

March Fifth D.D.C.

Consulting Engineers Report – March 2022

Weed Control and Drain Maintenance

The maintenance and drain works carried out last year generally accorded with the recommendations approved by the Commissioners at their last Annual Meeting.

Harrison Agricultural Contractors carried out the Commissioners' flail mowing requirements last season and have indicated that they are available to undertake them again for the ensuing year. A sum for the completion of flail mowing district drains has been included within the estimate.

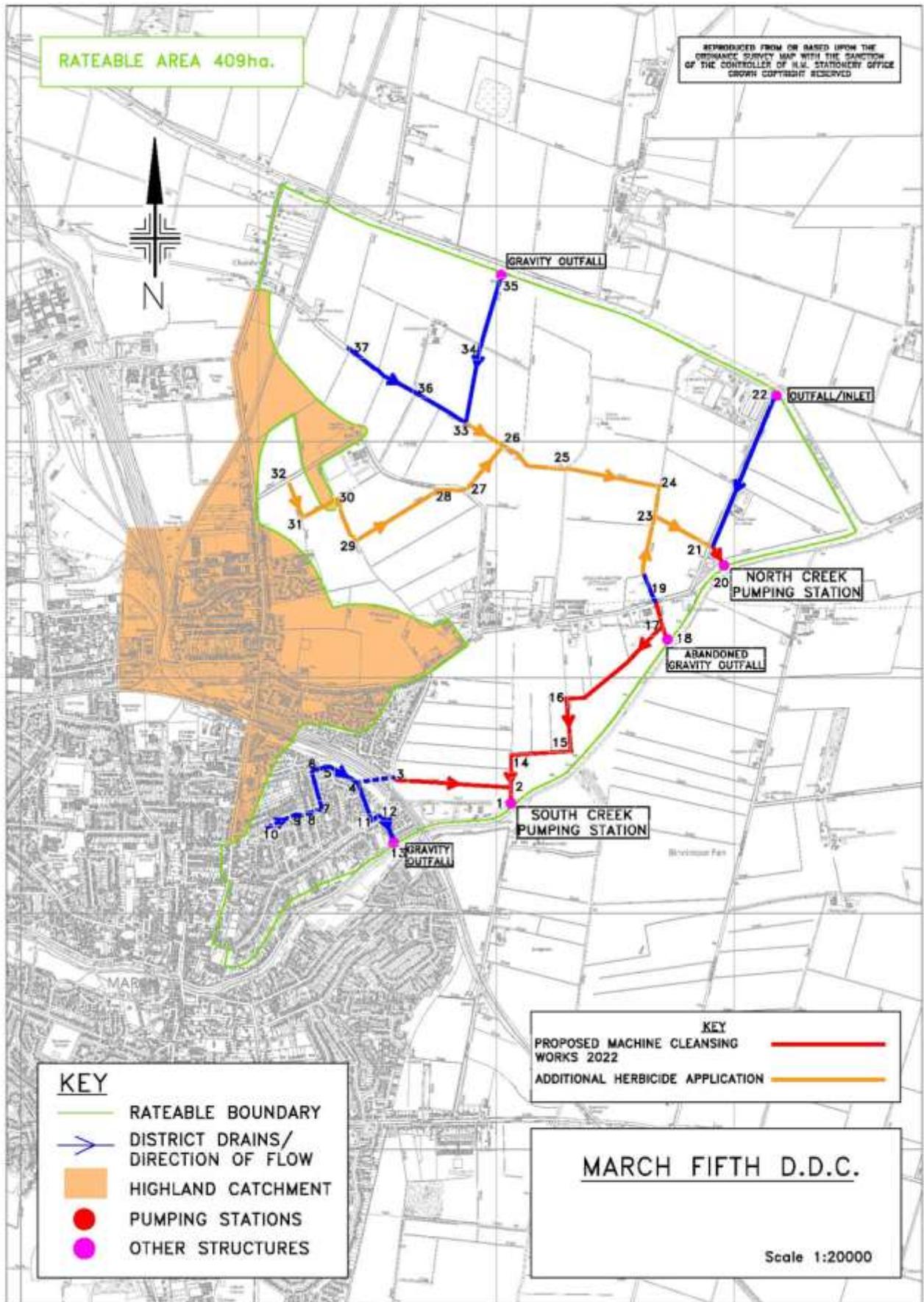
A pre-harvest district inspection last summer indicated that the majority of the Commissioners' district drains were in a satisfactory condition and being maintained to a good standard. However, as with most seasons, the inspection highlighted sporadic stands of aquatic vegetation throughout the Flaggrass Hill drains, reach 33-34-35-36-37, and Foxglove Way area, reach 12-11-4-5-6-7. With the Chairman's prior approval, the Flaggrass Hill reaches were included in the annual herbicide application programme and the Foxglove Way area watercourse was machine cleansed.

Following previous years' requirements and with the Commissioners' approval, the Commissioners' drains immediately upstream of North and South Creek pumping stations, reaches 1-2-3 and 20-21, were included in the annual machine cleansing programme. This action was deemed necessary in an attempt to reduce the mass of aquatic weed required to be manually cleaned from the pumping station weedscreen. It is recommended that a sum is allowed for both reaches to be included again in this year's machine cleansing programme.

A recent joint inspection of the Commissioners' district drains was undertaken with the Chairman. The inspection indicated that the majority of drains are currently in a satisfactory condition, however as the Commissioners' annual meeting falls during the early part of the growing season a subsequent district inspection will be required during the summer months to accurately identify any additional drain maintenance requirements.

North Creek Pumped System

The Commissioners' drains within the North Creek area are in a generally satisfactory condition. Sporadic stands of aquatic vegetation are evident in the Flaggrass Hill drains, reach 24-25-26-27-28. It is recommended this reach is treated with an early season application of Roundup herbicide and inspected again during a pre-harvest summer inspection for any re-infestations that may require a second herbicide application.



RATEABLE AREA 409ha.

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KEY

- RATEABLE BOUNDARY
- DISTRICT DRAINS/
DIRECTION OF FLOW
- HIGHLAND CATCHMENT
- PUMPING STATIONS
- OTHER STRUCTURES

KEY

- PROPOSED MACHINE CLEANSING
WORKS 2022
- ADDITIONAL HERBICIDE APPLICATION

MARCH FIFTH D.D.C.

