

Provided by the Middle Level Commissioners		Item No:	7
Meeting:	UPWELL IDB (Hereafter referred to as the Board)	Subject:	CONSULTING ENGINEERS REPORT: CHIEF ENGINEER'S SUMMARY & CAPITAL PROGRAMME
Date:	Wednesday 21 st January 2026	Officer Responsible:	Nicola Oldfield

RECOMMENDATIONS

The Board is asked to:

- A. Authorise the Chairman and Vice Chairman to take decisions on enforcement action on behalf of the Board with advice from MLC.
- B. Approve panel replacement works to start ahead of receiving grant approval.
- C. To consider the development of an investment plan for asset refurbishment/replacement and to instruct the Consulting Engineer accordingly.

1. Enforcement & Compliance Overview

Our Enforcement and Compliance Officers Dave Coles and Tony Payne joined us on the 23 June 2025 as a job share. They are currently investigating cases across 17 boards plus Middle Level Commissioners, including:

- 47 active enforcement cases,
- 23 surface water or surface water and foul discharges,
- 24 byelaw cases.

Cases already concluded:

- Eight cases in the last two months including trespass, unlicensed moorings, unauthorised structures and encroachment,
- Six major developments have been referred to Technical Services following enforcement action, as consent applications for outstanding discharge consents.

In September and October, they were successful in recovering more than £70,000 of historic outstanding drainage charges for three developments across two boards and the MLC.

It is recommended that the Board authorise the Chairman and Vice Chairman to take decisions on enforcement action on behalf of the Board, having taken advice from MLC Officers. They will engage other Board Members as they see appropriate and determine whether a Special Meeting of the Board is needed on a risk and complexity basis.

2. Capital Works

The Environment Agency's grant in aid funding policy is being changed and will be applied to all new projects after April 2026. The pressure on funding is extreme, and the EA is prioritising all projects in the programme.

Upwell IDB Pumping Station Improvements has £50k allocated this year (2025/26). The proposed work consists of control panel replacements at Nordelph and Cock Fen.

We are completing a business case to get the funding approved but at this late stage in the year there is a high risk that the approval may delay the delivery of the works. EA approval is anticipated early in the new year.

The Board is asked to approve this work starting ahead of receiving grant approval so that we can get orders placed, noting that in the unlikely event that the funding application is not successful, the Board will need to fund the work.

Upwell IDB Asset Refurbishment has an allocation in 2026/27.

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Role: Chief Engineer

Appendix 1: Applications since last report

Appendix 2: M&E Report

Appendix 1

There have been 3 planning applications responded to since the last meeting.

There has been 1 Byelaw Consent (to discharge to a watercourse) application processed since the last meeting.

There has been no planning, Byelaw Consent (to undertake works in and around watercourses) applications processed since the last meeting.

There have been no infiltration device applications acknowledged since the last meeting.

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Date:	Wednesday 21 st January 2026	Officer Responsible:	Dave Bantoft

1. M&E key messages and advice

Other than the matters described below or previously reported, only routine maintenance has been carried out since the last meeting and the pumping plant at each of the stations is mechanically and electrically in a satisfactory condition. The stations, pumps and control panels are at an age where reliability is a concern and a plan should be put in place to overhaul or replace items as necessary to ensure ongoing reliability.

The Board is strongly advised to consider the development of an investment plan for asset refurbishment/replacement. The Board is asked to instruct the Consulting Engineer accordingly.

1.1 M&E Equipment Key Health Indicators

Over the past 2 years we have been compiling and verifying Pumping Station Key Date to allow easier identification of equipment age and the need for refurbishment to assist in developing an investment plan for asset refurbishment or replacement. To ensure reliability, resilience and longevity of the pumping equipment it needs to be refurbished or replaced at suitable intervals. We have experienced examples lately of pumps being left too long and failing, or when they are removed for overhaul the condition is very poor and the pump overall lifetime has been reduced significantly, which is not cost-effective use of the asset. The same is true for control panels, component failures often damage other components incurring costly repairs and machine downtime. Overall, it is more cost effective to run well maintained equipment.

The pictures below are of pump bolts that have been in situ for 20 years and have corroded to the point of failure as shown by the gap between the flanges. Although now rebuilt with stainless steel bolts they were not in the past. The pump tubes are also heavily corroded which reduces pump life considerably. Ideally pumps should be refurbished every 10 years because by the time they reach 15 to 20 years it is likely the corrosion will heavily impact their overall residual life.



