

LOWER SEVERN (2005) INTERNAL DRAINAGE BOARD

# Engineering Meeting

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Wednesday 20th October 2021

**The Gables, Falfield  
10.30am**

# **LOWER SEVERN (2005) INTERNAL DRAINAGE BOARD**

## **TERMS OF REFERENCE OF THE ENGINEERING COMMITTEE** Approved 5<sup>th</sup> Feb 2020 Minute 3002

### **MATTERS FOR DETERMINATION BY THE COMMITTEE**

1. Small engineering schemes or works up to £30,000.
2. Machinery replacement in accordance with the pre-approved programme.
3. The adoption or declassification of watercourses in the context of an approved policy framework and the regimes of other statutory authorities in this regard.
4. To assess, agree and monitor works for the Capital Programme.

### **MATTERS FOR RECOMMENDATION BY THE COMMITTEE TO THE BOARD**

5. To review the Board's rhine maintenance priorities.
6. To review future maintenance liabilities of assets e.g. Environment Agency, outfalls and main river
7. To review Avonmouth and Severnside developments commuted sums, infrastructure charges and modelling.
8. To review pumping station maintenance and repair.

Signed:..... (Chairman)



	<p>The LDE added that whilst this was a significant increase the pumps that were being installed were able to pump at a larger capacity at a higher head and this would futureproof the pumps dealing with increasing water levels owing to climate change. He also advised Members that 50% of the cost of the pumps and screens had already been paid and parts required from outside the UK had been sourced early in order to avoid any potential issues arising from Brexit.</p> <p>Richard Betteridge, the Director of Motion Consultants agreed with the Engineers and explained that the size of this project was a first for the Board and whilst Saul had gone relatively smoothly, Elmore Back had presented more challenging issues owing to its complexity.</p> <p>Members heard that considerable time had been spent in analysing and modelling the catchment. He confirmed his confidence in the revised figure of £700k the LDE and CE had presented. Mr Betteridge stated that his role was to act impartially and fairly for the Board with the appointed contractor.</p> <p>Cllr Riddle commented that that it was important to fully understand the overspend as it may impact and have consequences on future pump replacements.</p> <p>Mr Simms expressed concern that this overspend had occurred and felt it was important that lessons were learnt from this and taken forward.</p> <p>The Chair agreed but pointed out that at this meeting it was important for Members to focus on the outcomes for the Elmore Back scheme.</p> <p>In response to a question from Mr Hyslop, Richard Betteridge confirmed that the pumps would be inoperable for the shortest amount of time possible and there was a contingency for over pumping in the budget. Exact timings could be provided once the contract had been awarded and project timings discussed.</p> <p>In response to a question from Cllr Riddle, the CE advised that although the UK had left the EU, the Eel Regulations 2010 remain part of UK law.</p> <p>Cllr Riddle also asked if depreciation on buildings could be changed from 25 years to 40 years based on current life span of pump stations surpassing 40 years. Members agreed.</p> <p>Mr Godwin requested that the pump station work was completed at the most appropriate time of year, taking into account rainfall and high tides. Richard Betteridge and the LDE confirmed that these were considerations and that whilst the weather can be unpredictable, works would be carried out to minimise any potential disruption.</p> <p>The LDE confirmed, in reply to Mr Hyslop, that electrical works would be completed in conjunction with the pump replacement.</p> <p>Cllr Riddle thanked the CE, LDE and Motion for all their efforts so far in respect of the pump replacement programme</p> <p><b>It was recommended that:</b></p> <ul style="list-style-type: none"> <li>• <b>A Board meeting be held on the 23<sup>rd</sup> December 2020 to approve the alterations to the Capital Programme</b></li> <li>• <b>The Committee recommends to the Board that the alterations be accepted by the Board</b></li> <li>• <b>The Committee recommends that the Board approve the increase in expenditure for Elmore Back Pump station to £700k</b></li> <li>• <b>The depreciation for the pumping stations is applied on a straight line basis over 40 years for new buildings and 15 years for the pumps and electrical equipment.</b></li> <li>• <b>Officers be requested to produce a project review report for consideration at the next Engineering Committee meeting addressing the issues encountered in the Elmore Back scheme and containing</b></li> </ul>	