Scale 1:20000

South Creek Pumped System

The recent inspection indicates the Commissioners’ drains within the South Creek area are currently in a good condition. Historically district drains in the South Creek area have been prone to late occurring infestations of submerged weed growth, most notably semi-buoyant Rigid Hornwort (*Ceratophyllum demersum*). The annual cleansing of this area has dramatically reduced this issue, however, as mentioned previously reach 1-2-3 will be included in the machine cleansing programme to prevent future issues with large accumulations of aquatic weed at the manually cleaned weedscreen. Accumulations of silt and sporadic stands of aquatic vegetation are evident throughout reach 14-15-16-17-18-19 and it is recommended that this area is included in the herbicide programme followed by light machine cleansing after the harvest of the adjacent crops.

Creek Road/Newlands Avenue/Foxglove Way – Gravity System

Following last year’s machine cleansing works, the Commissioners’ watercourses in the Foxglove Way area remain in an exceptionally good condition and it is pleasing to report only small amounts of windblown litter and debris are visible within the drain, and there have been no cases of fly-tipping reported. It is envisaged regular visual inspections of drains will continue for the next season to ensure any domestic or household debris being fly-tipped into the Commissioners’ watercourse can be dealt with swiftly and to monitor for potential recolonisation of invasive, non-native aquatic vegetation.

The estimated costs of this year’s recommended Weed Control and Drain Maintenance works are shown below, please refer to the previous plan for locations. A provisional sum has also been included within the Commissioners’ budget to allow for any emergency machine cleansing, bank slip repair or culvert clearance works required later in the season. An additional allowance has also been included in the estimates, in anticipation of an increase in contractors’ rates this year, due to the ever-rising cost of fuel.

Estimated costs of recommended Weed Control and Drain Maintenance works:

North & South Creek Pumped System				£
1.	Flail mowing of District drains	Item	Sum	3200.00
2.	Application of Roundup to control emergent weed and reed	Item	Sum	900.00
3.	Machine cleanse			
	• Reach 1-2-3	Item	Sum	300.00
	• Reach 2-14-15-16-17-18-19	1300m	@ 1.50	1950.00
	• Reach 20-21	Item	Sum	200.00
				6550.00
		Carried forward		6550.00

Brought forward

6550.00

4. <u>Provisional Item</u> Allowance for any culvert clearance, bank slip repair, emergency or additional machine cleansing that may be deemed necessary later in the year	Item	Sum	1200.00
5. Fees for inspection, preparation and submission of report to the Commissioners, arrangements and supervision of herbicide applications and maintenance works	Item	Sum	950.00
TOTAL			£8,700.00

Orders for the application of herbicides by the MLC are accepted on condition that they will not be held responsible for the failure or efficacy of any treatment.

Pumping Stations

Routine maintenance has been carried out since the last meeting and the pumping plant at each of the stations is mechanically and electrically in a satisfactory condition.

The syphon breaker at North Creek has been sticking and I recommend that it is removed and overhauled this summer. Cost approximately £1k to 2k.

Pumping Hours

Pumping Station	March 2021- March 2022	March 2020- March 2021	March 2019- March 2020	March 2018- March 2019	March 2017- March 2018
North Creek	43 (4795)	275 (4752)	89 (4477)	62 (4388)	66
South Creek	105 (3055)	306 (2950)	242 (2644)	115 (2402)	157

Pumping Station	March 2016- March 2017	March 2015- March 2016	March 2014- March 2015	February 2013- March 2014
North Creek	52	28	160	82
South Creek	121	110	337	193

Flood Risk Management (FRM) for the Fens [previously reported as the Future Fenland Project]

The Middle Level Commissioners' Planning Engineer has represented both the Middle Level Commissioners (MLC) and their associated Boards on the Technical Group since the last meeting.

Tactical Plans for the Fens

In response to the following question raised at the March East IDB meeting in June 2021:

“Clerk to provide further information to members regarding the cost to the Board, of whether the Board has any input into the project and whether the Board is able to remove themselves from the arrangement if costs escalate.”

the Environment Agency’s Fenland Partnerships Advisor, FCRM, Vicky Eade, advised as follows:

“As you know, there has not been any cost to the Board in developing the plans, aside from officer time to provide data and information. The agreement to the plans is on the basis that any work in the Fens area will be to maintain the current Standard of Service (SoS) for the area, until the Flood Risk Management for the Fens project has set out the preferred direction and options for managing the flood risk infrastructure in the Fens. If the Board were to remove themselves from the Tactical Plans, then they would not be able to demonstrate they have taken a Strategic Approach in assessing options to managing risks, as set out in the Partnership Funding Guidance 2020, to avoid the double counting FCERM Grant in Aid (GiA). Which would then mean maximum amount of eligible grant available for any scheme in their Board area, would be capped at 45%.

Input to the Tactical Plans has been represented by David Thomas and Graham Moore at the Fens Technical Group.

I have noted that March East IDB do not have any capital works planned for the Tactical Plan period, so in terms of cost increases I assume you mean contribution to Phase 2 of the FRM for the Fens project. When we have developed that phase, any contributions to the project would be made with a legal agreement, which would specify how cost increases would be dealt with.”

An allocation has been made available to the Board to maintain its system over the next 15 years. The details of this funding allocation are currently being clarified.

The Tactical Plans referred to in this document cover what has been termed the ‘Great Ouse Fens’, which covers the catchment of the River Great Ouse in Cambridgeshire, Norfolk and Suffolk. Its boundary to the west is formed of the right bank of the River Nene and includes all of the Middle Level catchment area and its constituent IDBs.

‘Flood Risk Management for the Fens’ is a project that has been set up to plan the best way of managing future flood risk in the whole Great Ouse Fens area. It is to be a Strategic Outline Programme which will set out the preferred option for managing flood risk in the Fens, taking in to account climate change and sea level rise (Strategic Outline Programmes sit above/before Strategic Outline Cases and are large scale programmes, so the Fens catchment scale fits this.)

The project will recommend actions that will be the best/most appropriate way of managing flood risk in the Fens over the next 50-100 years. The Flood Risk Management for the Fens project will take approximately 10-15 years to complete and in the mean time we need to know the maintenance and

capital work needed in the area to continue to manage flood risk over the next two 6 year capital Grant in Aid settlement cycles, the period 2021 to 2027 and 2027 to 2033.

The background to the above is that the East Anglia Flood & Coastal Risk Management team has been working with national colleagues to come up with a better way of presenting the whole picture of future investment to allow us to have a conversation with government about the short, medium and long term plans for the area. We agreed that we would produce Tactical Plans for each of the sub-catchments (Middle Level, South Level, West and East of Ouse and King's Lynn areas) to look at ALL FCRM assets for all sources of flooding that would better present the short-term programme of works required and the agreed amount of benefits (Outcome Measures) that can be claimed for each project. This advice has led to the piece of work around benefit apportionment to address the issues with double counting of outcome measures by individual projects. In January 2019 all IDB Chairs in the Fens area were sent a letter, explaining the Fens project and how it fitted with the Strategic Approach for Flood & Coastal Risk Management Projects. This strategic approach fits with the Tactical Plans.

