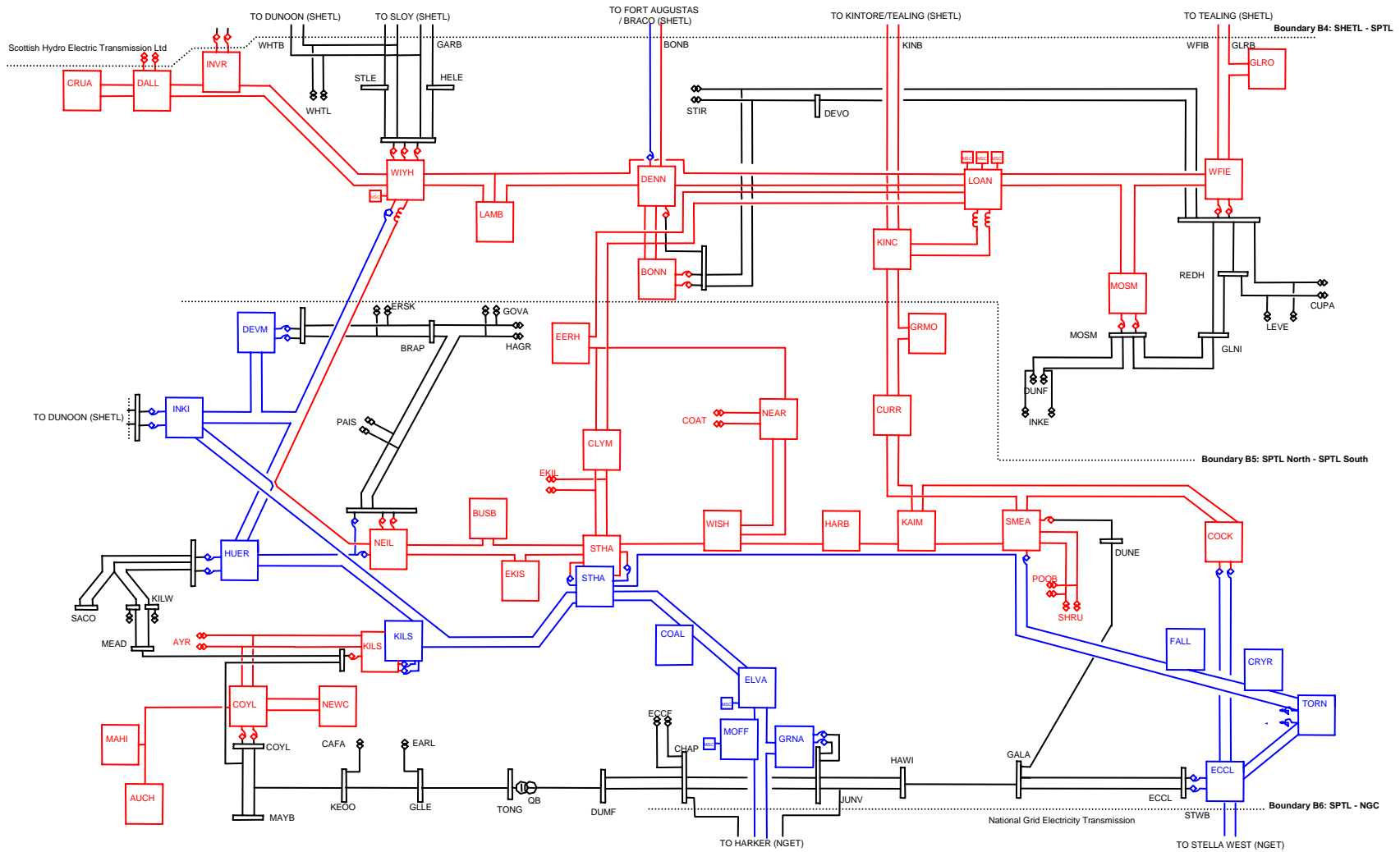
Figure A.2.4 - SHETL Transmission Boundaries and SYS Study Zones, 2015/16



