

BLACK SLUICE

INTERNAL DRAINAGE BOARD



Northern Works Committee Meeting

Wednesday, 2nd June 2021 at 2pm

Virtual Meeting



Black Sluice Internal Drainage Board

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Our Ref: IW/JB/B10_1

Your Ref:

Date: 26th May 2021

To all Northern Works Committee Members

Dear Member

Northern Works Meeting on 2nd June 2021

Notice is hereby given that a meeting of the Northern Works Committee will be held remotely on Wednesday 2nd June 2021 at 2pm at which your attendance is requested.

Due to COVID-19, this meeting will be held remotely in accordance with The Local Authorities and Police and Crime Panels (Coronavirus) (Flexibility of Local Authority and Police and Crime Panel Meetings) (England and Wales) Regulations 2020.

Yours sincerely

Chief Executive

AGENDA

1. To approve the amended Standing Orders.
2. Recording the meeting.
3. Apologies for absence.
4. Declarations of interest.
5. To receive and, if correct, sign the Minutes of the last Meeting of the Northern Works Committee held on 4th November 2020 (**pages 1 - 13**)
6. Matters arising.
7. To discuss the Engineer's Report (**pages 14 - 19**)
(a) Capital Scheme Budget (**page 20**)
8. Rainfall (**page 21**)
9. Any other business.

BLACK SLUICE INTERNAL DRAINAGE BOARD

MINUTES

of the proceedings of a Meeting of the
Northern Works Committee

held remotely on the
4th November 2020

Members

Chairman - * Mr P Holmes

* Cllr T Ashton	* Cllr R Austin
* Cllr P Bedford	* Mr M Brookes
Mr D Casswell	* Cllr M Cooper
* Mr J Fowler	* Cllr M Head
Mr R Leggott	* Mr R Needham
* Cllr F Pickett	* Mr J E Pocklington
Mr P Robinson	Mr N Scott
* Cllr P Skinner	Mr R Welberry

(* Member Present)

In attendance: Mr D Withnall (Finance Manager)
Mr P Nicholson (Operations Manager)
Mr S Harrison (Works Manager)
Mr K Methley (Pump Engineer)
Mr K Casswell (Chairman)

Due to COVID-19, this meeting will be held remotely in accordance with The Local Authorities and Police and Crime Panels (Coronavirus) (Flexibility of Local Authority and Police and Crime Panel Meetings) (England and Wales) Regulations 2020.

1666 **APOLOGIES FOR ABSENCE - Agenda Item 1**

Apologies for absence were received from the Chief Executive, Mr P Robinson, Mr R Leggott and Mr D Caswell.

1667 **DECLARATIONS OF INTEREST - Agenda Item 2**

Mr J Pocklington declared an interest in Minute 1672(a)(i) - North Forty Foot Cleansing / Revetment & Langrick Road Pipeline as landowner of the proposed lagoon.

1668 **MINUTES OF LAST MEETING - Agenda Item 3**

The Minutes of the Joint Works Committee, which was held on 21st November 2019, copies of which had been circulated, were considered. It was AGREED that the Minutes should be jointly signed as a true record.

1669 MATTERS ARISING - Agenda Item 4

There were no matters arising.

1670 TERMS OF REFERENCE - Agenda Item 5

The Chairman presented the Terms of Reference for the Northern Works Committee and invited any opinions or questions.

All AGREED that the Northern Works Terms of Reference be RECOMMENDED to the Board for approval.

1671 TO CONSIDER PERIOD 06 MANAGEMENT ACCOUNTS - Agenda Item 6

The Finance Manager presented the Period 06 Management Accounts, noting that the forecast will be presented after the Engineer's Report, inviting questions and comments from the committee.

1672 REPORT ON ENGINEERING WORKS 2020 - Agenda Item 7

The Operations Manager presented the report on Engineering Works 2020, highlighting particular points as follows. He also noted that 2020 has been a challenging year in light of COVID-19 and the challenges it has caused making it difficult to remain on schedule. Many building materials have been more difficult to source and staff levels have been more difficult to maintain (both internal and external contractors).

(a) CAPITAL ASSET IMPROVEMENTS

2020/21 Defra/EA Funded Grant in Aid (GiA) Schemes

(i) North Forty Foot Cleansing / Revetment & Langrick Road Pipeline - Schemes 2103 & 2133

Royal Smals are going to be doing the desilting, they are currently desilting sections of the River Steeping and are then coming to complete the North Forty Foot in mid-January 2021, the section from Cooks Lock to the back of Rosebery Avenue Playing Field.

There have been some complications with the proposed lagoon site as there is a high pressure gas main that runs through the proposed site. It is expected a site meeting with Cadent Gas will resolve any ongoing issues.

There is a budget of £350,000, as outlined in the Capital Schemes Budget.

Bushing works have commenced and part of these works included investigation work underneath Cooks Lock Pumping Station. Whilst the water levels were reduced, it was found that the bell mouth of one of the pumps was no longer attached due to rusting of the bolts. In total 10 investigations at pumping stations have been completed and these works are to continue this year. Some silt removal from the channel by machine also took place whilst the water levels were reduced.

2020/21 Board Funded Capital Schemes

(ii) Wyberton Marsh PS Weedscreen Cleaner Replacement

The contractors have been on site over the last few weeks but have encountered a few challenges in relation to weather and ground conditions. However, works are still within budget (£110,000) and is now up and running, with the old equipment removed from site. Photographs were displayed on screen.

(iii) Jetting to Major Pipelines

A map showing the proposed jetting and completed jetting of Kirton was presented on screen. A site meeting has taken place in regard to partnership works with Lincolnshire County Council to alleviate flooding in the area of the War Memorial in the village of Kirton.

(iv) Remote Monitoring & Control (H&S Scheme)

This work involves the automation of pumping stations, installing metric gauge boards and installing CCTV cameras. The CCTV cameras will be especially beneficial in relation to Health & Safety as officers will be able to see what is happening at the pumping stations without having to send members of the Workforce in an emergency and potentially dangerous situations.