The Tactical Plans therefore clearly set out what maintenance and capital works are required in each sub catchment over the next 12 years (feeding into the East Anglian Area pipeline of work), and what benefits this work delivers. The plans also highlight the apportioned Outcome Measures and the likely FDGiA funding each scheme can attract based on maintaining the Standard of Service, along with the Partnership Funding (PF) scores to show where PF contributions are needed. The Plans also take into account benefits that have been claimed already in the previous six year capital investment programme (2015-2021).

The expectation is that work in the Fens area will only be to continue delivering the current Standard of Service for the area, until the Flood Risk Management for the Fens project has set out the preferred direction for the area as a whole. This can, though, include capital interventions to assets to return them to design standards, where assets are currently below target conditions and Standard of Service levels. The expectation is that those with assets in the area will be able to provide a plan of work for the next 12 years, and this will lead to us having a joined up, strategic approach for the short to medium term providing certainty to all RMAs with their investment planning and highlighting the amount of FDGiA funding individual schemes are eligible for. It will however remain the case that for each scheme a business case will need to be developed and approved before any grant is released and of course over the six year period national priorities for funding FRM schemes could impact the amount of grant available, in any given year, for schemes that come forward that do not currently have an allocation of funding.

As part of the Tactical Plans works, the base line economic benefits have been calculated for each of the Commissioners' assets. This represents the potential maximum Grant-in-Aid that would be

supportable, should a scheme or a series of schemes need to come forward to keep the asset operational over the 15 year period, whilst analysis of the long term catchment needs is identified. These sums effectively represent a cap on grant that may be accessible should the need arise and a business case be approved. They are not at this time allocated monies and availability will to an extent be dependent upon how the national pot of funding is being shared at the time of need. The cap has been identified to help guide scheme economics and to potentially underpin business cases. For the Commissioners these sums by asset are;

Asset	Max eligible FDGIA £
North Creek Pumping Station	449,985
South Creek Pumping Station	449,985
March Fifth Main Drains	337,489

Please note that £60,000 and £50,000 are identified currently under a request to be allocated to North Creek Pumping Station and South Creek Pumping Station respectively in the 2022/23 financial period.

Flood and Coast Resilience Innovation Programme

The County Council’s bid for the above funding was unsuccessful. Further funding sources are currently being investigated for the projects concerned.

A list of the 25 successful areas can be viewed at [Innovative projects to protect against flooding selected - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/innovative-projects-to-protect-against-flooding-selected).

The Right to Connect

During the passage of the Environment Act through the House of Lords an amendment was sought which aimed to minimise the impact of new housing development on levels of local flood risk and the likelihood of storm discharges of untreated sewerage effluent into rivers and coastal waters. It aimed to ensure housing developers design systems according to a hierarchy of drainage options that seek to reduce to a minimum the volume of rainwater entering combined sewerage systems removing the current “right to connect” to public sewers.

As members of the Cambridgeshire and Peterborough Flood and Water Management (FloW) Partnership the Middle Level Commissioners and their associated Boards/Commissioners have been asked to consider taking the opportunity to write to government and voice concerns over the right to connect for new developments and how this is expected to increase risk in the future. The County Council in its role as the LLFA was going to prepare a letter requesting that the right to connect be stopped, or at the very least that a change be considered, but at this time nothing has yet been received for comment.

Members need to consider that there could be many currently unassessed beneficial or detrimental impacts on the Commissioners'/Boards' systems; the viability of developments, particularly the re-development of sites within older parts of town centres, as the more sustainable discharge points (ie where the system has capacity for extra rainwater discharge) for site drainage could be more costly requiring the provision of significant infrastructure, for example, new surface water sewers, pumping station, outfall structures etc.

In order to assist further discussion, the Board/Commissioners are asked to consider if they would support removal of the right to connect to public sewers or not.

Planning Applications

In addition to matters concerning previous applications, the following 23 new applications have been received and dealt with since the last meeting:

<i>MLC Ref.</i>	<i>Council Ref.</i>	<i>Applicant</i>	<i>Type of Development</i>	<i>Location</i>
502	F/YR21/0154/O	Goldstar Traders Ltd	Residential (52 flats)	Norwood Road, March*
503	Enquiry	Anglian Water	Storm Tank	Creek Fen Road, March
504	F/YR21/0197/F	Mr & Mrs Norton	Residence (Extension to garage)	Shaftesbury Avenue, March
505	F/YR21/0284/F	The Glenholme Group	Care Home (56 bed)	Estover Road, March*
506	F/YR21/0318/F	Mrs S Alcorn	Residence (Extension)	Estover Road, March
507	F/YR21/0412/F	Mrs Z Vawser	Residence (Extension)	Creek Road, March
508	F/YR18/0892/F - F/YR18/3136/COND	Mr Gillies & Miss Adamson	Residence	Elm Road, March*
509	F/YR19/0321/VOC	Mr Biggs & Miss Mantovani	Residence	Elm Road, March*
510	F/YR21/0537/F	Mr R Smith	Residence	Elm Road, March
511	F/YR21/0659/F	Ashewell Developments	Conversion (Grain store to 2 dwellings)	Flaggrass Hill Road, March
512	F/YR21/0624/AG1	Mr S Bushell	Agricultural (Storage building)	Creek Road, March
513	Consultation	Network Rail	Ely Area Capacity Enhancements (EACE) Programme	Group 2 March East, March South & Norwood
514	F/YR21/0668/F	Mr G Goakes	Residence (Extension)	Creek Road, March
515	F/YR21/0747/F	Mr I Tabor	Residence	Elm Road, March
516	F/YR21/0783/F	Lily Rose Construction Ltd	Residence	Creek Road, March
517	F/YR21/0961/F	Mr J Woods	Residence (Extension)	Newlands Avenue, March
518	F/YR21/1013/F	Innerspace Homes Group Ltd	Residential (41 dwellings)	Elm Road, March*
519	F/YR21/1057/F	Mr D Upton	Residential (2 dwellings)	Flaggrass Hill Road, March

520	F/YR21/1105/O	Mrs E Wilkinson	Residential (4 dwellings)	Elm Road, March
521	F/YR21/3129/O	The Glenholme Group	Care Home (56 bed)	Estover Road, March*
522	F/YR21/1496/F	Mr & Mrs Ogden	Residence (Extension)	Foxglove Way, March
523	F/YR21/1532/F	Mr McCullough	Residence (Extension)	Elm Road, March
524	F/YR22/0083/F	The Glenholme Group	Care Home (56 bed)	Estover Road, March*

***Planning applications ending 'COND' or 'DISC' relate to the discharge of relevant planning conditions
Planning applications ending 'VOC' relate to variation of condition
Planning applications ending 'AG1' relate to Agricultural Notification***

Developments that are known to propose direct discharge to the Commissioners' system are indicated with an asterisk. The remainder are understood to propose surface water disposal to soakaways/infiltration devices or sustainable drainage systems, where applicable. The applicants have been notified of the Commissioners' requirements.

