

|                                            |                                                                       |                      |                                                                                      |
|--------------------------------------------|-----------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------|
| Provided by the Middle Level Commissioners |                                                                       | Item No:             | 7                                                                                    |
| Meeting:                                   | <b>MANEA &amp; WELNEY DDC</b><br>(Hereafter referred to as the Board) | Subject:             | <b>CONSULTING ENGINEERS REPORT: CHIEF ENGINEER'S SUMMARY &amp; CAPITAL PROGRAMME</b> |
| Date:                                      | <b>Wednesday 20<sup>th</sup> May 2026</b>                             | Officer Responsible: | <b>Nicola Oldfield</b>                                                               |

## RECOMMENDATIONS

The Board is asked to:

- A. Consider the recommendations for the development of an investment plan for asset refurbishment/replacement and grant funding and to confirm acceptance of recommendations to the Consulting Engineer.
- B. Confirm if it wishes to include the development of a refurbishment/replacement plan for for Glenhouse for inclusion on the GiA programme.
- C. Confirm they are happy to go ahead with the replacement of the main contractor and overload unit on pump 1 to aid the fault finding of the low resistance.

### 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 22 boards plus Middle Level Commissioners.

We have a total of 102 investigations of which 47 are currently active including:

- 29 surface water or surface water and foul discharges,
- 12 byelaw cases.

The Officers will also be taking over some aspects of Navigation Enforcement.

Since joining they have successfully recovered £445,000 of outstanding discharge contributions across IDBs and the MLC.

### 2. Summary of Key Planning Issues

We will, when possible, seek the Board's input, rather than wait for Board meetings. This will be done via correspondence with the Chair, Vice Chair, District Officer and any appropriate sub-committees.

### 3. Technical Services Overview

The team was joined by Project Manager, Ellie Edwards at the end of April. She will be assisting the Engineer in planning and delivering capital projects, significantly increasing our capacity to deliver the developing works programme.

#### 4. New FCERM grant funding guidance

The Government published new FCERM funding guidance on 3 March 2026.

To be eligible for funding a project must deliver strategic objectives and government policy. Governments' objectives most relevant to IDBs include:

- value for money (Net Present Value)
- reducing flood risk
- focusing on deprived areas
- prioritising projects with contributions from others (this would include funding provide by IDBs themselves)
- a percentage investment in Natural Flood Management (NFM) across the programme

Project types that are eligible for grant funding include:

- refurbishing or replacing existing assets
- building new assets
- NFM projects
- Sustainable Urban Drainage Systems (SuDS)

##### Asset Refurbishment Projects

Asset refurbishment is a significant renewal to one or more components in an existing asset that is not covered by routine maintenance.

It includes work to mitigate for the loss of asset performance. This covers issues that asset maintenance cannot manage and that would be significant and permanent if not fixed.

It does not include asset replacement projects where an existing asset at the end of its life is replaced with another like for like asset which sustains the standard of service.

Under the new FCERM funding policy existing FCERM assets are eligible for 100% of funding for refurbishment.

##### New or Improved Asset Projects

Projects that are not refurbishment are eligible for 100% for the first £3 million, and 90% for costs above £3 million.

These include:

- projects replacing existing assets with a like for like replacement
- projects building new or improved assets
- projects with combined asset interventions

Projects cannot be artificially split into smaller components to fall below the £3 million fully funded threshold.

##### Applying for funding

It should be noted that there will be more projects that are eligible for investment than funding available. Projects will need to be prioritised to meet government targets and achieve best value for money.

Therefore, it is recommended that should the Board wish to apply for FCERM grant funding, they consider part-funding projects. This is similar to the funding rules that were in place prior to 2011 when IDBs only received 45% of project costs.

Should the Board wish to submit a new project to be considered for funding, the first step is to collate relevant cost and benefit data to submit to the Environment Agency from 1 July 2026. This requires collating costs and benefits and other relevant data required by the EA to determine a project's eligibility and prioritise the programme. The Consulting Engineer can provide resources to do this and this will be recharged to the Board.

If a project already appears on the FCERM investment programme with an allocation for future years, an application for grant funding approval/business case will need to be submitted. The Consulting Engineer can provide resources to do this.

