LOWER SEVERN (2005) INTERNAL DRAINAGE BOARD

Engineering Committee Meeting

Thursday 24 October 2019

The Gables Hotel
10.30am

LOWER SEVERN (2005) INTERNAL DRAINAGE BOARD

TERMS OF REFERENCE
OF THE ENGINEERING COMMITTEE
Approved 22 June 2016 Minute 2349 (b)

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.

MATTERS FOR RECOMMENDATION BY THE COMMITTEE TO THE BOARD

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

Minutes of the Engineering Committee
Of the Lower Severn (2005) Internal Drainage Board
Meeting held Wednesday 21st November 2018 at 10.30 am
At The Gables Hotel Falfield

Present:

Mr Barnes	Chairman	
Mr W J Cornock		
Mr T Cullimore		Cllr J Jones
Mr R Godwin		Mr I Ractliffe
Miss R Hewlett		Mr G Simms
Mr Hyslop		Mr R Thatcher
Mr P Goodey		

Staff:

Martin Dear	Accounts Officer	AO
James Druett	Land Drainage Engineer	LDE
James Thomas	Civil Engineer	CE
Kieran Warren	Principal Officer	PO
Sue Williams	Minutes	

2771.	**Appointment of Engineering Committee Chairman** **Resolved that:** • **Mr Barnes was appointed Committee Chairman for the ensuing year.**	
2772.	**Apologies** No apologies were received.	
2773.	**Declarations of Interest** No interests were declared.	
2774.	**Minutes of Previous Engineering Committee Meeting** **It was resolved that:** • **The minutes of the Engineering Committee meeting held 10th May 2018 were approved as an accurate record of that meeting.**	
2775.	**Biosecurity Policy & Procedures** ADA had produced a model policy and procedure to address the spread of invasive plant species. The PO had adapted the model to complement the Biodiversity Action Plan that had been adopted by the Board (minute 2523 refers). The LDE confirmed that Japanese Knotweed had become more evident in recent years, particularly in the south of the Board's area. The policy and procedure addressed the following: • Notifying staff, regulators, contractors and landowners when invasive non-native species are found; • Advising these parties on the appropriate course of action; • Recording the incidence of infestation and actions taken; • Decontaminating clothing, protective equipment, tools and machinery as appropriate; and • Training staff so that they can identify invasive species and take appropriate action as directed by the Civil Engineer. **It was resolved that:** • **The policy and procedure appended to these minutes be referred to the Board for approval.**	<u>Action 1</u> Add to the Board agenda for approval policy Appendix 1
2776.	**Machinery Replacement Programme**	

	The LDE explained that at the Engineering Committee meeting held 22nd November 2017 he was instructed to prepare a replacement programme based on engine hours rather than a fixed term replacement. Having considered the two programmes the LDE concluded that 7,000 engine hours was a rational benchmark for replacement. He had produced for members a programme that applied this approach. Most of the Board's plant completed 1,000 hours per annum. There were 3 machines that were used seasonally that could be pushed back to be replaced every nine years rather than every seven years based on engine hours. He had also taken into account peaks and troughs of expenditure in each financial year. Mr Simms supported the revised programme and said that it should be kept under review as information and experience was gathered. <u>Energreen 1500 AU11 HCH</u> The Committee had deferred this replacement in 2018/19 for one year, owning to low hours. The LDE recommended that a replacement should be deferred for another year when he would expect the machine to have accumulated 6,000 hours. He did not want to replace this machine any later than this as it would clash with other replacements and create a financial spike in the programme. <u>New Holland 3.6 wheeled Excavator WX09 FYF</u> The LDE had looked at replacement options for this machine. New Holland had discontinued the model. He reported he had only found one model that fitted the Board's requirements for weight, reach and stability; JCB Hydradig. The LDE hoped to have the machine on demonstration before he could make a commitment. Mr Cullimore asked if these machines came with an extended warranty. He suggested that a warranty extended by four years with a high excess would cover major repairs and may be attractive to the Board. The LDE undertook to check the insurance options prior to purchase. **It was resolved that:** • **The Energreen 1500 be replaced in 2020/21.** • **The New Holland 3.6 wheeled excavator be replaced in 2019/20 with a JCB Hydradig subject to a working demonstration of this machine satisfying the LDE it is suitable for the Board's requirements.**	<u>Action 2</u> LDE to investigate extended warranty on new machinery purchases
2777.	**De-maining** The Board had accepted the principal of de-mainment at the meeting held 27th June 2018 (minute 2683 refers). The Engineers were tasked to formulate a strategy to assess the rivers for de-mainment. The CE reported that they had identified 83 km of low priority watercourses that could be demoted for less frequent maintenance. This would free resources to maintain the 16.2 km of proposed de-mained watercourse namely: Longdon Brook, Tirley Main Drain and Wicksters/Capehall Brook If the Board wished to proceed the EA would be formally requested to begin the process of de-mainment. The CE recommended that a provision of £30,000 be budgeted in 2019/20 to enable the Engineers to commission surveys such as the structure, condition and ecology of each watercourse in order to progress the application. The CE explained that the Engineering Committee could approve this budget but he felt the decision should be ratified by the full Board as it represented a strategic change of maintenance policy. Members questioned whether the EA should fund the survey works. The CE said that de-mainment would not happen if the Board did not undertake the necessary surveys.	