The following applicants chose to use the Infiltration Device Self-Certification procedure and, in doing so, agreed that if the device was to fail in the future, the land owner would be liable for any remedial works to rectify the situation:

- Solar Savings 4U Ltd – Three dwellings on land to the west of Kinloss, St Johns Chase, March (MLC Ref Nos 431 & 443)
- Mrs Norton – Residence at Shaftesbury Avenue, March (MLC Ref No 479)
- Mr M Patel – Residence at Great Northern Close, March (MLC Ref No 489)

No further correspondence has been received from the applicants or the applicants' agents concerning the following developments and no further action has been taken in respect of the Commissioners' interests.

Outline with one matter committed detailed as access in relation to 95 no dwellings (max) with associated landscaping, drainage and open spaces at land north of 75-127 Estover Road, March – St Johns College, Cambridge (MLC Ref No 408)

March to Wisbech Transport Corridor (Previously known as the Re-opening of the March to Wisbech Rail-line - Scheme No 398128) (Wisbech Rail) (MLC Ref No 477)

Erection of single-storey rear extension and relocation of external staircase to rear of existing building involving demolition of existing shed and removal of lorry container at March Braza Club, Elm Road, March – The Braza Club Ltd (MLC Ref No 478)

Erect a dwelling involving the demolition of existing dwelling at Sedgenville, 17 Shaftesbury Avenue, March - Mr D Barber (MLC Ref Nos 497 & 501)

In view of the absence of recent correspondence and any subsequent instruction from the Commissioners it will be presumed, unless otherwise recorded, that the Commissioners are

content with any development that has occurred and that no further action is required at this time.

Erection of a 2-storey rear extension and porch to side of existing dwelling New Park, March – Mr L Johnson (MLC Ref Nos 379 & 384) & Mrs G Clarke (MLC Ref No 427)

The “opening up” following the end of the lockdown will enable the inspection of the site (previously placed on hold due to the pandemic) to be undertaken. This is currently being arranged.

Erection of 30 dwellings (max) east of Berryfield, Berryfield, March – The Wilkinson Family (MLC Ref Nos 392, 396 & 471) & FPP Facades (MLC Ref No 498)

Further to the last Commissioners’ Meeting Report the contents of Minute C.1160 Erection of 30 dwellings (max) east of Berryfield, Berryfield, March (MLC Ref Nos 392 & 396) were issued to and queried by the applicant’s consultant, MTC Engineering (Cambridge) Ltd [MTC].

During a subsequent and lengthy discussion, the Commissioners’ Chairman re-affirmed the contents of the Commissioners’ resolution and clarified that all discharges must be attenuated to the worst case 1 in 1 year event for a greenfield site. This was confirmed with both MTC and the applicant.

Both a SuDS Maintenance Plan and Watercourse Management Plan were submitted and following some discussion these met with the Commissioners’ requirements.

Documents relating to the “Precedent Transfer”, “Incorporation Certificate” and Property Management Company were forwarded to the Middle Level Commissioners’ Solicitor.

During July, the District Council was advised that:

“Further to our previous correspondence, discussions have been undertaken with the applicant, its engineering consultant and Solicitor in a positive manner to resolve the issues raised both by the Board and the Middle Level Commissioners.

Condition 5 – Surface Water Disposal

During the above mentioned discussions the applicant has confirmed that:

- i) The surface water discharge emanating from the site will be at the greenfield rate.
- ii) The on site surface water management systems will be the responsibility of the individual plot owners and the management company, for the communal system. The latter will

have rights of access to enter the individual plots to undertake maintenance on the communal surface water management systems.

iii) The watercourse forming the southern boundary of the site adjacent to the will be maintained to a satisfactory condition by the management company.

iv) The details of the works to be undertaken are included in a SuDS Management Plan and Watercourse Management Plan, both of which will be included in the “Homeowners Pack”, and the Deed of Sale.

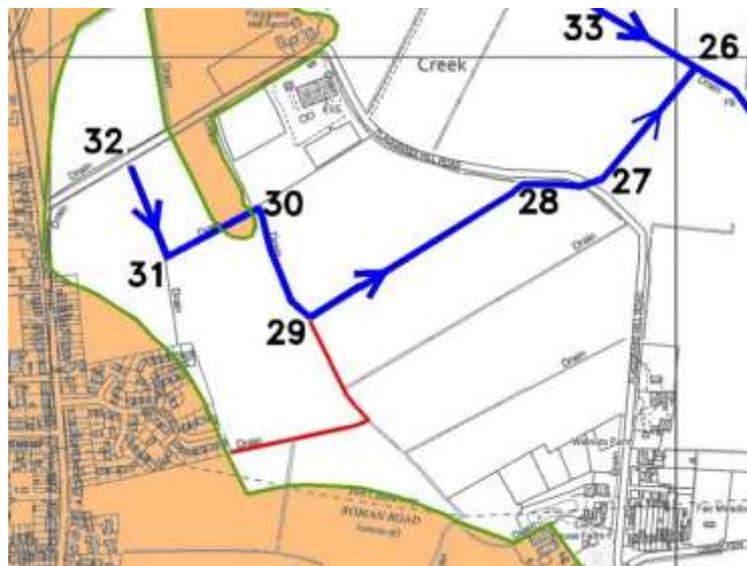
Condition 6 – Foul Water Disposal

Treated foul effluent water discharges into the Middle Level Commissioners system via March WRC. The appropriate documentation has been received and is currently being processed.

As a result, it is considered that the previously raised points of concern have been answered with any adverse impacts upon our respective systems, our ratepayers and the natural, built and waterborne environment being reduced and this meets with our approval.”

The development required works to the overhead cable that previously crossed the field (which was to be buried underground) but required the erection of a terminal pole adjacent to the Commissioners’ District Drain, between Points 29-30. Following some discussion, it was decided that the Commissioners would not consent the erection of the terminal pole within the 9.0m wide maintenance access strip. The applicant was advised accordingly.