The Board has made their contribution to the works (£57,000), and it was hoped to achieve funding from GiA (£55,000) and Local Levy (£55,000). However, it is becoming unlikely that any funding will be achieved through GiA, but it is hoped that all of the remaining budget can be achieved through Local Levy (£110,000). Discussions are currently taking place with the EA around the Local Levy application.

(v) General Culvert Contributions

A map showing the identified culverts for replacement was presented on screen, outlining culverts 635, 2880 and 1795 for replacement.

There is only a small budget for culvert replacements (£5,000). It was noted that there was a mistake within the agenda report; it should be £5,000 as opposed to £500.

Culvert 1795 is the only culvert that a contribution will be considered for, with the watercourses that culverts 635 and 2880 are on being proposed to be given up.

Proposed Works 2021/22 - Board Funded Capital Schemes

(vi) Jetting to Major Pipelines

It is important to complete this camera survey work so that the conditions of the pipelines are known, so that blockages and potential failures can be dealt with and prevented.

(vii) General Culvert Contributions

Like this year, there will be a small budget for incidental culvert replacements contributions (£5,000).

Proposed Works 2021/22 – Pumping Station Schemes

(viii) Great Hale PS Weedscreen Refurbishment - Scheme 2225

This work has been previously deferred, the weedscreen cleaner was installed in 1999 but doesn't do as much work in comparison to some of the other pumping stations.

This scheme may be deferred again due to problems at Wyberton Marsh Pumping Station with the pumps that may take priority. There have been a few issues with various pumps and pump motors, which may be a result of the excessive rainfall received in 2019.

The Chairman questioned if it is a standardised weedscreen cleaner and if spare parts could be used to keep it working into another financial year? The Pump Engineer responded that it is Bosker, the one generally used, however, not all parts are interchangeable, but felt it was feasible for it to last a few more years.

Mr R Needham questioned if the hours of the weedscreen cleaners are known or whether it is purely done on a timeline in regard to replacement? The Pump Engineer responded that the hours the weedscreen cleaners do is currently not monitored, replacement is based on a timeline of c20 years. However, the Pump Engineer explained that he is trying to implement a system that will record the number of hours the weedscreen cleaners operate through the telemetry system. Mr R Needham noted that it could be connected into the CCTV installation if possible.

The Chairman questioned if it would correlate with pump hours? The Pump Engineer noted that there wouldn't be a correlation as they are all set up differently and don't run constantly whilst the pumps are running. The Operations Manager added that some weedscreen cleaners work harder than others, even if doing the same hours; some will have a lot more weed to pull out on a cycle than others.

(b) DRAIN MAINTENANCE

(i) Prior Notice given for Summer Cutting

The committee were directed to the map shown on page 29 of the agenda, showing the proposed alternate bank and early cutting 2021/22.

The Operations Team have been tasked with reviewing the summer cutting programme. A similar programme has been completed for the past 3 / 4 years, commencing and completing at around the same time each year, which has proven to be quite successful.

However, at the beginning of the 2020/21 summer cutting season (mid July 2020) there were complaints received about damage to wildlife, for the first time. Similar complaints having also been received this year in relation to the cutting completed by the Board on early bank top cuts under instruction from the EA.

The Board maintains 750km of watercourse and c150km for the EA.

The proposed alternate bank flailmowing and early cutting has been based around where the officers know they will be able to get on site. The early flailing (c40km) is proposed to commence, dependant on weather conditions, at the end of March / early April on a four-week cycle. The proposed alternate bank cutting is c40km.

The Operations Manager felt that the programme did need to change and move with the times. However, noted that challenges that could be faced with the new proposed programme include the weather conditions and causing more damage to land and crops. The programme can be tailored, it may take a few years to get to the ultimate programme or it may be that different programmes are completed each year on a 2/3/4-yearly cycle, for example.

The costs of the proposed programme can be looked at and compared to that of the current programme.

The Chairman felt it was a case of trying it and seeing, and about balancing the complaints about the wildlife with the complaints from landowners for damaging crops with the complaints about not moving the water. The Chairman gave credit to the Operations Manager and his team for creating the proposed plan, noting that it will take time to get it completely fine-tuned.

Mr K Casswell questioned whether the costings would be worked out and presented to the Board in November or at the Board Meeting in Spring? The Operations Manager responded as soon as possible. Mr K Casswell expressed his support for the change in programme.

Cllr R Austin questioned if other IDBs are experiencing similar issues? Other IDBs have had similar complaints, with their response being that they are following a programme. The Chairman noted that this Board seem to take a 'softer' approach compared to other Board's in the area.

The Operations Manager believed that the complaints about the wildlife are trying to protect what they believe is right and that he believes they do have a valid point.

Mr J Fowler questioned if part of the problem is because the programme has always started in one particular area and if those complaining are in the early cut areas and tend to notice it more? The Operations Manager didn't believe so, noting that the programme followed this year has been followed for the past 3 / 4 years with no complaints. The Operations Manager highlighted that this year many people have been at home more or exercising in their local area due to COVID-19 and therefore may have had more opportunity to notice.

The Chairman noted that one of the complaints he has encountered from landowners is that communication is not like it once was, the Chairman explains to them that the Board haven't got the time or resources they did have, there aren't as many 'feet on the ground'. The Chairman also emphasised the importance of landowners providing their contact details to the Board for communication purposes.

Cllr M Head felt that the operations staff were in a difficult position and acknowledged the environmental aspect, especially from a NKDC perspective, but also noted he appreciates that the Board has a job to do and needs to maintain the drains. He questioned whether some of these issues could be allayed through communication and explanation of the need for maintenance of the drains, noting this could be done through social media platforms. It was confirmed that Black Sluice IDB have a Facebook and Twitter account.