### Timescales

The Consulting Engineer currently has limited resources to develop and deliver projects, although recruitment is currently in progress to address this. The likely timescales for project delivery are:

- submit for funding consideration July 2026 onwards
- prepare and submit applications for subsequent funding approval onwards
- delivery 2027/28 onwards

The Consulting Engineer will prioritise workload based primarily on Key Health Indicators.

### **The Board is asked to:**

- **Consider the development of an investment plan for asset refurbishment/replacement taking account of the recommendations made in the M&E Report in Appendix 4,**
- **Liaise with the Consulting Engineer to determine project suitability and timescales,**
- **Consider and agree to making a contribution towards the project costs to aid funding prioritisation, and**
- **Confirm acceptance of recommendations so we can prioritise developing funding bids ASAP.**

## **5. Capital Programme**

The Board's current Capital Programme is shown as Appendix 1.

Given the critical age of Glenhouse Pumping Station an estimated replacement cost has been included. It is advised that Board starts planning for a major refurbishment or replacement of the pumping station.

**The Board is asked to confirm if it wishes to include the development of a refurbishment/replacement plan for inclusion on the GiA programme.**

Future replacement of Purlis Bridge is also included on the plan to be considered as part of any investment plan.

**Author Name: Nicola Oldfield**

**Role: Chief Engineer**

**Appendix 1: Capital Programme**

**Appendix 2: Applications responded to since last meeting**

**Appendix 3: M&E Report**

# Appendix 1

|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
|------------------------------------------------|-------------------------------------------------------------|----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------|-------------------|
| Manea & Welney District Drainage Commissioners |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
| Capital Improvement Programme (2026/2027)      |                                                             | PREVIOUS YEARS | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 2028/29 | 2029/30 | 2030/31 | 2031/32 | 2032/33 | FUTURE YEARS | ALL YEARS         |
|                                                |                                                             | Pre Yr 0       | Year 1  | Year 2  | Year 3  | Year 4  | Year 5  | Year 6  | Year 7  | Year 8  | Year 9  | Year 10 | Post Year 10 | Total Expenditure |
| Glenhouse p/s                                  | Pumping station replacement                                 | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 1,500.0 | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 1500.0            |
|                                                | Pumping station pumping and control equipment replacement   | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 200.0        | 200.0             |
|                                                | Pumping station automatic weedscreen cleaning equipmet      | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                | Pumping station Control building refurbishment/replacement  | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 15.0         | 15.0              |
|                                                | Pumping station compound/surrounds improvements             | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
| Purls Bridge p/s                               | Pumping station replacement                                 | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 5,600.0      | 5600.0            |
|                                                | Pumping station pumping and control equipment replacement   | 0              | 0       | 0.0     | 180.0   | 0.0     | 130.0   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 310.0             |
|                                                | Pumping station automatic weedscreen cleaning equipmet      | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                | Pumping station Control building refurbishment/replacement  | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                | Pumping station compound/surrounds improvements             | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
| Drainage Channels                              | John Deere Tractor - purchased April 2020 - £111,480        | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 85.0    | 0.0     | 0.0     | 0.0          | 85.0              |
|                                                | Herder Cavalier Flail Mower - purchased June 2020 - £71,100 | 4              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 65.0    | 0.0     | 0.0     | 0.0          | 69.0              |
|                                                | Citroen van - purchased 13/03/2015 - £8,753                 | 0              | 0       | 15.0    | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 15.0              |
|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
|                                                |                                                             | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
| Drainage Channels                              | Refurbishment of inlets/outfalls                            | 0              | 0       | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0          | 0.0               |
|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
|                                                |                                                             |                |         |         |         |         |         |         |         |         |         |         |              |                   |
|                                                |                                                             | 4              | 0       | 15      | 180     | 0       | 130     | 1,500   | 0       | 150     | 0       | 0       | 5,815        | 7,794             |

## **Appendix 2**

There have been 8 planning applications responded to since the last meeting.

There have been 1 application for Byelaw Consent (to undertake works in and around watercourses) granted since the last meeting.