The applicant was amenable to the improvement of the adjacent watercourse which was undertaken following harvest last year and an invoice was sent to the applicant to cover the Commissioners’ costs. However, it is understood that the land owner was not prepared for this watercourse to be adopted as a District Drain. The view of the Middle Level Commissioners’ Solicitor is currently awaited advising on how this affects the previously agreed maintenance documents.



Extract from the Commissioners’ District Plan showing the watercourse concerned in red

Residential development involving the demolition of existing dwelling at land west of Kinloss, St Johns Chase, March - Mr D Fisher & Executors of Mrs J Easter Deceased (MLC Ref No 393) & Solar Savings 4 U Ltd (MLC Ref Nos 424, 431 & 443)

Following the issuing of an advisory letter informing that there were matters outstanding, a completed Infiltration Device Self-Certification form was duly received and acknowledged.

Residential development at Highfield House, Elm Road, March – Mrs E Wilkinson (MLC Ref Nos 432 & 520)

Further to the Commissioners' March 2017 Meeting Report an outline planning application for the erection of dwellings on land at Highfield House has been submitted to the District Council. It is understood that this is to replace the previous outline permission which ceased in January.

Erection of 1 x 3-storey 6-bed and 3 x 2-storey 4-bed dwellings with garages at land north of Elm House, Elm Road, March – Mr & Mrs Coe (MLC Ref Nos 436, 475, 484, 508 & 509)

Further to the previous Meeting Report advisory letters informing that there were matters outstanding were issued to the four homeowners, as detailed below, reminding them of their duties under the Commissioners' Byelaws and the Land Drainage Act.

The current situation is as follows:

Plot 1 (200 Elm Road) – (MLC Ref No 508)

The applicants have advised that foul water was being treated on site via a package treatment plant and that surface water disposal was via infiltration devices.

An Option 2 Infiltration Device Certification and Checking Service form was received, although there were no details of percolation testing as the system was already in place. The matter was referred to the Commissioners which was content with the current situation and an acknowledgement was sent, advising the applicants that if the device was to fail in the future, the land owner would be liable for any remedial works to rectify the situation.

It should be noted that the positioning of an infiltration device within close proximity to a watercourse could be considered as a direct discharge and the wet/dry action of such a device and its impact on the moisture content of the soil could detrimentally affect the stability of the adjacent watercourse beside Elm Road.

The Technical Services Department has recently received an application for discharge consent relating to the disposal of treated foul effluent water from the property, to be discharged to the adjacent watercourse.

Plot 2 (198 Elm Road) – (MLC Ref No 509)

The applicants advised that both surface and treated foul effluent water was discharging to the adjacent watercourse beside Elm Road.

Although a discharge consent application form was sent to the applicants along with details of the contribution fee due, in April 2021, no further correspondence has been received. The applicants have recently been advised that this matter is outstanding.

Plot 3 (196 Elm Road) – (MLC Ref No 484)

The applicant forwarded a proposal to attenuate surface water flows discharging from the site into the adjacent watercourse to greenfield rates along with the disposal of treated foul effluent water. However, this proposal involved the use of a very small orifice, which may easily have become blocked, and the Commissioners agreed that a part-attenuated rate of 5 l/s would be more acceptable, provided that the adjacent watercourse was well maintained by the applicant. A discharge consent application was duly received and a positive recommendation was made to the Clerk.

Plot 4 (194 Elm Road) – (MLC Ref No 475)

The applicant advised that the disposal of both surface and treated foul effluent water was to infiltration devices. Although the relevant application form was sent to the applicant in May 2021, no reply has yet been received. The applicant has recently been advised that this matter is outstanding.

In view of the above:

(a) *Surface water disposal*

Commissioners will be aware that these dwellings and other sites along Elm Road have been the subject of flooding. Despite enquiries with relevant parties the exact cause has yet to be determined and will need to be investigated either as part of

the Innerspace development, assuming that planning permission is granted, and/or as part of the further investigations undertaken by the LLFA and other partners in the Fenland Flooding Group (in which the Middle Level Commissioners and thus March Fifth DDC are involved).

In the absence of readily available suitable points of discharge it is considered that:

- (i) The ground conditions are not suitable for the use of infiltration devices particularly during high rainfall and flooding incidents such as that experienced during December,
- (ii) The watercourse on the north western side of Elm Road has an unknown capacity and may be restricted and/or not have an outfall,
- (iii) The outfall of this watercourse may discharge at a confluence with a public surface water sewer to the south of the site.

In view of this it is considered that until that matter is resolved and any remedial actions taken, any surface water disposal made directly into this watercourse should be attenuated to greenfield rates.

(b) *The disposal of treated foul effluent water*

Commissioners may be aware that the nearest adopted foul water sewer is at the junction with Flaggrass Hill Road approximately 90m south of the site. In view of this some of the developers have requested that the disposal of such effluent is discharged into the local watercourses either directly or indirectly and NOT into an adopted sewer.

When such discharges from one or two properties are proposed it is possible to justify receiving “additional” water, particularly if a connection to an adopted sewer is some distance away and not viable in economic terms. However, in addition to transferring the “additional” water, which places an increased “load” on the receiving systems and the rate payer, other issues associated with the disposal of treated effluent water from non-adopted systems include the increased risk of pollution and odours as a result of “spills”, possibly due to the lack of maintenance of the units and the potential detrimental effect on the water environment.

Commissioners will also be aware of the problems associated with dealing with pollution events and the increasing demand for providing soil analysis to check and/or disposal to an off-site tip because of contaminated dredgings.

Whilst it is accepted that there is some distance between the sites and the nearest adopted foul water sewer it is considered that the number of properties involved may make the installation of a new foul water sewer preferable. This would also be of benefit to future development in the area.

In view of this and the known problems in the area including the potential capacity issues within the downstream watercourses it is considered that the developers should be encouraged to install a new connection to the existing public sewer.

In order to assist further discussion and the issuing of consents **the Commissioners are asked to provide instruction on how they would wish us to proceed in respect of items (a) and (b) above.**

Regeneration of playing field to include: erection of a single-storey pavilion, formation of a car park ; netball courts/multi-games use courts; hard-standing for external terrace and walkways; siting of 3 x storage containers; erection of 4.5m high (max height) mesh fencing bounding both the football pitch and netball court and the erection of 4 x 8.0m high lighting columns to car park and footpaths; 6 x 10.0m high floodlights to netball courts and 6 x 15.0m high floodlights to football pitch at Playing Field, Estover Road, March – Estover Playing Fields 2015 CIC (MLC Ref No 440)

Further to Minute C.1163 Consulting Engineers' Report, including planning and consenting matters, additional discussions with the developer are required to resolve the issues associated with this site.