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	<b>recommendations for improved project management in respect of the remaining pumping station replacements.</b>	
3137	<p><b>Land Drainage Engineers Engineering Committee Report Machinery Replacement 2021/2022</b></p> <p>The LDE advised Members that the existing Claas 650 tractor and Bomford Eagle mower were due for replacement. The new Claas would replace the Claas 997 as the Board's spare vehicle. The LDE reminded members that the Board maintained a spare to minimise downtime when other machines required maintenance or servicing.</p> <p>Members noted that the quote for the new Claas was [REDACTED] with a part exchange available of [REDACTED] and the Bomford mower at [REDACTED] costing a total of [REDACTED] was recommended by the LDE. The Claas tractor also came with a 5-year warranty.</p> <p><b>It was resolved that:</b></p> <ul style="list-style-type: none"> <li>• <b>A new Claas tractor and Bomford Mower be purchased in 2021/22, part exchanging the Claas 997.</b></li> </ul> <p>The LDE also reported that the Kobelco SK135 purchased in 2014 with the extended dipper arm (purchased in 2001) was due for renewal.</p> <p>The LDE had spoken with Kobelco about purchasing another extending dipper arm. The company indicated that owing it would not be able to manufacture another one. Consideration was given to refurbishing the dipper arm for another 7 years however given its age and condition the LDE was not confident it would last.</p> <p>The LDE received 5 quotes and after consideration felt that the Hitachi ZX135 would be the best option. It came with a factory produced dipper arm and did not require modifications. The quote for the Hitachi with dipper arm was [REDACTED] with a part exchange available for the existing Kobelco around [REDACTED].</p> <p><b>It was resolved that:</b></p> <ul style="list-style-type: none"> <li>• <b>A new Hitachi Excavator be purchased in 2021/22, part exchanging with the existing Kobelco.</b></li> </ul>	
3138	<p><b>Frampton Flood Resilience Briefing Notes</b></p> <p>The LDE explained that the water from the village of Frampton on Severn drained via 2 routes. The water in the north of the village drained via Hock Ditch into the Severn Estuary via an EA owned outfall.</p> <p>The remaining water in the village drained under the canal via Buckholt Syphon. Once on the west side of the canal the water flowed via a drainage channel owned by the Canal and Rivers Trust southwards through several old structures and the wharf before being discharged into the Estuary.</p> <p>Maintenance of some of the drainage areas was poor and there was a build-up of mud and debris in the wharf. The LDE advised that this would cause more severe drainage problems in the future and that it would be beneficial to carry out some hydraulic modelling to assess the issues.</p> <p>Miss Hewlett advised Members that information had been collated over a number of years that supported this approach.</p> <p>Funding was available from Gloucestershire County Council and the local parish council and it was thought the cost to the drainage board would be around £5,000.</p> <p>Mr Hyslop asked who would carry out the works once the modelling was complete, as there would be no value in funding a study if the works then required were not executed. Miss Hewlett confirmed that the Council had identified possible funding opportunities.</p>	

	<p>In response to Mr Simms' question as to which financial year the money would be required, the LDE confirmed this would be 2021/2022.</p> <p>Cllr Riddle was pleased to see joint working between the councils and IDB to provide Frampton with an improved drainage system.</p> <p><b>It was recommended that:</b></p> <ul style="list-style-type: none"> <li>• £5,000 be included in the Budget for 2021/2022 for hydraulic modelling at Frampton on Severn</li> </ul>	
3139	<p><b>Date of Next Meeting</b></p> <p>The date of the next meeting is 14<sup>th</sup> April 2021.</p>	
	The meeting closed at 12.30pm	