400kV BLUE
 275kV RED
 132kV BLACK

INTERCONNECTED TRANSMISSION SYSTEM
 SPT Existing Transmission System, April 2009

Figure A.3.1

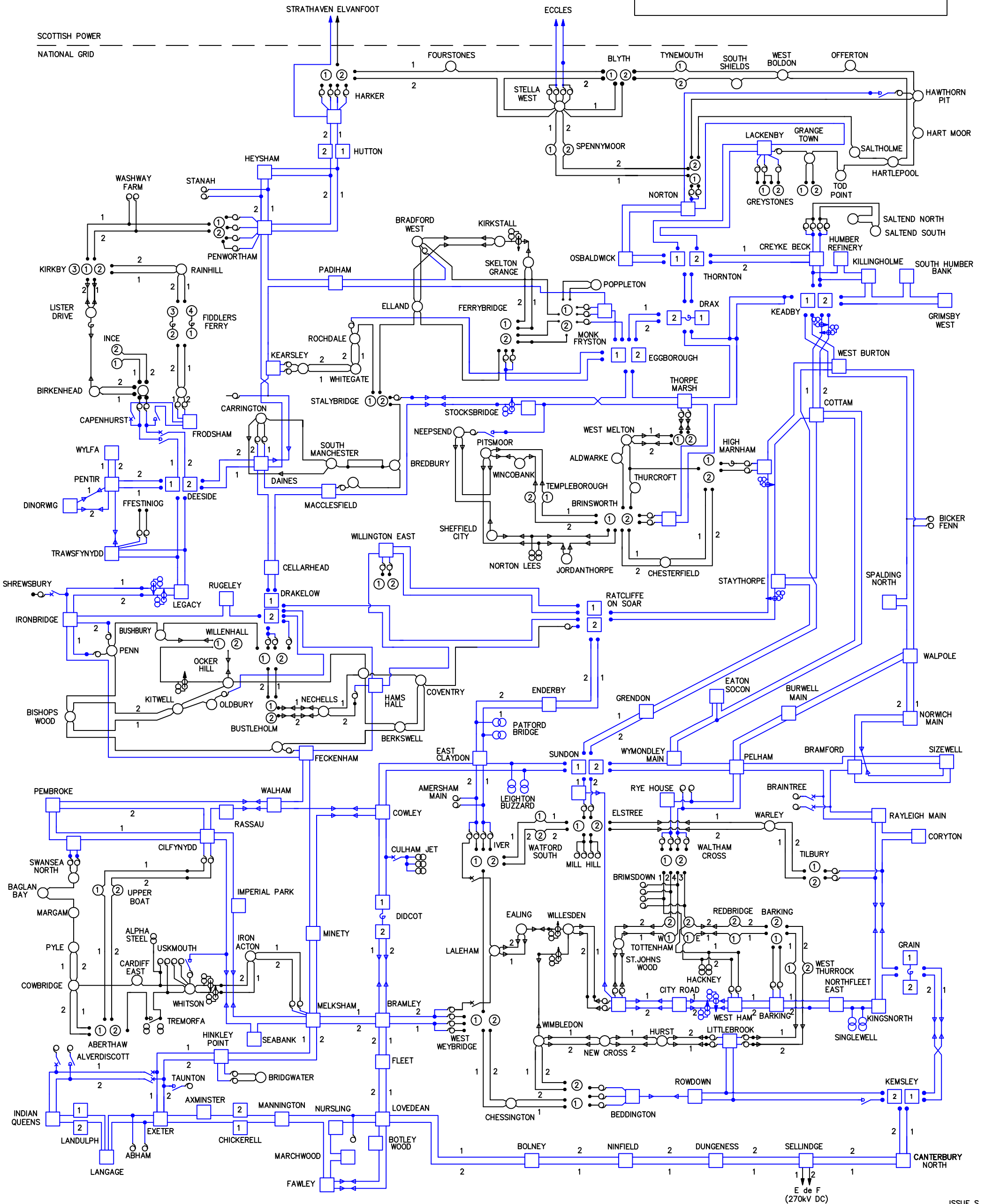
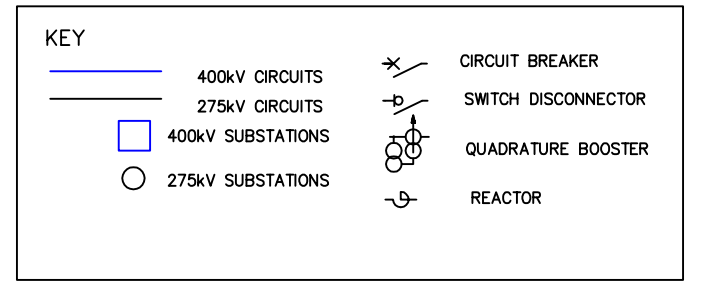


400kV BLUE
 275kV RED
 132kV BLACK

INTERCONNECTED TRANSMISSION SYSTEM
 SPT Transmission Boundaries and SYS Study Zones, 2015/16