Key Health Indicators

Station	Built	Pump	Pump Overhaul	Motor O/H	Controls
Bedlam Bridge	1948	1980(1) 2006 (2)	2015(1) 2006(2)	2015 (1) 2006 (2)	2006
Cock Fen	1975	1975	2013(1) 2012 (2)	2010 (1) 2010 (2)	1975
Nordelph	1932/1970	1970	2011	2011	1970/1991
Padgetts Corner	1980	2012	2012	2012	2015
Upwell Fen	1967	1976	2011	2011	2018

Station	Weedscreen			
Station	Bars	WSC	WSC O/H	Controls
Bedlam Bridge	1980	2006	2006	2006
Cock Fen	2018	2018	2018	2018
Nordelph	1991 / 2020	N/A	N/A	N/A
Padgetts Corner	1980	N/A	N/A	N/A
Upwell Fen	2018	2018	2018	2018

The Key Health Indicators table above shows the critical area for concern and improvement is the pumps. The pumps range from 13 to 55 years old with last refurbishments ranging from 10 to 19 years ago. The Board is advised to develop and start a pump refurbishment/replacement plan for the pumps that are overdue refurbishment. Having a plan in place and underway helps to secure further grant funding when it comes available, such as the recent IDB Recovery Fund.

Submersible pumps are often not cost effective to repair and lead time on new pumps can be up to a year. Standard pumps are normally cost effective to repair and lead times can be as short as 4 weeks or can be over a year if impellers are damaged and have to be reverse engineered. Costs can be in the range £30k to £100k depending on pump condition.

1.2 Padgetts Corner

The last routine inspection at Padgetts took place on 15th July 2025 and no remarks or recommendations were made at that time.

The pump here has some vibration which is being monitored in case it starts to deteriorate. The pump controller is temperamental and will be replaced.

1.3 Upwell Fen

The last routine inspection at Upwell Fen took place on 15th July 2025 and the following remarks / recommendations were made:

1. Leak around thrust block now requires remedial work. Continuously leaking and crack opened up since last inspection – coupling now corroded.
2. Pump bolts need replacing for corrosion, contact D Bantoft to action.
3. Telemetry level reading is incorrect.
4. Weedscreen cleaner drum is heavily corroded. This should be removed and recoated before it becomes irreparable.
5. Felt needs rework on roof

1.4 **Cock Fen**

The engines control panel is now 50 years old and should be replaced as it is corroded inside and cannot be deemed reliable, this is likely to be in the region of £20 to £30k. If the plan going forward is not to continue with the electrification of this site, then the engine control panel should be replaced, and consideration given to replacement of the engines.

The last routine inspection at Cock Fen took place on 15th July 2025 and the following remarks / recommendations were made:

1. Alternator on engine 2 is not charging.
2. Rev counter faulty on Pump 2.
3. WSC hrs: 3870
4. WSC Drums Corroded & need Recoating

1.5 **Nordelph**

The level probe bracket needs replacing as is heavily corroded. The electrical panel soft start is now obsolete, and consideration should be given to replacing this control panel as it is in excess of 30 years old and parts would be difficult to source quickly in the event of a failure. The level controller is also at an age where it is more at risk of failure, this would be replaced as part of the panel refurbishment. The replacement of the control panel is likely to be in the region of £20k to £30k.

The electricity meter issue is still ongoing.

The last routine inspection at Nordelph took place on 15th July 2025 and the following remarks / recommendations were made:

1. Siphon Breaker valve in good order, (flap door missing)
2. Level probe bracket needs replacing, severely corroded.
3. Soft start is obsolete and unsupported, consider installing a complete replacement electrical panel. Quotes are being obtained for control panel replacement.
4. Electricity meter faulty.
5. Motor Bearings Noisy – Monitor for Deterioration

1.6 **Bedlam Bridge**

The last routine inspection at Bedlam Bridge took place on 15th July 2025 and no remarks or recommendations were made at that time.

2. Pumping summary

The main pumping report will be provided by the District Officer.

3. Inspections, maintenance and minor works

- 3.1 HSB Engineering annual inspections for insurance were carried out during September 2025.

3.2 The mandatory site Electrical Installation Condition Reports (due every 5 years) are in date.

	EICR	
Station	EICR Date	EICR Due
Bedlam Bridge	21-Jul-2022	21-Jul-2027
Cock Fen	21-Jul-2022	21-Jul-2027
Nordelph	20-Jul-2022	20-Jul-2027
Nordelph Bungalow	18-Aug-2022	18-Aug-2027
Padgetts Corner	21-Jul-2022	21-Jul-2027
Upwell Fen	20-Jul-2022	20-Jul-2027

4. Water level Management

The pumping stations have summer and winter pump level references based on historic values which serve as very good reference points. I would actively encourage pump attendants to vary these to suit their current catchment conditions. For example, running pump start and stop levels at intermediate settings above the base winter settings during times of high Soil Moisture Deficit and then reducing towards winter level setpoints as the SMD reduces or if there is heavy rainfall forecast. This needs to be balanced with ensuring the pump has a good operating range so it is never short cycling (hunting). This can also be used to ensure maximum benefit of the lower night electricity rate.

Ultimately this takes more operator time but will produce more efficient running and reduce costs. We can advise on this if needed and show some good and bad examples to help with setting and monitoring your pumps.

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