Erection of a cold storage building including plant rooms, 6no loading docks, 14no vehicle charging points, 2 no condensers and new hardstanding at Marwick Road, March - March Cold Stores Ltd (MLC Ref No 455)

Further to Minute C.1159 Erection of cold storage building (MLC Ref No 455) – March Cold Store the current position is being ascertained.

Erect 6 no dwellings (2 x single storey 3-bed and 4 x 2-storey 3-bed) involving formation of a new access at land north of March Braza Club, Elm Road, March – March Braza Club (MLC Ref No 480)

No correspondence has been received from the applicant concerning the above, and an advisory letter has been issued informing the applicant that there are matters outstanding and reminding them of their duties under the Commissioners' Byelaws and the Land Drainage Act.

Future March - Investing in the potential of March - March Area Transport Study (MATS) Public Consultation May/June 2020 - March Options Assessment Report (OAR) - Cambridgeshire County Council (MLC Ref No 487)

No further correspondence has been received and no further action has been taken in respect of the Commissioners' interests.

It is understood that the Study was discussed at a meeting of the Cambridgeshire and Peterborough Combined Authority (CPCA) Board on the 29th September 2021.

"3.4. The Strategic Outline Business Case (SOBC) was developed at the end of stage 1. At this stage the package of schemes had a Benefit Cost Ratio (BCR) of 3.6 (High).

3.5. The current stage of the MATS is due for completion in October 2021. This includes Outline Business Case (OBC) and Preliminary Design for a package of schemes including:

- A141 / Twenty Foot Road Traffic Signals
- A141 / Peas Hill Roundabout (60m ICD) and Hostmoor Avenue Roundabout
- High Street / St Peter's Road Traffic Signal Improvements
- Broad Street / Dartford Road / Station Road Mini Roundabout with Broad Street one lane in each direction
- Development of a Northern Industrial Link Road (NILR)

3.6. The project is planned to go to CCC Board in December 2021 and CPCA Board in January 2022 to request the next stage of funding for the project which includes Detailed Design and Full Business Case."

Re-development of W H Feltham and Son Limited, Estover Road, March – Mr S Thomas (MLC Ref No 488) and the Glenholme Group (MLC Ref Nos 505, 521 & 524)

Further to the last Meeting Report, planning applications for a 56 bed care home have been submitted to the District Council. The original application for access off Cawood Close was granted planning permission subject to the imposition of planning conditions

but a revised planning application for the access off Peterhouse Crescent is currently pending consideration.

Commissioners will be aware that the existing site discharges surface water unregulated into the adjacent Anglian Water sewer to the south which discharges into the Commissioners' system at Point 3.

Ward Associates (Consulting Engineers) Ltd Foul and Surface Water Drainage Strategy Project No. CE2996 December 2021 includes the following:

"It is proposed to restrict the surface water discharge from the site to 5l/s. A predevelopment enquiry has been submitted to Anglian water and the response is contained in Appendix J confirming the existing sewer network has capacity to serve the development and the proposed connection point is acceptable. It is proposed to use Type C permeable paving to the car parking spaces to drain the access road, car parking area and hardstanding. The building will be drained via a below ground attenuation tank located in the car park area. Each system has been designed to accommodate rainfall events up to 1 in 100 years over a range of storm durations with 40% allowance for climate change."

The Strategy also advises that the existing discharge rates have been calculated as:

"1 in 1 year rainfall event – 43.9 l/s
1 in 30 year rainfall event – 104.1 l/s
1 in 100 year rainfall event – 132.1 l/s"

Therefore, there appears to be a significant reduction in flows even during a low level event.

Discussions as part of a pre-application consultation are continuing with Life Property Construction Ltd.

Erect 1 x block of 4 x industrial units (Class E(g)(iii) - light industrial) involving the demolition of existing building, and the construction of an internal road access road to existing unit including the relocation of external door at Gravel House Elm Road March - Ashwell Developments (MLC Ref No 493)

According to the District Council's Public Access webpage the status of this application is "Pending Consideration".

Erect up to 52 x flats (outline application with all matters reserved) at the Lorry Park, Norwood Industrial Estate, Norwood Road, March - Goldstar Traders Ltd (MLC Ref No 502)

This planning application, for the re-development of the lorry park, has been withdrawn.

Provision of a storm tank at March WRC, Creek Fen Road, March – Anglian Water Services Ltd. (MLC Ref Nos 503)

An enquiry has been received from AWSL concerning the provision of a storm tank at March WRC.

The opportunity was taken to refer AWSL to a previously raised concern about the damage to the adjacent verge and potential adverse impact on the Commissioners' inlet channel at Point 22.

Erect a dwelling (2-storey, 3-bed), detached single garage and boundary fence 1.5m high (max) and temporary mobile home during construction involving demolition of existing dwelling at Elm Tree Farm, Elm Road, March – Mr R Smith (MLC Ref No 510)

During April a planning application was submitted to the District Council for the erection of a replacement building at the above address.

Planning permission was granted at the end of June subject to the imposition of conditions, none of which relate directly to the Commissioners' interests. However, a Drainage Advisory Note was contained in the Decision Notice.

During October correspondence was received from the applicant's engineering consultant, Ellingham Consulting Ltd, which advised that:

- (i) The existing dwelling directly discharges surface water to the ditch to the south of the property, which appears to flow towards Point 37 of the Commissioners' system
- (ii) The proposal would increase the impermeable area discharging "direct" to the Commissioners' system by 109m² giving a new total impermeable area of 209m²
- (iii) Treated foul effluent water would discharge via a new 'Biodisc' style treatment plant.

Following an internal consultation both the Commissioners' Chairman and Vice-Chairman were satisfied with the proposals, and consent was recommended for approval in December 2021.