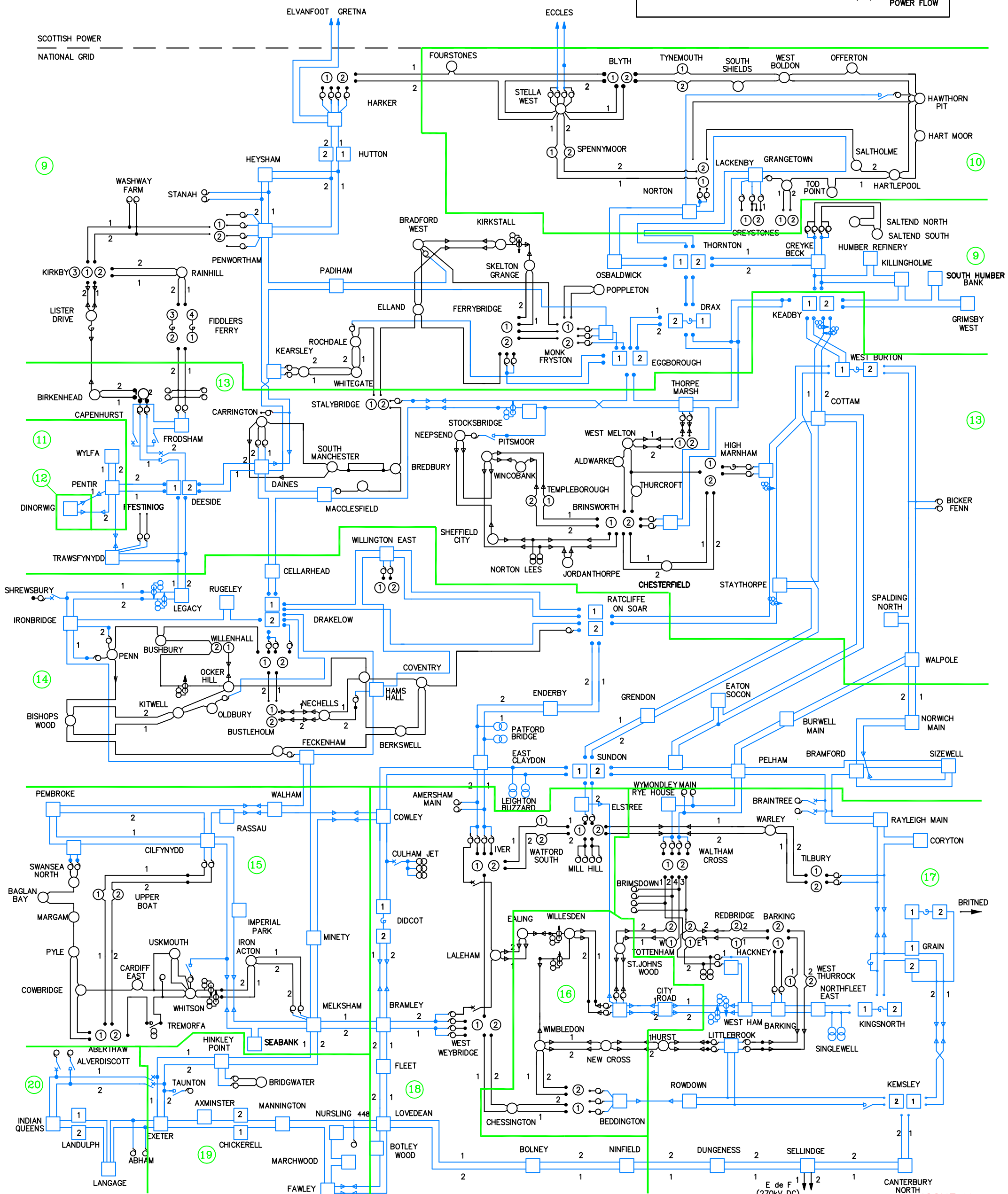
Figure A.3.4

GB SYS FIG. A.4.1. - NGET EXISTING TRANSMISSION SYSTEM - 2008/09

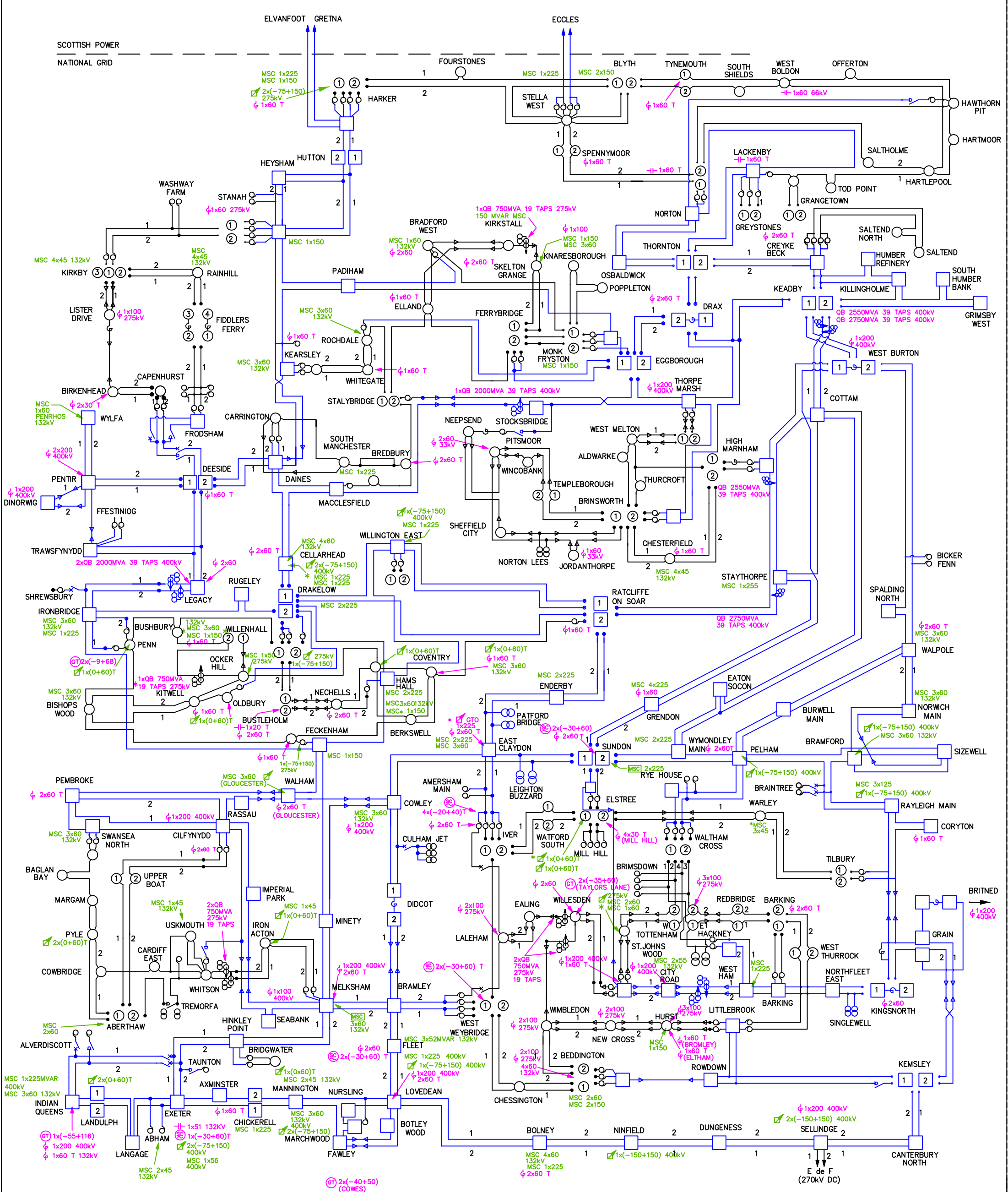


GB SYS FIG. A.4.2. NGET GENERATION USE OF SYSTEM TARIFF ZONES (ELECTRICAL) 2009/10

KEY			
	400kV CIRCUITS		CIRCUIT BREAKER
	275kV CIRCUITS		SWITCH DISCONNECTOR
	400kV SUBSTATIONS		QUADRATURE BOOSTER
	275kV SUBSTATIONS		REACTOR
			185(MW) POWER FLOW



KEY	MSC MECHANICALLY SWITCHED CAPACITOR
GT MAIN GAS TURBINE SYNC COMP CAPABILITY 132kV CONNECTED	T COMPENSATION CONNECTED TO TERTIARY OF TRANSFORMER
SC SYNCHRONOUS COMPENSATOR	* QUADRATURE BOOSTER EQUIPMENT TO BE INSTALLED FIGURES QUOTED IN MVAR
SCV STATIC VAR COMPENSATOR	
SR SHUNT REACTOR	
SCV STATIC CAPACITOR	



GB SYS FIG. A.4.4. NGET TRANSMISSION BOUNDARIES AND SYS STUDY ZONES - 2015/16