The Operations Manager noted that they have held a meeting with one of the individuals who complained about the summer maintenance works and explained to them what the Board does, how it is carried out and why it is carried out the way it is. The complainant did understand this.

The Operations Manager added that although the idea is to complete cutting either earlier or after nesting birds, some birds can have multiple broods in a season if the weather conditions are favourable.

Cllr M Head noted that he is going to take this onboard to some of the NKDC projects and expressed his support for the programme.

The Operations Manager next referred the committee to page 27, showing the summer machine roding 2020/21 and page 26, showing summer machine flailing 2020/21. This is due to be substantially complete by the end of November, having not experienced too many issues this year.

(ii) Proposed Desilting, Bushing and Cleansing Works

The Operations Manager referred the committee to page 28, showing proposed winter cleansing 2020/21. The Board maintain c750km, so if 75km are cleansed a year then the target of cleansing the drains every ten years will be met. The notifications have been sent out and so the Operations Manager noted that if anybody is in receipt of this notification and has any concerns or specific requirements the please contact the office.

(c) PUMPING STATION MAINTENANCE

There was heavy rainfall received October 2019 onwards which created a few problems at South Kyme Pumping Station, Ewerby Pumping Station and Damford Pumping Station.

External initial inspections (£1,150) have been completed and costs given for further inspections works required (£22,050). There will be further support works required from the Board (£6,000).

The Board's Officers have been engaging with the EA about this and it is expected that the EA will provide a contribution to the costs, if not the full amount. Currently this confirmation of funding from the EA has not been confirmed. The investigations are important as, currently, the Board are not aware of any damage that may have been caused. It has been taken to director level at the EA, but a response is still being awaited.

Mr K Casswell questioned whether the insurance would help if the EA did not provide the funding? The Finance Manager reminded that committee that it is currently for identifying if there is damage, as opposed to making a claim for damage that has been done. Mr K Casswell felt it was important to go ahead with as any damage needs to be dealt with. The Finance Manager added that, whether the EA pay or not, he feels it is something the Board should consider funding, for the long term assurance that the foundations of the three pumping stations are sound.

Mr K Casswell questioned which one the Operations Manager would complete first, which is the most critical? The Operations Manager noted that typically you are drawn to the one that looks worse on the surface, but until it is known what unseen damage has been done it is hard to say.

The Finance Manager added that he will have discussions with the insurance company, the EA and the Chief Executive and bring back some proposals to be Board in November.

(d) HEALTH & SAFETY

Cllr R Austin questioned if any of the Board's employees has been infected with COVID-19?

The Finance Manager explained that the Chief Executive tested positive for COVID-19 last week and has been quite poorly with it, which is why he is not present at this meeting. The Operations Manager and Pump Engineer are in isolation due to being in contact with the Chief Executive.

The Chairman thanked the Operations Manager for his report and presentation.

1673 QUARTER 2 FORECAST - Agenda Item 8

The Finance Manager explained that the overall outcome of this, with the adjustments for the GiA Schemes being pushed into next year, is that the Board's General Reserve will have an additional £20,484 as it stands currently. The Finance Manager invited questions and comments.

1674 REVIEW OF POLICY No. 46: CROP LOSS COMPENSATION - Agenda Item 9

The Chairman presented this, thanking the Audit & Risk Chairman and Committee for their work on, noting that something that he wanted to highlight was that landowners need to provide the operations team with contact details to allow communication.

Mr M Brookes added that this policy just documents what is already in place, highlighting points including that the onus is on the landowner to claim it, it is not paid automatically and that other adjacent IDBs do not pay compensation, even though it does state in the Land Drainage Act that IDBs are liable to pay for injury sustained.

The Finance Manager further added that this is a new policy that was presented to the Audit & Risk Committee on 14th October 2020, noting the mistake in the table in the last paragraph – the 'Annual Rentable Value' should be 'Annual Rateable Value'. It was suggested at the meeting that an additional paragraph be included to explain how the process of claiming the compensation works. The Operations Team, Chief Executive and Finance Manager had a meeting about this and concluded the points listed within the agenda for further committee discussion. Therefore, the ask of this committee is what to include within the additional paragraph?

Mr K Casswell felt it was a good idea to put the onus onto the landowners to claim it, as some may not then claim it.

The Operations Manager noted the importance of getting across the understanding that the onus is on the landowner to claim to ensure the Operations Team time is used as efficiently as possible.

Mr M Brookes suggested that the forms should be included in the policy as an appendix.

All AGREED for the Board's Officers to propose a paragraph they believe to be suitable and present to the Board and include the forms in the policy as an appendix.

Mr J Fowler questioned how much is currently claimed for crop loss? The Finance Manager responded that it is around an average of £8,000 a year. The Chairman felt that it is not that much for the claimant or Board but is a good will gesture.

1675 REPORT ON THE SOUTH FORTY FOOT CATCHMENT UPDATES - Agenda Item 10

The Chairman explained that the Chief Executive was going to present this report and so he, the Operations Manager and Finance Manager will try to answer any questions. Any questions that can't be answered will be passed onto the Chief Executive once he is well again to answer.

(a) Boston Tidal Barrier

Mr K Casswell noted that the EA have been given an award for good practice in relation to the barrier.

(b) Boston Haven Bank Improvements

The Operations Manager noted that the Board has been involved with these works.

(c) EA/BSIDB Public Sector Cooperation Agreement (PSCA)

The Finance Manager noted that it was started late this year due to delays in receiving orders which has impacted on the timings of the budget, but it should be complete by the end of November 2020.

The EA PSCA Works for 2021 were displayed on screen.

(d) South Lincolnshire Water Partnership (SLWP)

Mr K Casswell explained that the Chief Executive is Chairman of the SLWP, explaining that it is a slow process, but a long list of potential sites is currently being reviewed. Also noting that there is a bid for £800,000 to look at the quality of water within the Board's and Welland and Deepings IDB catchment.

