

THE DERWENT VALLEY WATER BOARD

MAP OF UNDERTAKING



AFFORESTATION.
PLANTATIONS ARE FORMALLY DEDICATED UNDER THE PROVISIONS OF THE FORESTRY ACTS. AREA PLANTED AT END OF 1952: 2,000 ACRES. APPROX.



RAINFALL
AVERAGE ANNUAL RAINFALL ON THE NATURAL CATCHMENT AREA TO LADYBOWER DAM, OVER THE PERIOD 1935 TO 1950 IS 54.85 INCHES.



HOWDEN RESERVOIR.
CAPACITY: 1900 MILLION GALLONS
OVERFLOW LEVEL: 870 FT O.D.
MASONRY DAM: LENGTH 1080 FT
HEIGHT 117 FT
FORMALLY OPENED 1912



DERWENT RESERVOIR.
CAPACITY: 2120 MILLION GALLONS
OVERFLOW LEVEL: 776 FT O.D.
MASONRY DAM: LENGTH 1100 FT
HEIGHT 114 FT
BROUGHT INTO USE 1916



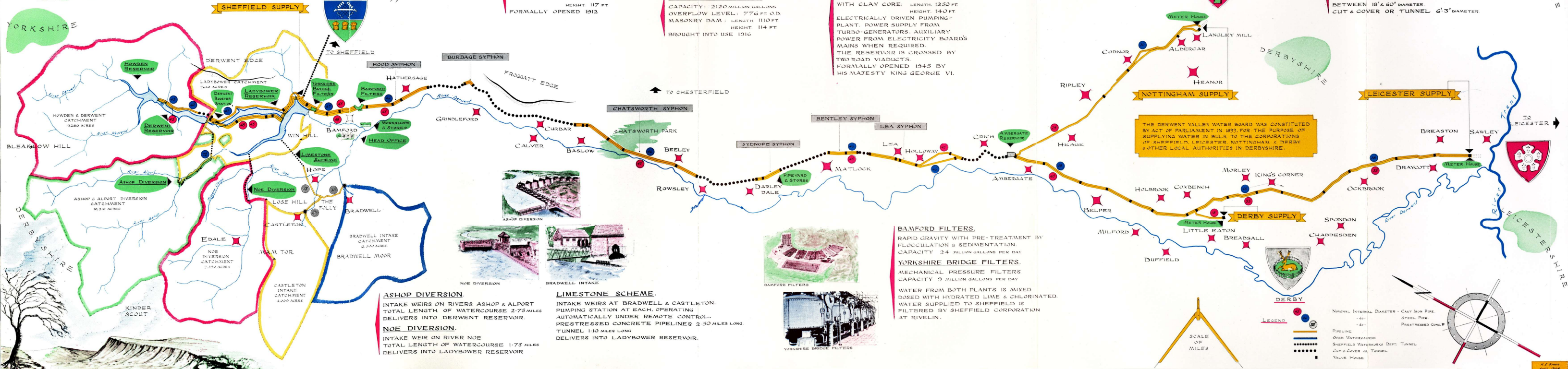
LADYBOWER RESERVOIR.
CAPACITY: 6310 MILLION GALLONS
OVERFLOW LEVEL: 668 FT O.D.
EARTHWORK EMBANKMENT WITH CLAY CORE: LENGTH 1250 FT
HEIGHT 140 FT
ELECTRICALLY DRIVEN PUMPING-PLANT. POWER SUPPLY FROM TURBO-GENERATORS. AUXILIARY POWER FROM ELECTRICITY BOARDS MAINS WHEN REQUIRED.
THE RESERVOIR IS CROSSED BY TWO ROAD VIADUCTS. FORMALLY OPENED 1945 BY HIS MAJESTY KING GEORGE VI.



AMBERGATE RESERVOIR.
CAPACITY: 28 MILLION GALLONS
AREA: 4.83 ACRES. DEPTH: 23 FT
UNDERGROUND SERVICE RESERVOIR



AQUEDUCT.
TOTAL LENGTH OF MAIN AQUEDUCTS: 54 MILES
CONSISTS ON VARIOUS SECTIONS OF 1, 2 OR 3 LINES OF PIPES BETWEEN 18" & 60" DIAMETER. CUT & COVER OR TUNNEL 6'3" DIAMETER



ASHOP DIVERSION.
INTAKE WEIRS ON RIVERS ASHOP & ALPORT
TOTAL LENGTH OF WATERCOURSE 2.75 MILES
DELIVERS INTO DERWENT RESERVOIR.

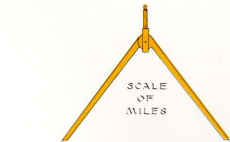
NOE DIVERSION.
INTAKE WEIR ON RIVER NOE
TOTAL LENGTH OF WATERCOURSE 1.75 MILES
DELIVERS INTO LADYBOWER RESERVOIR.

LIMESTONE SCHEME.
INTAKE WEIRS AT BRADWELL & CASTLETON.
PUMPING STATION AT EACH, OPERATING AUTOMATICALLY UNDER REMOTE CONTROL.
PRESTRESSED CONCRETE PIPELINES 2.50 MILES LONG
TUNNEL 1.10 MILES LONG
DELIVERS INTO LADYBOWER RESERVOIR.

BAMFORD FILTERS.
RAPID GRAVITY WITH PRE-TREATMENT BY FLOCCULATION & SEDIMENTATION.
CAPACITY 24 MILLION GALLONS PER DAY

YORKSHIRE BRIDGE FILTERS.
MECHANICAL PRESSURE FILTERS
CAPACITY 9 MILLION GALLONS PER DAY

WATER FROM BOTH PLANTS IS MIXED DOSED WITH HYDRATED LIME & CHLORINATED.
WATER SUPPLIED TO SHEFFIELD IS FILTERED BY SHEFFIELD CORPORATION AT RIVELIN.



LEGEND

- (Blue line) PIPELINE
- (Yellow line) OPEN WATERCOURSE
- (Dotted line) SHEFFIELD WATERBORG DEPT. TUNNEL
- (Red line) CUT & COVER OR TUNNEL
- (Black line) VALVE HOUSE

NOMINAL INTERNAL DIAMETER - CAST IRON PIPE
48" - STEEL PIPE
60" - PRESTRESSED CONCR. P.