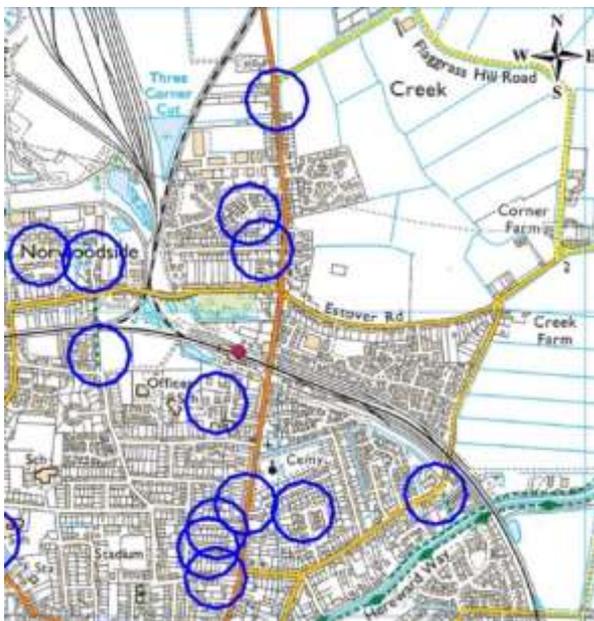
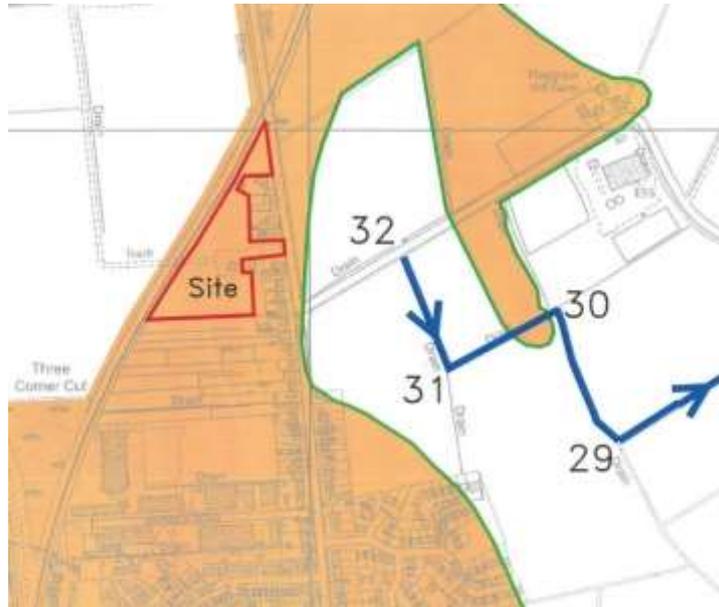
Hybrid Application: Full application to erect 41 x dwellings (1 x 2-storey 2-bed, 28 x 2-storey 3-bed and 12 x 2-storey 4-bed) with associated parking, landscaping, and a new access, and Outline application with matters committed in respect of access for the erection of up to 2 x dwellings on land to the west of 180 to 200 Elm Road, March - Innerspace Home Group Ltd. (MLC Ref No 518)

In September the District Council validated a planning application for forty one dwellings for full permission and outline planning permission for two self build plots (Plots 42-43).

Thrive Architects Ltd's Design and Access Statement dated August 2021 advises that:

"Drainage Surface Water Drainage Surface water runoff from the development will be attenuated on site via two principal mechanisms, within the road sub-base (below permeable block paving) and within a central attenuation basin. The majority of the attenuation basin will be dry, with a permanent pond occupying a smaller area at the northern end in the vicinity of the outlet. The dry basin will only become temporarily inundated with flood waters during heavy rainfall events. The surface water flows through the road sub-base will be controlled through a series of orifice plates and check dams to limit the rate at which the surface water runoff passes through The Site. Two outfalls to the boundary ditch along the eastern side of The Site (adjacent to Elm Road) are proposed. The primary outfall is proposed adjacent to The Site entrance road which discharges runoff at a controlled rate from the main part of The Site (occupied by 41 no. units); a hydrobrake chamber will be utilised so that runoff is discharged at the Greenfield runoff rate (Q_{bar}). The secondary outfall is proposed adjacent to The Site entrance for the 2 no. self-build units in the northern confines of The Site. The discharge rate in this location will be restricted to a practicable minimum using an orifice plate restriction, given the runoff from this part of The Site is significantly lower compared to the main part of The Site. Foul Water Drainage Foul drainage for the proposed site will be provided by a new gravity system (pipes and chambers) which will extend outside The Site boundary at the main entrance to The Site. A section of new foul sewer will need to be constructed along Elm Road, between the main entrance to The Site and the proposed point of connection to existing Anglian Water public foul sewer (via a chamber located at the Flaggrass Hill)."

Commissioners have previously expressed concerns about development within this area and will be aware from previous Meeting Reports, including last year's, that several properties along the Elm Road corridor have flooded in recent years. In addition, residents of 194-200 Elm Road and Berryfields have also been affected.



Extract from plans provided by Cambridgeshire County Council showing the locations of internal flooding reported in August 2014 left and December 2020, right



View of the flooding experienced in Elm Road during December 2020

In view of these concerns and those expressed by Commissioners, a letter was written to the District Council opposing the planning application. This response included the following:

“There are several different aspects associated with this proposal. These include but are not limited to the following:

A. The site is adjacent to a known “wetspot” which has a history of flooding.

Evidence of the flooding experienced during December 2020 has been provided by local residents and an entry is included in the LLFA’s Draft March Flood Investigation Report which is currently being prepared. This entry advises that internal property flooding to four properties was reported and that one household is known to have had to leave home for longer than one month.

B. The discharge route serving the site is not definitively known.

(i) No conclusive evidence has been provided concerning the receiving watercourse system.

In the absence of any detailed topographic survey or hydraulic modelling of this system it is difficult to be conclusive but the downstream water level and flood risk management systems may be absent, poorly maintained and/or have insufficient capacity to transfer the current flows from the catchment that it serves.

(ii) It is considered likely that improvements to this system will be required to alleviate the current problems.

(iii) Any adverse impacts should be fully assessed to:

- The point of discharge into and on the receiving watercourse system.
- Ensure that the existing properties are not detrimentally affected by the proposal particularly in relation to the detrimental effects of any landscaping and/or ground raising/re-shaping operations.

C. On-site Water level and flood risk management systems

(i) It is considered that the applicant has not yet provided adequate evidence to prove that a viable scheme that meets the Board’s requirements and current design standards exists and can be constructed.

(ii) A “Surface Water Drainage Maintenance Plan” has not been provided.

It is considered that the issues of long-term ownership, funding, management and maintenance arrangements for the upkeep of the facilities in perpetuity, particularly those associated with flood risk and water level management including SuDS.

D. The future integrity of the Boards system

(i) The Boards system provides an arterial network that serves the local community by managing water levels in ordinary watercourses and other water infrastructure within its District to mitigate against the risks from flooding and drought. In delivering its functions the Board has to meet its environmental obligations and commitments and seek opportunities to enhance the environment.

(ii) The application site is served by the Boards Flaggrass Hill Road Drain which serves part of the urban area of March. This watercourse is becoming increasingly important as further development within its catchment occurs.

- (iii) The Board considers this proposal to be another example of uncoordinated piecemeal development within its catchment.
- (iv) Your Council will be aware from the previous correspondence and representation at Planning Committee meetings that the Board has strongly expressed significant concerns about other developments within its catchment, including the Elm Road/Creek Road area, and the adverse impacts on the respective water level and flood risk management systems.
- (v) It is also concerned that both its and the District Councils ratepayers will have to contribute public money to resolve problems created by this proposal.”