Lincolnshire Wildlife Trust (LWT) have been successful in an Elms bid for 50ha in Bourne North Fen. This is next to a pit owned by the Board. This site would be able to polish enough water to supply Bourne and if the South Lincs Reservoir goes ahead it would require twenty sites of the same size. There has been no landowner / public engagement around the South Lincs Reservoir yet as it is unknown whether it will actually go ahead. If it does go ahead, it will start to be constructed around 2025/26.

Cllr P Skinner added that this is an interesting project, noting the potential for brining tourism to the area and the possibility of large barges being able to pass through the town, making the area more prosperous. Cllr P Skinner also noted that water has previously been treated as a problem, when actually it is a resource and needs to be treated as one and get value from it.

Mr K Casswell noted that once a value is put on the water, difficulty arises over who owns the water.

Cllr M Head noted that he has had a meeting with Katherine Samms of the EA this morning regarding the Sleaford end of the River Sleas, noting that North Kesteven District Council are very interested in the regeneration of the River Sleas, it is an economic resource for the area. He added the importance of getting people working together. Cllr M Head also added that there was a webinar held by Anglian Water about the potential reservoir and the transfer of water from the north of the region down to a large reservoir. Cllr M Head got the impression that this a project that is likely to go ahead with Water Resources East.

Mr K Casswell noted that Anglian Water are still yet to decide whether the resources within the area will be sufficient or whether they take it from the River Trent in a pipe, but hopefully Defra will support the option of open water transfer and all its benefits.

(e) The Black Sluice Pumping Station (Boston) (BSPS) Effectiveness Initiative Project

Cllr R Austin informed the committee that a meeting was held a few days ago and all of the options are being seriously considered.

(f) The Black Sluice Gravity Sluice and Navigation Lock

The Chairman noted that he thinks the work has progressed reasonably well.

Mr K Casswell noted that discussions are still ongoing with the EA regarding the contingency plan documentation for if one of the structures failed. It has now been left with Norman Robinson at the EA.

The Chairman made reference to the telemetry traces presented within the agenda, showing a four-month period (June – September) for 2019 and 2020. The Chairman noted that, despite scepticism of their modelling, it can be seen by the telemetry traces that they got rid of the exceptional amount of water received in 2019 very well.

(g) SFFD De-silting Work

The Operations Manager noted that the three lagoons (Sempringham, Rippingale and Billingborough) have been successfully pushed out. Discussions with the EA have taken place, work on the next 3km downstream of the A52 is hoped to begin October onwards. The aim is to get things in place to start the desilting process and next section of bushing next year.

(h) Upper Catchment Natural Flood Management (NFM) and Control Analysis

The Operations Manager noted that it is proposed to put this into local choices, so funding is being sought for the seven catchments (Aslackby, Morton, Rippingale, Billingborough, Helpringham, Heckington, Swaton) to take the initial investigations further. It is on programme.

(i) The Lower Witham Flood Resilience Project 2020

There were no further comments or questions regarding this project.

1676 REPORT ON RAINFALL - Agenda Item 11

The rainfall figures at Swineshead were circulated. The Committee RESOLVED that this report be noted.

1677 ANY OTHER BUSINESS - Agenda Item 12

The following planning and byelaw matters were presented and discussed:

(a) BYELAW APPLICATION - FX1707 - DRAINSIDE SOUTH

The Operations Manager explained that an application has been received for a house extension, which is extremely close to a piped section of maintained watercourse. The Operations Manager and his team feel it is too close to be consented, even following reviews of their plans.

The Operations Manager further explained that the property is semi-detached and the neighbour's application for an extension was approved in 2006. However, the drain runs away from the back of that property.

Mr M Brookes felt the committee should take the advice of the Board's Engineers.

All AGREED to RECOMMEND that the byelaw consent is refused.

(b) PLANNING APPLICATION B/20/0235 - TYTTON LANE EAST, WYBERTON

The Operations Manager noted that this is for information purposes only, presenting on screen the plans for 132 dwellings.

The Operations Manager made reference to Cllr P Bedford having an enquiry a few weeks ago from a local resident about problems with his property, that the Operations Manager is aware of and has spoken with the property owner about before.

(c) PLANNING APPLICATION B/20/0293 - LONDON ROAD, KIRTON

The Operations Manager noted that this is for information purposes only, presenting on screen the plans for 42 dwellings.

(d) BANK SLIP - FX1339 - DRAINSIDE, KIRTON MEERES

The Operations Manager explained that the property owner originally had a hedge on the bank side of his property. He was advised not to remove the hedge as it will destabilise the bank but did remove it and put up a fence, meaning bank slips started to occur. The property owner has paid the Board an agreed sum of money (£8,000) to complete revetment works and protect the bank from failing in the future.

(e) ACCESS TO SWINESHEAD PUMPING STATION - FX1688 - SYKE MOUTH DROVE

The Operations Manager informed the committee that a meeting took place in July with a representative of the landowner regarding access to Swineshead Pumping Station.

The Operations Manager explained that many years ago, the landowner put an artic trailer across the end of the Board's registered land at Syke Mouth and was agreed informally that as long as the Board have access to the Pumping Station from the A17 it wasn't a problem. The landowner has contacted the Board to inform them that they have spent £20,000 repairing the roadways, both from the A17 and Syke Mouth Drove, questioning if the Board would be willing to make a contribution to this cost.

It was agreed at the meeting that the Board would potentially make a contribution, but that it would be based on the upkeep of the road rather than bringing the road to a passable condition. The Operations Manager invited thoughts on a suitable contribution?

The Chairman noted that at the meeting it was discussed that the Board wouldn't be contributing to the initial repair of the road because the Board hasn't contributed to the disrepair of it. The Chairman made reference to the landowner at Ewerby Pumping Station, where the Board contribute a load of stone / hard core (1/2 loads per year) for the landowner to use to maintain the road.

The Operations Manager further added that the Board travel down to Swineshead Pumping Station in 4x4 vehicles, the artic low loader and machine only travels down the road at the maximum twice a year. The Chairman noted that the landowner has a grain store which they will cart cereal crops to and from along the roadway, with tractors, trailers and lorries.

