



2 PUMPS
Operating
Duty Stand-By



DRY WELL

INTRODUCTION

- Dry well with 2 pumps. Normal operating conditions are duty stand-by.
- Critical station that frequently rags, which was set to alert at low flow and single pump failure. Due to frequency of call outs, this was then changed to proactive visits every week to lift and check pumps.
- Benchmark data collected from November 2017 to February 2018.
- Anti-ragging switched on for 8 weeks from February 2018.

RESULTS

- Once DERAGGER® was installed and fully commissioned, weekly visits to site could be scaled back as no longer required.
- DERAGGER® performed multiple clean cycles in 8 weeks across both pumps, ensuring they ran clean throughout trial.
- Energy savings were slight (as pumps were lifted frequently during pre-activation phase) with Runtime/kWh up 2.50% in Pump 1 and 3.90% on Pump 2.

CONCLUSION

- Data does show impact of significant ragging events, which the DERAGGER® automatically dealt with once it was activated.
- Energy efficiency gains were moderate on this site as manual lift and cleans were being performed during the pre-activation period.
- Weekly, proactive visits to site could be scaled back once the DERAGGER® was activated.
- At notional £300 cost per visit, estimated cost saving of £12,000 per year* possible with DERAGGER® implementation.

IMPROVEMENT TO SITE VISIT REGIME:

Before: Proactive every week

After: Regular visits no longer required

ESTIMATED COST SAVING:

£12,000 per year*

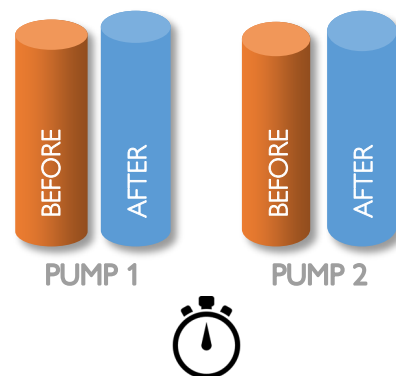
(At notional £300 per visit cost.)

EFFICIENCY SAVING:

2.50% for Pump 1

3.90% for Pump 2

(INCREASE IN MINUTES PUMPED PER KWH WITH DERAGGER®)



MINS PUMPED PER KWh

Data gathered by Clearwater Controls during dates specified, in collaboration with Northumbrian Water. A full report is available at www.clearwatercontrols.co.uk. *Cost saving based on reduction from weekly to monthly routine visits, and cost of £300 per visit.

DETAILED RESULTS AND DATA

PUMP 1 Weekly Averages:	BEFORE	AFTER
Average running current (A)	17.34	17
Average energy consumed (kWh)	359	553
Average runtime in mins per kWh	369	378

PUMP 2 Weekly Averages:	BEFORE	AFTER
Average running current (A)	17.76	17.28
Average energy consumed (kWh)	433	478
Average runtime in mins per kWh	368	382