	Mr Simms was concerned that the proposed strategy would not incur additional costs. The CE replied that the strategy should not increase the maintenance budget but there could be extra capital expenditure on structures that the Board may have to commit to; this would not be known until the survey works had been completed. Regarding the transfer of EA resources; the CE explained that the EA categorised these watercourses as low priority, as they only protected agricultural land and therefore there was no budget to transfer. Some members were concerned about mowing the low priority watercourses less frequently. Members debated whether there were benefits of applying for all three watercourses or singly. The CE advised that to apply for them individually would be a long-drawn-out process that could take years. Mr Hyslop asked whether Worcestershire Wildlife Trust had already completed an ecological survey where they owned land alongside the Longdon Brook. The CE explained that riparian owners involved on a watercourse had very different objectives and it would be difficult to find a balance that accommodated all the interested individuals. A majority were in favour of the recommendations There were no objections. **It was resolved that:** • **The Environment Agency be formally approached to consider the de-maining of the Longdon Brook, Tirley Main Drain, and the Wicksters/Capehall Brook.** • **A budget of £30,000 be provided in the financial year 2019/20 for the commissioning of surveys required to process a de-mainment application, to be ratified by the Board.**	<u>Action 3</u> Add to the Board agenda for ratification
2778.	**Production of Capital Programme** In accordance with Minute 2693 the PO had produced a draft Capital Programme. He explained that this was a working document. The plan included the pump replacement programme and machinery replacement programme. In consultation with the Engineers and Accounts Officer, eight new projects had been added that could be considered once the pump replacement programme had been completed. The PO had also proposed assessment criteria to evaluate the merits and benefits of each project and prioritise the schemes. He envisaged there would be several drafts for the Committee to consider before a final version was accepted by the Board The AO explained that the £350k per annum that had been generated from rates to fund the pump replacement programme could be used to finance the Capital Programme, if members decided to adopt the programme. Mr Hyslop was mindful that the pump replacements programme was just underway and it was too early to know what the final expenditure would be. Mr Simms stated that the Board needed to consider the future and that this programme would start a healthy process and debate. **It was resolved that:**	<u>Action 3</u> The Capital Programme to include a brief description of the new projects

	(1) The format and proposed assessment criteria for the Capital Programme, as set out at Appendix 2, be referred to the Board for approval; (2) **All Members be invited to propose projects for inclusion in the Programme** (3) **The Capital Programme be included on all Committee agendas at least on an annual basis.** (4) **The Capital Programme be included as a standard item on the agenda for all future Engineering Committee meetings so that information can be regularly updated and progress monitored.** **(5) The Engineering Committee continue to manage the Programme on behalf of the Board.**	
2779.	**Gloucestershire NFU Severn Estuary Stakeholders Meeting** The Engineers and Members from the Board had attended a recent meeting of this group. Representatives from the EA Midlands and Wessex regions informed attendees that the EA had reviewed their approach to the maintenance of outfalls between Avonmouth and Sharpness and in future would take a re-active approach. CCTV would be installed to monitor the outfalls and the EA would respond when an outfall did not operate. Members that attended had considered that this could be an improvement on the current situation.	
2780.	**EA/IDB Liaison Meeting** THE LDE had raised the Board's concerns at the Liaison Meeting with regard to Hill Pill and Arlingham Pill.	
	The meeting closed at 11.55 am	

Appendix 1

Lower Severn (2005) Internal Drainage Board]

Biosecurity Policy

PURPOSE

This document sets out the Biosecurity Policy of the Lower Severn IDB. It covers activities undertaken by the IDB on a daily basis to reduce the spread and damage from invasive non-native species.

It is intended that the Board's staff and contractors will follow procedures commensurate with this Policy.

POLICY STATEMENT

Invasive non-native species are widespread nationally and if left uncontrolled present a threat to our aquatic and riparian systems. It is imperative that our field operations to manage flood risk and water levels do not exacerbate the risks to the environment and economy that are posed by these species. Failure to minimise the spread of invasive non-native species, when visiting a site where an invasive non-native species is known to be present, can risk prosecution under the Wildlife & Countryside Act 1981.

Vigilance is required if we are to stop the spread of invasive non-native species, and it is imperative that we integrate basic biosecurity in our operations to prevent this spread. Much to do with biosecurity involves awareness, common sense and agreed procedures.

RESPONSIBILITIES

The Board is responsible for reviewing and approving the content and implementation of this Policy.