All AGREED to offer a contribution of a load of stone / hard core / road plainings for the landowner to use to maintain the roadway as they feel necessary, on the provision that the roadway has been brought up to an acceptable standard.

(f) FALLEN TREE - FX1742 - NORTH FORTY FOOT DRAIN

The Operations Manager informed the committee that a tree had fallen into the North Forty Foot Drain caused by high winds, it is an inaccessible area from both bank tops and so a contractor was employed to remove the tree at a cost of c£5,000 + VAT.

Discussion has taken place with the landowner, who is arguing that it is not her tree or responsibility. Common law has been explained, which states that the adjacent landowner is responsible up to the centreline of the watercourse, unless proven otherwise.

The Operations Manager believes that the landowner will legally oppose any invoice sent. Therefore, the Operations Manager has spoken to the Board's legal representative about this matter, who is currently struggling to get confirmation from the Land Registry, once received he will be able to give more detail, but, in principle, he doesn't believe there would be a problem if pursued.

The Chairman questioned if the rest of the bank is going to be debushed as part of the desilting works? The Operations Manager noted that it will.

The Operations Manager explained that there is a large pond adjacent to the North Forty Foot and the tree was growing in the bank of the pond. The Board do not own any trees, raising the point that if this happened every week and the Board paid, how long could it be sustained.

Cllr M Head noted a similar scenario in South Kyme, where building plots have been sold exclusive of the footpath and adjacent bank to the river, so that the residual ownership remains with the previous landowner.

The Finance Manager presented the map from land registry, showing the red line up to the bank. However, in line with common law the adjacent landowner owns up to the centre line, irrespective of whether it is a Board maintained watercourse or not.

Mr J Fowler noted that he has had a similar situation in Frampton, with the end result being that the landowner on the road opposite and the parish council share the cost of the tree removal. Mr J Fowler felt that it would set a dangerous precedent if the removal costs were not pursued, or a share of it at least.

Cllr P Bedford noted that the pond has been owned by the same family for generations, noting that he also feels it should be pursued.

Mr K Casswell felt the response of the Board's legal representative should be waited for to ensure the Board are on a sound footing. The Operations Manager noted that he will provide any more information at the next Board meeting.

The committee wanted to pass on their best wishes to the Chief Executive for a speedy recovery.

There being no further business the meeting closed at 16:18.

BLACK SLUICE INTERNAL DRAINAGE BOARD

NORTHERN WORKS COMMITTEE MEETING - 2nd JUNE 2021

AGENDA ITEM No 07

ENGINEER'S REPORT

1. CAPITAL ASSET IMPROVEMENTS

(a) 2020/21 Defra/EA Funded Grant In Aid (GiA) Schemes

- (i) North Forty Foot cleansing/revetment & Langrick Road pipeline, lining/replacement works, total scheme value is £472,000. The approved sum being calculated as follows: -

£394,000 GiA
£70,000 Board contribution
£8,000 Development contribution

Local Levy support is no longer required for this scheme.

The majority of the c250m x 600mm pipeline has been replaced, tenders having been requested for the remaining sections proposed for lining.

Some of the bushing works have been completed and the silt containment lagoon has been constructed in preparation for the Desilting works originally expected to have been completed in March 2021. Covid 19 having caused delays to intended programmes, and will now commence in October 2021, preceded by vegetation removal from the banks of the watercourse and the watercourse channel.

This scheme is now estimated to be completed by March 2022.

(b) 2020/21 Board Funded Capital Schemes

Capital Scheme works completed in this financial year:

- (i) Wyberton Marsh P/S weedscreen cleaner replacement

Works commenced on site 19th October 2020 to remove existing equipment, and works were completed w/e 31.10.2020.

- (ii) Chain Bridge P/S refurbish weedscreen cleaner (19/20)

Completed September 2020.

- (iii) Jetting to Major pipelines

Jetting/CCTV works have continued in the Donington and Wyberton areas, towards completion of both of these areas.

Jetting/CCTV works have also been completed in Kirton, in conjunction with Lincolnshire County Council Highways investigating Section 19 flooding issues in Kirton Village.

(iv) Remote Monitoring & Control(H&S Scheme)

Works have progressed on this scheme, with new metric gauge boards now being placed at pumping stations, and remote operation of the pump control at the pumping stations currently being completed, utilising the £57,000 contribution towards this scheme from the Board.

(c) 2020/21 Defra/EA Funded Grant in Aid (GiA) Schemes

(i) Remote monitoring, telemetry H&S scheme

Works have progressed on this scheme, with new metric gauge boards now being placed at pumping stations, and remote operation of the pump control at the pumping stations currently being completed, utilising the £57,000 contribution towards this scheme from the Board.

As reported to the last meeting, and at the time of writing this, Holland Fen and Dyke Fen pumping stations now successfully running the pump control. Great Hale Fen has new operating system but setup is still required. There are five more, Mallard Hurn, Wyberton Chain Bridge, Cooks Lock, Blackhole Drove and Quadring pumping stations operating systems to install which the Pump Engineer will be completing.

The additional £110,000 grant funding allocation required to complete this scheme all now through Local Levy has now been deferred to be allocated and claimed in 2021/22.

(d) 2021/22 Board funded Capital Schemes

(i) Jetting to major pipelines - £50,000 (estimate)

Jetting/CCTV works are to continue towards completing all proposed areas in the Wyberton and Donington catchments, some areas having been difficult to access due to weather conditions.

(ii) General culvert contributions - £5,000 (estimate)

At the recent Structures Committee meeting held on 24 March 2021 it was agreed that Culvert No 1469 in Bicker Fen would have a £1,000 contribution from the Board towards its replacement, along with the proposed in the table below.