There have been 2 applications for Byelaw Consent (to discharge to a watercourse) granted since the last meeting.

There have been 1 infiltration device applications acknowledged since the last meeting.

|                                            |                                                         |                      |                                                      |
|--------------------------------------------|---------------------------------------------------------|----------------------|------------------------------------------------------|
| Provided by the Middle Level Commissioners |                                                         | Item No:             | 7                                                    |
| Meeting:                                   | MANEA & WELNEY DDC (Hereafter referred to as the Board) | Subject:             | CONSULTING ENGINEERS REPORT: MECHANICAL & ELECTRICAL |
| Date:                                      | Wednesday 20 <sup>th</sup> May 2025                     | 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 (not M&W site) 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        | Controls | Weedscreen Bars | WSC  | WSC Overhaul | Controls |
|--------------|---------------|----------------------|----------------------|----------|-----------------|------|--------------|----------|
| Glenhouse    | 1948/<br>1997 | 1997                 | 1997                 | 1997     | 1997            | 1997 | 2021         | 1997     |
| Purls Bridge | 1978          | 1999 (1)<br>1986 (2) | 2016 (1)<br>1986 (2) | 1978     | 2008            | 2008 | 2008         | 2008     |

The Key Health Indicators table above shows the critical area for concern and improvement is the pumps. The pumps range from 29 to 40 years old with last refurbishments ranging from 10 to 40 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 Electricity Readings

Andy Maddams supplies regular monthly meter readings and pump hours which are greatly appreciated and allow efficient verification of electricity bills.

### 1.3 Purls Bridge

The insulation resistance of pump 1 has deteriorated and due to the age and deterioration of the control panel equipment we have not investigated further as the works are likely mean that the contactors and overloads once disconnected will not be able to be reconnected and will need to be replaced. This is likely to cost c£2k.

**Please confirm the board are happy to go ahead with the replacement of the main contractor and overload unit on pump 1 to aid the fault finding of the low resistance.**

Bedford Pumps have advised that a replacement pump of this type would be in the range of £70k to £100k.

Pump 2 had a slight wobble and will need to be monitored closely, this does sometimes happen will a build up of debris on the impellor, which can clear itself. It may also be a sign of a pump issue that will need to be rectified if it continues. There is no record of a pump overhaul since its fitting in 1986. An overhaul of this type of pump is likely to be in the region of £50k.

The electrical control panels are at an age where reliability is a concern and plans should be put in place for their replacement. They are likely to cost in the region of £20k to £30k.

The last routine inspection took place at Purls Bridge Pump Station on 24<sup>th</sup> March 2026.

Recommendations / remarks include:

- 1) Siphon Heater Failed.
- 2) Pump 2 Motor Heater not powered.
- 3) Recommend replacement electrical panels due to the age and deterioration of the equipment.



- 4) Pump 2 has a little bit of a wobble when running.
- 5) Pump 1 – Unable to split starter / motor circuit (risk of damage to contactor terminals)

WSC inspected (1 basket tine is missing but not causing an issue).