The Board will ensure any new contracts let will include reference to the Policy where a risk is considered to exist arising from the works involved.

All Board Members, staff and contractors are required to comply with the Policy's requirements and share responsibility for performance in implementing the Policy in regard to the health, safety and welfare of the environment.

IMPLEMENTATION

This Policy is implemented though supporting guidance documentation covering biosecurity procedures.

Where biosecurity risks have been identified operational Staff will be provided with training and information on identification of invasive non-native species likely to be found within the Drainage District.

All operational machinery, tools and personal protection equipment (PPE) identified as at risk of cross-contamination will be subject to 'check, clean, dry' decontamination procedures before moving between operations on watercourses and sites.

All Operational Staff will report sightings of invasive non-native species to the Board's Civil Engineer or the GB Non-Native Species Secretariat directly.

APPROVAL

This Policy was approved by the Board on 6 February 2019. This Policy will be reviewed, at a minimum, every five years.

Lower Severn (2005) Internal Drainage Board

Biosecurity Procedures

PURPOSE

These procedures aim to help Board members, staff, and operators working for the IDB to identify key biosecurity risks pertinent to the internal drainage district and the Board's activities, and identify measures to address these risks.

Accidentally spread invasive non-native species may be harmful to the environment and potentially damaging the reputation of the Board, compromising its ability to operate, or work with partners. Operators visiting a site where an invasive non-native species is known to be present, should take measures to ensure they do not spread it. Failure to do so can risk prosecution under the Wildlife & Countryside Act 1981.

OBJECTIVES

- Increase awareness around invasive non-native species via training.
- Identify, and keep a record of, known areas where invasive non-native species are an issue.
- Ensure effective cleaning of equipment, machinery, and clothes.
- Ensure operators take care to avoid transporting water and material between water bodies where a risk has been identified.
- Ensure ongoing monitoring of invasive non-native species when undertaking operations.
- Remain vigilant when undertaking operations to identify any further areas where invasive non-native species exist.

RESPONSIBILITIES

Awareness

The Civil Engineer will have oversight of biosecurity, disseminate information, and report on these matters.

The Board's staff will be encouraged to seek information on invasive non-native species and biosecurity practices. The Environment Agency and Non-native Species Secretariat have relevant useful information.

If a risk is identified then the operator concerned or contractor should be made aware of the priority invasive non-native species, with specific attention to aquatic and riparian species of concern and those known to be present in the surrounding area. Training for staff and operatives shall be provided as appropriate, and information will be disseminated through toolbox talks, workshops, leaflets, emails etc. Contractors should be asked to confirm that they have similar arrangements in place.

Signage, species alerts/information sheets, or guidance should be in place, making operators aware of the risks, and providing advice on how to prevent spread.

Monitoring

Operators should be vigilant in the field for invasive non-native species and have an appropriate mechanism for recording and reporting sightings of suspected species, location, and relevant details.

New sightings should be reported to the Civil Engineer and other authorities and/or land managers as appropriate. The PlantTracker app (www.planttracker.org.uk/), available free for Apple and Android devices, shows you how to identify invasive non-native plant species and enables you to easily submit geo-located photos whenever you find one.

Planning works

Biosecurity should be taken into consideration alongside other factors, such as health and safety, when planning operations and standard working procedures.

The risk of spreading invasive non-native species can be reduced by reducing the contact time in which equipment is exposed to the water. This is particularly important for items such as trailers, which have cavities that may retain water and be hard to inspect.

Propagules are small bits of plant that become detached and give rise to a new plant. Working practices that either reduce, or contain and remove, propagules should be encouraged where practicable, especially in regards to mechanical vegetation control.

Cleaning

Remember: Check, Clean, Dry - www.nonnativespecies.org/checkcleandry/

Decontamination is an essential process to be carried out prior to leaving a site where invasive species are present. This ensures that any foreign matter remains on the land/watercourse of origin, rather than taking it to another location.

Where it is not possible to conduct the decontamination prior to leaving the land/watercourse where the work was conducted (e.g. steam cleaning larger equipment), the operation should be carried out immediately afterwards at the depot or another secure site before the next operation.

Where a cross contamination risk has been identified any field team moving from a contaminated site should carry a 'disinfection box'. This should contain an appropriate commercial disinfectant, a spray bottle, cloths or sponges, a scrubbing brush and protective gloves.