Proposed replacement/contribution towards for 2021/22, none of these completed in 2020/21:

No. 635	Swineshead	15m x 0.6m	Armco	£1k max contribution
No. 1795	Kirton	12m x 0.6m	Armco	£1k max contribution
No. 2880	Kirton	9m x 0.6m	BAT	Potential to give this up

(e) Pumping Station Schemes

(i) Great Hale p/s weedscreen refurbishment - £46,000(estimate)

The weedscreen was originally installed in 1999 and this refurbishment is inclusive of replacing all of the moving parts of the weedscreen cleaner which helps to prolong its life and prevent future failure. At the time of writing this report, there have been some issues with the pumps at Wyberton Marsh, which may mean that consideration is given to prioritising those repairs, which will be discussed in more detail at the meeting.

(ii) Kirton Marsh Pumping station new roof - £10,000(Estimate)

This station will have a new roof installed within the financial year.

2. Proposed Works 2022/23

Please refer to the Capital Scheme Budget on page 20.

(a) Defra/EA Granted schemes

(i) Ewerby Fen Catchment works

Ewerby Fen catchment covers an area of 1,142 hectares.

Catchment works schemes are part of a proposal discussed with the Environment Agency for some time now towards a whole catchment survey.

EA have advised that the best option would be to present an Outline Business Case based upon works that are required within individual catchments. It is envisaged that these works will include, a survey of the catchment along with proposed improvements to Board maintained assets within, to include Pumping Station refurbishments/updates. An indicative value for proposed works being provided as per the advice received, which will be subject to change as the scheme is developed. At proposal stage the estimated value being £530,000.

£410,000 GiA

£50,000 possible Board contribution

£70,000 Local Levy

An estimate of contribution from the Board is included for information and may be required to make the scheme viable, based on existing proposed benefits available for the scheme, should Local Levy or additional external funding not be available.

(b) Board Funded Capital schemes

(i) Helpringham Fen P/S roof - £10,000(estimate)

Helpringham Fen Pumping Station is the next station proposed for a new roof. Examples of previous installations will be shown within a presentation at the meeting.

3. Information on investigations at Ewerby, South Kyme & Damford

As reported to this committee and most recently at the Structures Committee meeting 24th March 2021, previously during high water levels, water from main river outfalls at 3 of the Board's pumping stations, Ewerby Fen, South Kyme Fen and Damford Grounds is seeping back through the bank, under or through retaining walls at the sites causing unknown damage to the foundation and structure of the pumping station buildings.

The final technical note reports on the ground investigations from the 3 sites were received w/c 10/05/21, and the summary from each site included for information below.

Ewerby Fen

Ground investigation work recorded the embankment fill at the site of the seepages through the embankment to comprise slightly gravelly clay. Detailed logging of the soil did not record anything (such as fissuring, voids or higher permeability materials) at the site of the seepages that could have been preferential pathways for the passage of water through the embankment. It is considered that the water flow through the embankment adjacent to the south-western side of the pumping station at times of sustained very high water levels in the Hodge Dyke is probably passing between the pumping station building and the adjacent wing wall sheet piles. This is because there is expected (based on the drawing information) to be a small gap between the sheet piles of the wing wall and the foundations of the building. The permeable granular sub-base beneath the slab and the thick sub-base beneath the front edge of the slab provide a preferential pathway for the passage of the water. The position of the seepage at the end of the flood wall adjacent to the building and the relative modernity of the wall, c. 11 years old, is likely to mean that failure of the sheet piles by corrosion or declutching to create holes in the steel wall is less plausible route for the passage of water. The flow through the embankment on the north-eastern side is also considered likely to be via the same route as the south-western side, between the wing wall sheet piles and the building substructure. The in-ground pipework on the crest of the embankment at this location (see Figure 6) would also form a preferential pathway for water ingress into the embankment and the discharge of roof water on to the embankment will also add water into the ground. The solution to the seepage problem is to prevent the flow of water through the embankment fill and this may be possible by reducing the permeability of the embankment fill locally. This could be achieved by excavation and replacement with well compacted high plasticity clay fill that would provide a low permeable barrier to the flow of water. The granular sub-base against the south-eastern side of the building and beneath the slab should also be replaced due to the potentially higher permeability of this material.

If good compaction of clay is too difficult to achieve in a small space then consideration could be given to filling the void created by removal of the material with a bentonite slurry which would not require compaction. Removal of in-ground pipework, digging out and infilling of animal burrows in the bund and the re-routing of the gutter downpipe to discharge away from the embankment would also assist with reducing water inflow in the embankment.

South Kyme Fen

It is considered that the dislocation of the flood wall from the western side of the pumping station and the settlement and tilting of the flood wall on the eastern side of the pumping station occurred because the sheet piles supporting the concrete walls have moved by tilting and settlement. In consideration of this, the best solution would be to construct new flood walls. The most efficient way to construct new flood walls would most likely to be by the use of sheet piles. In the case of the seepage beneath the eastern side of the pumping station it will be necessary to block the flow of water through the ground and this may be possible by reducing the permeability of the soil locally. This could be achieved by excavation and replacement with well compacted high plasticity clay fill that would provide a low permeability barrier to the flow of water. If compaction of clay fill would be too difficult to achieve in the restricted space, then consideration could be given to filling the void created by removal of the material with a bentonite slurry which does not require compaction.

