

INTAKE SCREENS UPGRADE PROJECT

AN OPERATIONAL CASE STUDY
SCORE: 9.8/10

INSTALLATION

- Broken Scar WTW
- River Tees
- 295 MLD abstraction limit
- Intake civils mid 1970's
- 4 No. Bandscreens, 10m deep, mid1980's
- Circa 500,000 population + Teesside Industrial Complex

INTAKE



CONTEXT

- EA requirement (NEP) new screens for Eel Regs.
- Existing mechanical band screens very unreliable
- System zone 2 no. supply points only
- Other major work ongoing in zone
- Severe water supply resilience risk
- Domestic properties

PROJECT RISKS

- Removal of screens in pairs
- Autumn, summer & winter peak demand
- Capex
- Existing footprint
- Competing projects in zone
- Covid

SUMMARY

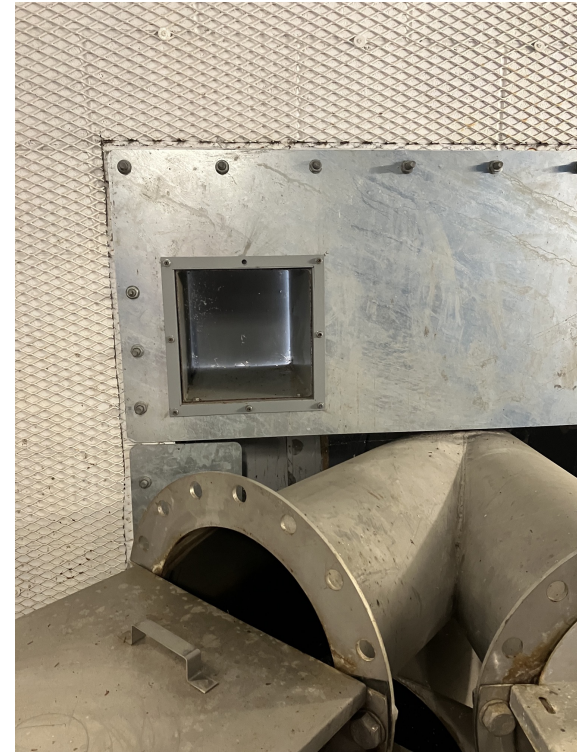
IDENTIFIED SOLUTIONS

- Hydralox 4 no. FRR screens (MMB Principal Contractor)
- Existing civils + building extension, use of 3D software
- Wash water equipment scrutiny
- Delivery phased around seasons
- Spares

SPACE & CONTROL




MAKE IT EASY



SPRAY BAR WATER SUPPLY



METRICS

- £3.2 m capex Complete May 2021, Sept. 2021
- Availability (pre/ post) circa 45% increase to >99%, 4 screens
- Maintenance cost (pre/ post) >£100k decrease to < £3k
- Redeployment of 2 – 3 FTE maintenance and operational staff
- Customer supply resilience 
- Asset replacement 2040 - 2050 (tba)

SPARES (MULTIPLE NWG SITES)



OPPORTUNITIES



- Press release
- Realignment of discharge pipes
- Solar

9.8 OUT OF 10?