On completion of a field operation, for situations where cross contamination is identified as a risk, the following principles apply:

1. Visually inspect all tools, equipment and machinery that has come into contact with the water for evidence of attached plant or animal material, or adherent mud or debris.
2. Remove any attached or adherent material before leaving the site of operation.
3. Washing/hosing with water will be sufficient to remove debris from most tools, equipment and machinery. Use hot water where possible.
4. Ensure that all water is drained from any water retaining compartments, outboard motors, tanks and other equipment before transportation elsewhere.
5. A high pressure washer or steam cleaner may be essential for more difficult stains or soil, paying particular attention to the tyres, tracks and undercarriage of vehicles and buckets, hulls, outboard motors and submerged parts of machinery. High-pressure steam cleaning, with water >40^{o}C, is recommended for larger equipment, excavators, boats, trailers, and outboard motors that are being moved from one watercourse to another.
6. Clothing and PPE should be visually inspected and any attached vegetation or debris removed. Soiled clothing and PPE should be removed for laundering and boots scrubbed clean; hands and other body parts may also need cleaning.
7. Finally, decontamination by spraying on a commercial disinfectant at the recommended strength to the cleaned boots, tools, equipment or machinery will ensure any remaining disease agents or pests are destroyed.

Every effort should be made to ensure that the decontamination process is a public exercise and where appropriate tactfully brought to the attention of the land owner or manager at the appropriate time. It is not just a question of doing the right thing but also being seen to be doing it. In this way, public confidence will be maintained in flood and water level management operations.

APPROVAL

These procedures were adopted on 6 February 2019.

Appendix 2

Assessment Criteria

In order to ensure consistency and fair consideration for all potential projects, it will be helpful to identify and agree the criteria by which these projects will be judged prior to their inclusion in the programme. The following criteria are proposed:

1. The number of residential, agricultural and commercial properties that will enjoy greater flood protection benefits.
2. The area of farmland that will enjoy greater flood protection benefits.
3. The status of the land, ie where it is designated as a RAMSAR, SPA or SSSI site, the site of a Scheduled Ancient Monument or supports the implementation of the Board's Biodiversity Action Plan.
4. The extent (if any) to which the project assists the Board in the discharge of its statutory responsibilities.
5. The ongoing maintenance costs of the project (if any) post-completion.
6. The extent to which the Board's general maintenance programme might reduce as a result of the proposed works.
7. Confirmation of the Board's ability to finance the project in the proposed timescale.
8. The availability of external funding to support the financing of the works.
9. Where it can be measured, the Return On Investment for the project.

These principles should also govern the priority attached to each project. Should the Board need to respond urgently to a flooding event, then funds may have to be diverted from the Capital Programme. In such a case slippage might be unavoidable.

LSIDB PROJECTS 2019/20 - 2025/26

PROJECT	BENEFITS	NET COST ESTIMATE £k	MAINTENANCE IMPLICATIONS + OR -	TIMESCALE	RETURN ON INVESTMENT	COMMENTS Description of scheme Criteria met
Plant + Vehicles Tractor/mower	Health & Safety and Efficiency	140*		2021/22		Offset by sale of old m/c
Excavator	Health & Safety and Efficiency	90* 130* 110*		2019/20 2021/22 2023/24		Offset by sale of old m/c
Vehicles	Health & Safety and Efficiency	25* 25*		2023/24 2024/25		Offset by sale of old m/c
Spearhead m/cs	Health & Safety and Efficiency	170* 360* 260*		2020/21 2022/23 2024/25		Offset by part exchange
Pumping Stations Renewals	Statutory, Environmental and Efficiency	200* 225* 250* 275*		2019/20 2020/21 2021/22 2022/23		
Drainage Schemes						
Hill Pill outfall		75				Survey work approved
Aust/Olveston		500		?		
Demainment works		30		2019/20		
Cornham		500		?		
Rea Lane pumps		250		?		
Epney				?		
Rockhampton				?		
Renew office and workshop		400		?		

***** Sum already budgeted.

COMMITTEE: Engineering **MEETING DATE: .10.2019**

REF: KW/B5/2019 **REPORT BY: Principal Officer**

UPDATE OF THE CAPITAL PROGRAMME

Introduction

At the Board meeting held on 21 November 2018, Members considered the contents of a draft Capital Programme for all major works planned by the Board. The Minute reads:

Production of Capital Programme

In accordance with Minute 2693 the PO had produced a draft Capital Programme. He explained that this was a working document. The plan included the pump replacement programme and machinery replacement programme. In consultation with the Engineers and Accounts Officer, eight new projects had been added that could be considered once the pump replacement programme had been completed.

The PO had also proposed assessment criteria to evaluate the merits and benefits of each project and prioritise the schemes. He envisaged there would be several drafts for the Committee to consider before a final version was accepted by the Board.

The AO explained that the £350k per annum that had been generated from rates to fund the pump replacement programme could be used to finance the Capital Programme, if members decided to adopt the programme.

Mr Hyslop was mindful that the pump replacements programme was just underway and it was too early to know what the final expenditure would be.

Mr Simms stated that the Board needed to consider the future and that this programme would start a healthy process and debate.