Damford Grounds

The ground investigation has recorded that the existing embankment forming the western side of the Kyme Eau Waterway at the Damford Pumping Station is formed of soft sandy very silty clay up to 2m thick overlying very soft clay and silt Tidal Flat Deposits. The investigation did not record notable fissuring, voids, or higher permeability fill material at the site of the seepage that could have provided preferential pathways for the passage of water through the bund. It is therefore not clear whether the water simply passed through the upstream face of the embankment or whether the discharge pipes that pass through the bund a short distance are in some way assisting water passage into the bund. It is considered that the seepage in February 2020 occurred because the embankment became saturated by high water levels in the Kyme Eau Waterway and that seepage through the embankment fill reached the surface via the shortest route, which was through the preferential pathway presented by the fence posts, which had either been driven into or placed in holes sunk in the embankment historically. The composition of the embankment fill may also be more permeable than is preferable due to the relatively high silt content and relatively low clay content of the material. Seepage through the embankment should be avoided because it can lead to internal erosion and slope instability and eventually to failure of the bund. It is therefore considered that some form of remedial measures are undertaken. The TECHNICAL NOTE from these measures take will be governed by the IDB's attitude to risk. Potential small-scale remediation could be a 'mend and monitor' approach, taking the form of removal of the fence posts and infilling the post holes with well compacted clay to remove the near surface preferential pathway for water flow, followed by monitoring at times of high water in the Kyme Eau Waterway to check for any further seepage. Larger scale remedial measures could include either replacement of the section of the embankment in which the seepage occurred or the installation of measures to cut off and prevent the flow of water through the existing embankment.

These are discussed below: Bund Replacement Replacement of a section of embankment would involve excavation and removal of material and replacement with an engineered low permeability clay fill. The material would need to be carefully selected to be of low permeability and preferably of relatively low plasticity to reduce potential internal erosion and shrinkage and swelling of the material during seasonal changes in moisture content which can lead to cracking of the soil due to desiccation. The material should be specified and compacted according to an engineer designed earthworks specification. The benefits of this solution are that it should be a relatively simple and cheap to construct. The potential downside to such an exercise would be that it would leave a section of the bank open temporarily, thus rendering the bund temporarily unable to hold back raised water levels in the Kyme Eau Waterway. Provided that the bund was reconstructed to the same geometry as the existing then, then the nett long term effect on the stresses and loads on the ground would be negligible thus limiting the risks of significant ground movements or slope instability in the waterway bank. Seepage Barriers Measures to impede the flow of water through the existing embankment by creating a low permeability barrier in the existing embankment are a potential solution.

These can be formed in several ways, however on a small-scale site the potentially most suitable are likely to be either installation of an interlocking sheet pile wall or installing a low permeability clay core within the existing bund. Installation of a low permeability clay core to the embankment could be completed by excavating a trench along the embankment crest and filling it with either engineered clay fill or with a bentonite slurry that would be pumped into the trench. This method would require disposal of the spoil and using plant on the embankment crest near the water's edge would present a potential health and safety hazard. Seepage could be impeded by installing an interlocking sheet pile wall through the crest of the bund. It would be fast to install, and the work requires minimal setup because the sheets can be installed via a pile hammer attachment to a conventional tracked excavator. In this instance the sheets should only need to be installed to around 2m below the crest of the bund to restrict groundwater seepages through the bund whilst leaving the flows through the underlying Tidal Flat Deposits almost unaffected. Furthermore, should sections of the bund further along from the present seepage location begin to experience seepages then additional sheet piles could be easily slotted in to extend the wall. Other benefits of this solution are that it does not require excavation nor leave a temporary breach in the wall during construction and there would not be any spoil disposal required. In terms of simplicity, speed of construction and cost it is considered that of the larger scale potential remedial measures the sheet piled wall would appear to be the most suitable solution for preventing future seepages through the embankment.

4. Trinity College P/S issues during high water levels

During the last high rainfall event Trinity College P/S also experienced water seeping back through the bank, under or through retaining walls, similar to the other sites.

Stantec Engineering Consultants have been asked to complete site inspection works, which are expected to be completed w/c 17.05.21, with a proposal to complete investigations works following this.

Ongoing discussions are being held with the Environment Agency to secure the funding for the inspection and investigations works completed to date.