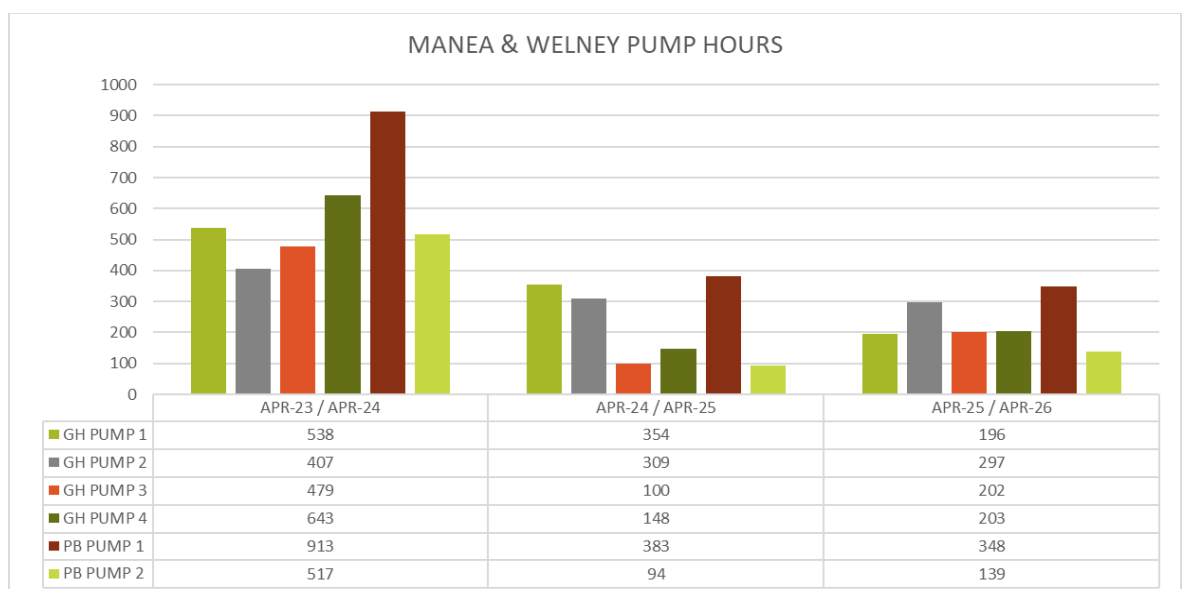
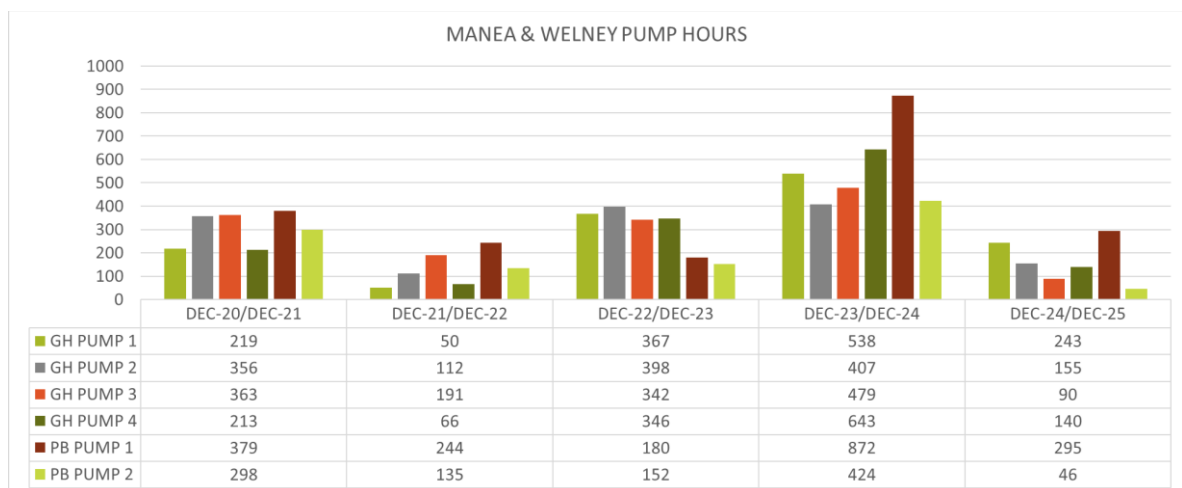
#### 1.4 Glenhouse

Inspections carried out by Andy Maddams, not MLC.

## 2. Pumping summary

Historically the pump hours for Manea and Welney have been provided December to December, many boards now have the hours April to April.

**Please confirm if the board would prefer pump hours December to December or April to April, both have been provided below.**



### 3. Inspections

- 3.1 HSB Engineering annual inspection for insurance at Purlis Bridge was carried out during September 2025. Glenhouse Inspection date to be confirmed as WSC out of commission in September 2025.
- 3.2 The mandatory site Electrical Installation Condition Reports (due every 5 years) are in date.

|               |             |             |
|---------------|-------------|-------------|
| Glenhouse     | 06-Nov-2025 | 06-Nov-2030 |
| Purlis Bridge | 06-Nov-2025 | 06-Nov-2030 |

### 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.**

**Author Name: Dave Bantoft**  
**Role: M&E Engineer**