It was resolved that:

(1) The format and proposed assessment criteria for the Capital Programme, as set out at Appendix 2, be referred to the Board for approval;

(2) **All Members be invited to propose projects for inclusion in the Programme**

(3) **The Capital Programme be included on all Committee agendas at least on an annual basis.**

(4) **The Capital Programme be included as a standard item on the agenda for all future Engineering Committee meetings so that information can be regularly updated and progress monitored.**

(5) **The Engineering Committee continue to manage the Programme on behalf of the Board.**

[Minute 2778 refers.]

This decision was ratified by the Board at the meeting held on 6 February 2019:

Capital Programme

The Engineering Committee had considered the PO's proposal to produce a capital programme. The Committee supported the production of a programme for approval by the Board.

The Chairman commented that a capital programme would be a positive planning mechanism for the Board and it also addressed the matter of undesignated reserves that had been highlighted by the F&GP Committee.

It was resolved that:

1. **The format and assessment criteria for the Capital Programme appended B to these minutes be approved**
2. **All Members be invited to propose projects for inclusion in the Programme**
3. **The Capital Programme be included on all Committee agendas at least on an annual basis.**
4. **The Capital Programme be included as a standard item on the agenda for all future Engineering Committee meetings so that information can be regularly updated and progress monitored.**
5. **The Engineering Committee would continue to manage the Programme on behalf of the Board.**

[Minute 2822 refers. The Appendix cited above is attached to this report as Appendix A for ease of reference.]

Subsequently a pro-forma was distributed to all Members should they wish to propose particular schemes for inclusion in this programme. A copy of the pro-forma is attached at Appendix B. No additional projects have come forward via this means at the time of writing.

Revision of Programme

The programme originally drafted relied upon figures which were only ever broad-brush financial estimates. Additionally, these figures are now two or three years out of date (see appendix C for more details). A more accurate forecast of the expenditure involved in these schemes, and the funds required to finance them over the timescale indicated is attached at Appendix D.

As feasibility studies have not been carried out in respect of the drainage schemes shown in Appendix A, these projects have been dropped from the programme until further investigative work is completed.

How projects will be added to the Programme

I propose the following assessment process to ensure that a consistent method of evaluation is adopted for every project from inception through to commissioning:

1. Proposal put forward by a Member, a Committee, the Board or staff.
2. Proposal scrutinised by the Engineers with reference to the criteria cited at Appendix A and costed with the assistance of the AO. External consultants will be engaged where appropriate so that financial predictions can be made with greater certainty.
3. A full report on the benefits and likely costs of the scheme is submitted to and approved by the Engineering Committee.
4. The financial details of the scheme are reported the Finance and General Purposes Committee to ensure that the scheme can be fully funded within the recommended timescale.
5. The recommendations of both Committees are submitted to the Board for approval.
6. The scheme is added to the Capital Programme for implementation.

Recommendations: That

(1) The revised Capital Programme, as set out at Appendix C, be approved; and
(2) The means by which new proposals will be assessed and added to the Capital Programme be approved.
(3) Subject to the meeting F&GP on 11th December requests the Board move £200k from the unallocated reserves to the pump replacement reserve.
(4) The LDE to write to the E.A to request an extension from the 2025/26 deadline for a further 2 years.

Kieran Warren

Principal Officer

October 2019

APPENDIX A

Capital Programme
Assessment Criteria

In order to ensure consistency and fair consideration for all potential projects, it will be helpful to identify and agree the criteria by which these projects will be judged prior to their inclusion in the programme. The following criteria are proposed:

1. The number of residential, agricultural and commercial properties that will enjoy greater flood protection benefits.
2. The area of farmland that will enjoy greater flood protection benefits.
3. The status of the land, ie where it is designated as a RAMSAR, SPA or SSSI site, the site of a Scheduled Ancient Monument or supports the implementation of the Board's Biodiversity Action Plan.
4. The extent (if any) to which the project assists the Board in the discharge of its statutory responsibilities.
5. The ongoing maintenance costs of the project (if any) post-completion.
6. The extent to which the Board's general maintenance programme might reduce as a result of the proposed works.
7. Confirmation of the Board's ability to finance the project in the proposed timescale.
8. The availability of external funding to support the financing of the works.
9. Where it can be measured, the Return on Investment for the project.

These principles should also govern the priority attached to each project. Should the Board need to respond urgently to a flooding event, then funds may have to be diverted from the Capital Programme. In such a case slippage might be unavoidable.