Un-approved

**VEHICLE & PLANT REPLACEMENT PROGRAMME 2022-2025****Introduction**

The Chairman of the Finance & General Purposes Committee Colin Williams has asked for his views on the spending decisions due to be made by this Committee, both for this year and following years, to be relayed to Engineering Committee Members. These are set out below:

*“Whichever strategy the Board adopts with regard to its statutory duty to replace the remaining four pumping stations it is very clear that it will put a great strain on the Board’s finances.*

*Recognising this may I suggest that you ask the Engineering Committee at its next meeting to consider whether it really needs to spend over £1 million on plant and vehicles in the near to medium term as is currently in the capital programme and which I detail hereunder.*

Year ending 31 March, 2022	236,000
“ “ “ “ 2023	360,000
“ “ “ “ 2024	175,000
“ “ “ “ 2025	295,000
<b>TOTAL</b>	<b>1,066,000”</b>

**Comment**

Cllr Williams makes an important point, but to give the matter some context Members should also bear in mind that:

- At its meeting each November to discuss vehicle and machinery replacements, the Engineering Committee scrutinises the LDE’s proposals for purchases in the following financial year.
- This Committee has already stretched the intervals between purchases to 7 years/7000 hours in order to smooth out the expenditure commitment and also to maximise the written-down value of the asset at the time of its disposal. All disposals are actioned in line with this policy and in some cases machinery is retained for longer than the minimum period.
- The retention of vehicles beyond the prescribed limit can cause a knock-on effect in future years, when other purchases are scheduled; when this occurs, financial planning and forecasting are inevitably more difficult.
- There will always be a tension between retention and replacement. The likelihood of more breakdowns and the requirement for replacement parts grows over time.
- By way of contrast, Members should note that the policy of some Boards and main contractors is to operate vehicles for the duration of the warranty period only, typically 3 years. The LSIDB has a history of adopting a frugal approach in this area.



- The AO has previously investigated other financing options (eg leases) and recommends no change to the present purchasing arrangements.

**Recommendation:** That all of the above factors be considered when the Vehicle and Plant Replacement Programme for the period 2022 to 2025 is scrutinised by this Committee.

*Kieran Warren, Principal Officer  
James Druett, Land Drainage Engineer  
Martin Dear, Accounts Officer*



**LAND DRAINAGE ENGINEER'S ENGINEERING COMMITTEE REPORT**

**Machinery Replacement Programme 2021/2022**

**Introduction**

The Land Drainage Engineer has reviewed the machinery replacement programme as agreed by the Board at the Engineering Committee dated 21<sup>st</sup> November 2018. The replacement programme was extended to 7 years which equates to a machine undertaking approximately 7000hrs.

The machinery which is due for replacement is a Spearhead SPV 3 Self-propelled mower/Excavator.

**Spearhead SPV 3**

The existing Spearhead SPV 3 (7600hrs) is now due for replacement. Unfortunately, at the beginning of the cutting season we suffered a major breakdown due to the failure of the slew ring.

The cost of repair was approximately £13k however the downtime of almost 8 weeks was extremely frustrating due to difficulties obtaining parts quickly. Something of this size is not kept on the shelf.

Luckily the weather has kept relatively dry until now so we have been able to catch up on our programme but had we experienced a wet summer, areas which had not been cut would have experienced high water levels which may have resulted in flooding.

The LDE has obtained a quotation from Spearhead for 1 x new SPV 3 = [REDACTED] (includes some of the extras, 1.5m head/Auto grease and wire watcher)

Trade in for the Existing = [REDACTED]

Cost to Change = [REDACTED]

**Recommendations:**

The LDE has taken into consideration all of the above points and would recommend that we continue to stick to the programme which was agreed by the Board to extend the life of the machinery fleet. If we deviate from the programme this purchase will clash with an excavator replacement and could potentially lead to long periods of downtime and additional repair costs as the machinery ages.

*James Druett*  
*Land Drainage Engineer*