Black Sluice Internal Drainage Board 10 Year Capital Schemes Budget

Year	Type	Scheme	Total	Grant	Local Levy	Possible Board Contribution	Drain	PS
2021/22	Drain	Leaves Lake Drove under capacity outfall and works	£ 200,000	£ 180,000		£ 20,000		
	Drain	Lane Dyke culvert replacement	£ 103,000	£ 102,000		£ 1,000		
	Drain	Graft Drain improvements	£ 60,000				£ 60,000	
	Drain	Jetting to major pipelines	£ 54,000				£ 54,000	
	Pump	Great Hale PS refurbish weedscreen cleaner	£ 46,000					£ 46,000
	Drain	Alternative Programme access works	£ 20,000				£ 20,000	
	Pump	Kirton Marsh PS new roof	£ 10,000					£ 10,000
	Pump	Horbling ps new roof	£ 9,000					£ 9,000
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
				£ 507,000	£ 282,000	£ -	£ 21,000	£ 139,000
2022/23	Drain	Ewerby Fen Catchment Works	£ 530,000	£ 410,000	£ 70,000	£ 50,000		
	Pump	Dunsby PS, replacement weedscreen cleaner	£ 90,000					£ 90,000
	Drain	SFFD Desilting Guthrum to Blackhole Drove PS	£ 65,000				£ 65,000	
	Drain	Graft Drain improvements	£ 60,000				£ 60,000	
	Drain	Dowsby Lode Catchment Works	£ 45,000	£ 20,000		£ 25,000		
	Drain	Haconby Fen Catchment Works	£ 20,000	£ 20,000				
	Drain	Alternative Programme access works	£ 20,000				£ 20,000	
	Pump	Helpringham Fen PS, new roof	£ 10,000					£ 10,000
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
			£ 845,000	£ 450,000	£ 70,000	£ 75,000	£ 150,000	£ 100,000
2023/24	Drain	Horbling Town Beck Flood Alleviation scheme	£ 525,000	£ 410,000	£ 95,000	£ 20,000		
	Drain	Dunsby Fen Catchment Works	£ 335,000	£ 230,000	£ 55,000	£ 50,000		
	Pump	Gosberton PS, replace control panel	£ 65,000					£ 65,000
	Drain	SFFD Desilting Guthrum to Blackhole Drove PS	£ 65,000				£ 65,000	
	Drain	Jetting to major pipelines	£ 40,000				£ 40,000	
	Pump	Dowsby Fen PS, refurbish axial flow pumps	£ 25,000					£ 25,000
	Drain	Quadrang North Fen roadside revetment	£ 24,000				£ 24,000	
	Drain	Alternative Programme access works	£ 20,000				£ 20,000	
	Pump	Dunsby Fen PS Refurbish axial flow pump	£ 13,000					£ 13,000
Drain	General culvert replacement contributions	£ 5,000				£ 5,000		
			£ 1,117,000	£ 640,000	£ 150,000	£ 70,000	£ 154,000	£ 103,000
2024/25	Drain	NFF Desilting	£ 65,000				£ 65,000	
	Drain	Bicker Fen Catchment works	£ 325,000	£ 275,000	£ 1,000	£ 49,000		
	Drain	Dowsby Lode Catchment Works	£ 245,000	£ 245,000				
	Drain	Jetting to major pipelines	£ 60,000				£ 60,000	
	Pump	Ewerby Fen PS Replace control panel	£ 45,000					£ 45,000
	Pump	Dyke Fen PS Refurbish 2x axial flow pumps	£ 26,000					£ 26,000
	Drain	Dyke Fen (New Dyke) revetments	£ 25,000				£ 25,000	
	Pump	Dyke Fen PS new roof	£ 15,000					£ 15,000
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
			£ 811,000	£ 520,000	£ 1,000	£ 49,000	£ 155,000	£ 86,000
2025/26	Drain	Claydyke desilting	£ 65,000				£ 65,000	
	Drain	Haconby Fen Catchment Works	£ 280,000	£ 255,000		£ 25,000		
	Drain	Dowsby Fen Catchment Works	£ 300,000	£ 275,000		£ 25,000		
	Pump	Donington NI Replace control panel	£ 65,000					£ 65,000
	Drain	Jetting to major pipelines	£ 50,000				£ 50,000	
	Drain	Dyke Fen (New Dyke) revetments	£ 35,000				£ 35,000	
	Drain	NFF Desilting	£ 20,000				£ 20,000	
	Pump	Kirton Marsh PS refurbish axial flow pump	£ 14,000					£ 14,000
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
			£ 834,000	£ 530,000	£ -	£ 50,000	£ 175,000	£ 79,000
2026/27	Drain	Claydyke desilting	£ 65,000				£ 65,000	
	Drain	Cleansing Wyberton Marsh PS Suction Bay	£ 60,000				£ 60,000	
	Drain	Jetting to major pipelines	£ 50,000				£ 50,000	
	Pump	Gosberton Fen PS Refurbish 3 x axial flow pumps	£ 40,000					£ 40,000
	Pump	Haconby Fen PS Replace control panel	£ 35,000					£ 35,000
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
			£ 255,000	£ -	£ -	£ -	£ 180,000	£ 75,000
2027/28	Drain	Old Hammond Beck Desilting	£ 80,000				£ 80,000	
	Drain	Jetting to major pipelines	£ 50,000				£ 50,000	
	Pump	Cooks Lock p/s refurbish weedscreen cleaner	£ 50,000					£ 50,000
	Drain	New Hammond Beck Desilting	£ 40,000				£ 40,000	
	Pump	Bicker Fen replacement control panel	£ 33,000					£ 33,000
	Pump	Bicker Fen 1 x axial flow pump refurb	£ 15,000					£ 15,000
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
			£ 273,000	£ -	£ -	£ -	£ 175,000	£ 98,000
2028/29	Drain	Old Hammond Beck Desilting	£ 80,000				£ 80,000	
	Drain	Jetting to major pipelines	£ 60,000				£ 60,000	
	Pump	Donington NI refurbish 3 x axial flow pumps	£ 43,000					£ 43,000
	Pump	Kirton Marsh p/s replace control panel	£ 37,000					£ 37,000
	Drain	Bourne Fen 28/10 Revetment	£ 30,000				£ 30,000	
		To be allocated	£ 15,000				£ 15,000	
	Pump	Helpringham p/s new roof	£ 11,000					£ 11,000
Drain	General culvert replacement contributions	£ 5,000				£ 5,000		
			£ 281,000	£ -	£ -	£ -	£ 190,000	£ 91,000
2029/30	Drain	Jetting to major pipelines	£ 60,000				£ 60,000	
	Pump	Chain Bridge p/s refurbish 3 x axial flow pumps	£ 45,000					£ 45,000
	Drain	Gosberton pump drain desilting/pump inspection	£ 40,000				£ 40,000	
	Drain	Dowsby Fen pump drain desilting/pump inspection	£ 40,000				£ 40,000	
	Pump	Quadrang Fen p/s replace control panel	£ 40,000					£ 40,000
	Pump	Allen House p/s replace control panel	£ 32,000					£ 32,000
	Drain	Chain Bridge pump drain desilting/pump inspection	£ 20,000				£ 20,000	
		To be allocated	£ 8,000				£ 8,000	
	Drain	General culvert replacement contributions	£ 5,000				£ 5,000	
			£ 290,000	£ -	£ -	£ -	£ 173,000	£ 117,000

BLACK SLUICE INTERNAL DRAINAGE BOARD Rainfall at Swineshead Depot

MONTH	Rainfall		Actual / Average
	Actual	25 Year Average	%
	mm	mm	
May-20	3.9	50.8	7.68%
Jun-20	58.8	59.2	99.32%
Jul-20	53.9	57.6	93.58%
Aug-20	94.4	61.5	153.50%
Sep-20	48.5	42.2	114.93%
Oct-20	67.9	57.8	117.47%
Nov-20	23.7	54.3	43.65%
Dec-20	99.2	48.5	204.54%
Jan-21	89.8	45.3	198.23%
Feb-21	40.0	41.1	97.32%
Mar-21	23.0	34.2	67.25%
Apr-21	6.1	50.5	12.08%
Totals	609.2	603.0	101.03%