LSIDB PROJECTS 2019/20 - 2025/26

Project	**Benefits**	**Net Cost Estimate £K**	**Maintenance Implications + Or -**	**Timescale**	**Return on Investment**	**Comments description of scheme criteria met**
Plant + Vehicles Tractor/mower	Health & Safety and Efficiency	140*		2021/22		Offset by sale of old machine
Excavator	Health & Safety and Efficiency	90* 130* 110*		2019/20 2021/22 2023/24		Offset by sale of old machine
Vehicles	Health & Safety and Efficiency	25* 25*		2023/24 2024/25		Offset by sale of old machine
Spearhead m/cs	Health & Safety and Efficiency	170* 360* 260*		2020/21 2022/23 2024/25		Offset by sale of old machine

Pumping Stations Renewals	Statutory, Environmental and Efficiency	200* 225* 250* 275*		2019/20 2020/21 2021/22 2022/23		
Drainage Schemes						
Hill Pill outfall		75				Survey work approved
Aust/Olveston		500		?		
Demainment works		30		2019/20		
Cornham		500		?		
Rea Lane pumps		250		?		
Epney				?		
Rockhampton				?		
Renew office and workshop		400		?		

***** Sum already budgeted.

APPENDIX B

TO: Engineering Committee

REQUEST FOR INCLUSION OF SCHEME IN THE LSIDB CAPITAL PROGRAMME

LOCATION	
CURRENT SITUATION	
WORKS REQUIRED	
ESTIMATE OF COSTS *(if known)*	**£**
BENEFICIARIES	
CRITERIA MET *(tick all that apply)* 1. Residential, agricultural and commercial properties will enjoy greater flood protection benefits. 2. Farmland that will enjoy greater flood protection benefits. 3. The land, is designated as a RAMSAR, SPA or SSSI site, the site of a Scheduled Ancient Monument or supports the implementation of the Board's Biodiversity Action Plan. 4. The project assists the Board in the discharge of its statutory responsibilities. 5. The ongoing maintenance costs of the project (if any) post-completion are nil or lower than at present. 6. The general maintenance programme will reduce as a result of the proposed works. 7. The Board is able to finance the project. 8. External funding is available. 9. The Return On Investment for the project. ***Please supply supporting information wherever possible.***	
PRIORITY *(High, Medium or Low)* and PROPOSED START DATE	
SKETCH or PLAN ATTACHED *(Yes or No)*	

NAME: **DATE:**

NB. The Board's Engineers will initially assess the details of your proposals so that the Engineering Committee have as much information as possible at its disposal when considering this scheme. You will be advised of the date of the relevant Committee meeting, which you are welcome to attend in order both to promote the scheme and to answer any questions Members may have.

APPENDIX C

TO : Engineering Committee

REVISION OF PUMP STATION REPLACEMENT PROGRAMME

The Boards' Engineer's originally gave the Board, in June 2015, a ball park estimate of 2.3 million pounds to make all 6 of the Boards pumping stations Eel Regulation compliant.

Unfortunately during the past 4 years costs of all raw materials and plant have escalated and after receiving some accurate cost estimates for the first large pumping station project at Elmore, it is clear that the original estimated budget is not adequate.

Elmore Back Pumping Station

The original ball park figure was £327,000 in June 2015.

The updated cost estimate is £500,000. This may be lower dependent upon whether or not the existing civils are structurally sound. Accurate pump prices, weed screen cleaner and all parts together with necessary civils have been obtained.

Implications for the Remaining Pump Station Costs

Due to such cost increases these figures have been used to revise the cost of rebuilding the remaining pump stations, as these are of similar layout and size.

LOWER SEVERN (2005) INTERNAL DRAINAGE BOARD

REVISED

Cash Flow Forecast for the Pump Replacement Programme
Annual Increment of £25,000 from 2018/19 to 2025/26

		£ Original Budget (June 2015)	£ Revised Budget	2016/17 £ actual	2017/18 £ actual	2018/19 £ actual	2019/20 £ forecast	2020/21 £ forecast	2021/22 £ forecast	2022/23 £ forecast	2023/24 £ forecast	2024/25 £ forecast	2025/26 £ forecast	2026/27 £ forecast	2027/28 £ forecast	Total £ forecast
Income																
Provision from Income and Expenditure A/c		2,400,000	3,175,000	150,000	150,000	175,000	200,000	225,000	250,000	275,000	300,000	325,000	350,000	375,000	400,000	3,175,000
Provision from Unallocated Reserves			320,000				200,000							120,000		320,000
Income Total		2,400,000	3,495,000	150,000	150,000	175,000	400,000	225,000	250,000	275,000	300,000	325,000	350,000	495,000	400,000	3,495,000
Expenditure																
Pump Station	**No. of Pumps**															
Oldbury	3	513,300	867,358				6,779							553,110	307,469	867,358
Marshfield	2	385,860	577,247				6,776			406,562	163,909					577,247
Lapperditch	2	352,820	514,500				8,177	351,823	154,500							514,500
Wicks Green	2	553,420	851,854				5,728					556,307	289,819			851,854
Elmore Back	2	327,391	500,000	2,891		13,540	283,569	200,000								500,000
Saul	1	169,457	180,000	6,887	24,387	55,329	91,755	1,642								180,000
Expenditure Total		2,302,248	3,490,959	9,778	24,387	68,869	402,784	553,465	154,500	406,562	163,909	556,307	289,819	553,110	307,469	3,490,959
Net Movement in the year				140,222	125,613	106,131	-2,784	-328,465	95,500	-131,562	136,091	-231,307	60,181	-58,110	92,531	
Reserve																
	Balance b/f				140,222	265,835	371,966	369,182	40,717	136,217	4,655	140,746	-90,561	-30,380	-88,490	
	In year movement			140,222	125,613	106,131	-2,784	-328,465	95,500	-131,562	136,091	-231,307	60,181	-58,110	92,531	
	Balance c/f			140,222	265,835	371,966	369,182	40,717	136,217	4,655	140,746	-90,561	-30,380	-88,490	4,041	4,041

Notes:

1 Assumes inflation of 3% per annum.
2 Extends the period of income required fronm the Income and Expenditure Account.
3 Assumes two transfers of funds from Unallocated Reserves.
4 Moves the start date of Oldbury pump replacemtn from 2025/26 to 2026/27.

MEETING: ENGINEERING **MEETING DATE: 24/10/2019**

REF: JD **REPORT BY: Land Drainage Engineer**

MACHINERY REPLACEMENT PROGRAMME 2020/2021

Introduction

The Land Drainage Engineer has reviewed the machinery replacement programme as agreed by the Board at the last Engineering Committee dated 21st November 2018.

After deferring the purchase of a new Spearhead in 2019/20 a new quotation has been obtained with a view to replacing in 2020/21. (See appendix 1)

Spearhead SPV2

- New Quotation = £211,946 includes extending counterweight option
- Part Exchange AU11 HCH Energreen 1500 = £25,000
- Cost to change = £186,946 + vat

Although the existing machine will only have done 6,000 hours by the time of trade in it will be 9 years old. If the decision is made to defer the purchase again for another year it will clash with 3 other large items of machinery which will be an excavator, tractor and a mower. (Approx. cost £300k).

Recommendation:

To purchase a new Spearhead SPV2 in 2020/21, part exchanging with AU11 HCH.

James Druett

Land Drainage Engineer

SPEARHEAD

QUOTATION

Station Road,
Salford Priors,
Evesham,
Worcestershire,
WR11 8SW,
England

Lower Severn Internal Drainage Board

Waterside Buildings
Oldbury Naite
Thornbury
South Gloucestershire
BS35 1RF

Date: 9 October 2019
Quote Ref:LS11/19MR

Dear James,

Thank for the opportunity to quote for the supply of a Spearhead SPV professional cutting machine. The below quotation and specification have been produced in line with your application and our discussions.

Spearhead SPV Range of professional cutting machines use clean and efficient T4F Deutz engines and now incorporate the New Eco Mode heling improve fuel economy. The SPV2's are the most versatile tool carriers and are designed to be cutting machines, providing your operator optimum Hydraulic Performance, exceptional safety and Visibility and Comfort for unrivalled productivity.

Specification based on SPV2	970XT
Max Weight	14,700 kg
Engine Type	Deutz TCD 4.1
Net Power	115 kW / 155 hp
Travel Speed	40 Kph
Turning Radius	2.15 M
Max Reach Ground	9.64 M
Max Reach Depth	7.27 M
Max Reach Height	9.85 M

SPEARHEAD

QUOTATION

SPECIFICATION AS BELOW – SPV2 COMFORT

155HP DEUTZ ENGINE with Eco System,
40 Kph 2 Speed Transmission
Hydraulic Circuit fitted with Load Sensing pump for precise Boom & Dipper services

Eco Mode
The Spearhead Eco mode provides efficiency savings when travelling between worksites by lowering engine RPM when travelling at 40 KPH

3 Year Warranty
Extended Warranty, 3 Year or 3000 hrs as standard covering all major components

OPERATOR STATION

- Rotation 0° to 90°
- Rops & Fops tested
- Tilting and adjustable steering wheel
- On-board computer for the control of DEUTZ engine.
- Tilting and height-adjustable steering column,
- GRAMMER adjustable air suspension seat.
- Air conditioning
- Adjustable right arm with integrated joystick socket.
- Rear tinted windows.
- Front & Side windscreen wipers.
- 2 Rotating Beacons
- 60/40 divisible cab door.
- Emergency glass with hammer.
- 2 kg extinguisher housing space.
- Cruise control.
- Reverse Pedal
- Radio with Bluetooth/DAB.
- Electronic potentiometer for control the cutting head pump.
- Self-retracting sun shade curtain on windshield.
- LED working lights.
- External rear View on left hand side
- Extra rear view mirror mounted on right side mudguard.

CUTTING HEAD

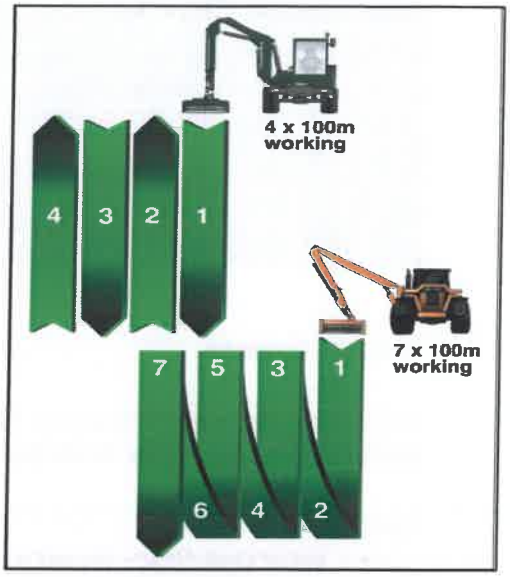
- 1.5 M New Speed Cutting Head
- Hose, Motor and Rotator
- Hammer Flails

SPEARHEAD

QUOTATION

CUTTING HEAD

Productivity and more Productivity - that is what is delivered by the TWIGA SPV 2, combining enhanced comfort, unrivalled visibility, controlled stability, agile manoeuvrability, extreme power, and distinctive versatility to provide you with the ultimate reach mowing machine.
The rotating cabin perfectly complements the rotating flailhead allowing bi-directional cutting to take place at equal speeds, whilst the heavy duty flailhead ensures that any type of vegetation is aptly dealt with.
When your mowing work is done add an alternative attachment such as a weed bucket or tree shear to provide even further profitability from your machine and even continue through winter



OPTIONAL EXTRAS

Extendable Counterweight **£6396**

Provides up to 2500Kg extra counterweighting at 60cm full extension

Three Point Linkage **£13,884**
C/W Ride Control hydraulic damping to reduce bounce while roading and alleviate stress on the machine and improve operator comfort

Spearhead Rolliflail 250HD **£6857**

2.5m working width, double spiral rotor, hammer flails, right hand offset when front mounted with minimum 500mm offset, double skinned hood, rear manual adjustable roller, replaceable full-length skids, front and rear mounting frames. PTO for front and rear mounting

SPEARHEAD

QUOTATION

Qty	Model Options & Description	Price +VAT
1	*Spearhead SPV 2 970XT Comfort* *As per standard Spec*	£205,550
1	*Part Exchange Energreen ILF 1500 Year 2011*	£25,000
	Cost to Change	£180,550

FINACIAL OPTIONS

The below contain financial quotes for Operating Lease which is just one of the many options that are available as an alternative to the full payment on account.

Operating lease: Benefits

- *Boost Cash Flow – We set a residual value of the SPV which reduces your payments*
- *Taking assets off balance sheets*
- *Reducing Tax Liability – you may be able to reclaim VAT on your equipment*
- *Removes Residual value risk*
- *Allows you to combine with service cost and gives peace of mind*
- *Payment Flexibility Monthly, Quarterly or Annual*
- *Lease extension can be considered at the end of the term*

Should you have an interest in discussing the options in greater detail we would happily arrange a meeting to talk through them with you.

Qty	Financial Quotation Operating Lease with Maintenance	Price + VAT
1	5-year Operating lease 1+59 monthly payment profile Please note the machine is returned to Spearhead at the end of the contract	**£3,073 per month**
1	5-year Operating lease 1+4 payment profile Please note the machine is returned to Spearhead at the end of the contract	**£35,133**

Qty	Financial Quotation Operating Lease without Maintenance	Price + VAT
1	5-year Operating lease 1+59 monthly payment profile Please note the machine is returned to Spearhead at the end of the contract	**£2889 per month**
	5-year Operating lease 1+4 monthly payment profile Please note the machine is returned to Spearhead at the end of the contract	**£33,763**

SPEARHEAD

QUOTATION

SPEARHEAD SERVICE PACKAGES

With a Spearhead service package, we offer you the opportunity to spread your service cost over the term of the agreement. The service plan is tailored for your business and to match each Twiga SPV operating needs.

Spearhead Service packages cover all regular service cost including oils Filters and fluids, only genuine parts are used. The service schedule is carried out to manufactures guidelines and time schedule as stated in the service manual.

Qty	Service Quotation	Price + VAT
	5-year Service Contract Based on 1000 hours usage per annum to include all regular service as per the operating manual includes fluids	
1	*Option 1* *Hourly rate paid by monthly invoice* **Pro rata invoice billed monthly*	*£2.30 per hour
1	*Option 2* *5 Year (3000hours) Full Cost, single payment* *** Cost can be included in any financial option*	**£11,500

We hope we have interpreted your requirements accurately and our quotation meets with your approval. We would welcome an opportunity to meet up and discuss the contents with you in detail.

Please note that valuations and prices are valid for 30 days only.

Yours Sincerely

M Raymond

Mark Raymond
Business Development Manager (SPV)
+44 (0) 7721 769481

SPEARHEAD
www.spearheadmachinery.com