During December further consideration was given to the northern area of March when a response was sent to the LLFA, copied to Stephen Barclay MP, concerning the draft March FIR.

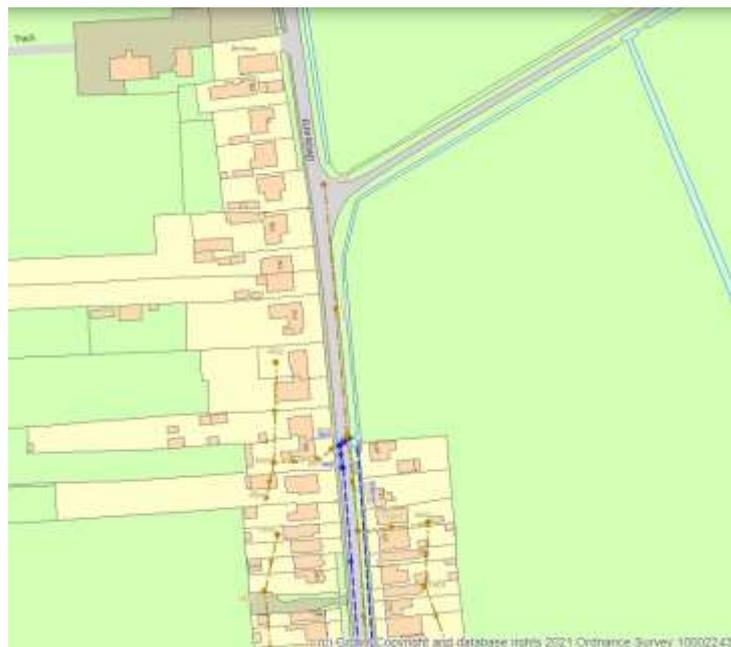
Many of the areas identified by the LLFA in the draft FIR abut or are in close proximity to each other, therefore, it is considered that the various areas may be linked or influence each other during high rainfall events.

This response advised, including other items, as follows:

- i. The impacts of the local geology in the area may influence the water table and this may need to be considered and investigated.

This area may be influenced by the Hostmoor Balancing Ponds, the land fill site to the north west and the large waterbodies to the north east and east – Three Corner Cut, Whitemoor Junction, March West Junction and Norwood Road Nature Reserve area. It is understood that there is a spring at Berryfields.

- ii. There may be a confluence of two public surface water sewers and a piped watercourse in close proximity to 129 Elm Road and this may contribute to the flooding experienced.



Extract from Anglian Water's Digdat GIA database

- iii. See item E above concerning the Anglian Water and the County Council integrated model.



- iv. In the absence of any positive evidence, it is difficult to be conclusive but from the photographs taken on 03rd March of the watercourse connecting the sewer outfalls and the Boards District Drain at Point 32 it is likely to be of insufficient size to process the flows that discharge into it.
- v. The area has been subject to both major and minor developments in recent years.

Despite reassurances from a previous Leader of the Council, further major development has occurred and further planning applications for major development have been received with further development anticipated in the near future.”

It was also advised that representation had been made by the Commissioners at Planning Committee concerning the extension to Berryfields estate advising on the Commissioners’ concerns.

Following the submission of additional documents in support of the planning application a further brief response was submitted on the Commissioners’ behalf. However, the Case Officer requested a more detailed response, issued to the District Council during February, which continued to oppose the planning application on the Commissioners’ behalf and included the following:

“The content of Ridge and Partners LLP Flood Risk Assessment and Drainage Strategy Ref. No. 5013107-RDG-XX-XX-DOC-C-0550 dated 19 January 2022 has been reviewed and its contents discuss some of the points raised in the Boards previous correspondence. However, there are several elements which have not been fully investigated and are considered subjective at this time. Please note that the previous concerns remain relevant and have not been resolved to the Boards satisfaction.

Both external and internal flooding was experienced in the immediate area during the flooding incidents experienced at Easter 1998, August 2014 and December 2021 and this is acknowledged in

the FRA. The Board encourages further investigation to be undertaken by the relevant parties to identify and alleviate the causes of flooding.

The FRA suggests one potential problem concerning the watercourse on the western side of Elm Road, due to lack of maintenance, incorrectly sized pipes etc., and the confluence of several discharges to the south of the application site. The FRA suggests that this is the responsibility of the IDB to resolve but this watercourse is outside of the Boards rateable area and, therefore, is primarily a matter for the LLFA but the Board would assist where it can. The concerns raised by the local residents are noted but under "Common Law" this is ultimately an issue for the individual land owners concerned.

It is suggested that if this discharge route is used discussions with each landowner will be required and it may take considerable time and funding to resolve all the issues to enable the reinstatement of this watercourse to a suitable condition to receive the flows involved. This route is also quite tortuous and may need a new more direct outfall which could alleviate some of the problems encountered by relieving the confluence to the south.

It is known that the December 2021 flooding incident resulted in several surface water systems failing even though they were designed to current design requirements. This is due, in part, to the preceding weather events which saturated the soil, partly filled storage voids and/or did not include sufficient "freeboard" and thus reduced the storage volume available during the incident. Current design standards or guidance does not accommodate this situation or appreciate the special nature and factors that affect water level and flood risk management in "The Fens", particularly within pumped catchments. As a result, the Commissioners and associated Boards are currently considering its position concerning design requirements, which are likely to be in excess of current design guidelines, to better cope with exceedance events and minimise the effects of future flood events. This could affect the storage volume and attenuation facilities required.

Concern is also raised about the insufficient consideration given to the following:

- (i) The detrimental effects of surface water run-off and overland flows from the site adversely impacting neighbouring properties or other locations which may be affected by the proposed ground raising/re-shaping operations.
- (ii) The layout of the development, which should be designed to facilitate access by routine maintenance access machinery to the on site water level and flood risk management systems, particularly to the attenuation pond.
- (iii) The shape and dimensions of the attenuation pond may make it difficult to maintain.
- (iv) The whole life funding, management and maintenance of the associated water level and flood risk management systems serving the site.

The Board will require that adequate provisions are made for the long-term ownership funding, management and maintenance arrangements for the upkeep of any water level and flood risk management system, whether on or off site, in perpetuity. These requirements may be in addition to those imposed by planning conditions or required by the LLFA and that details of the works to be carried out by the occupier/land owner, adopting authority, the Management Company or other responsible person/authority, together with the costs attached, are included in the "Homeowners Pack" and the Deed of Sale."

According to the relevant District Council Public Access webpage the application is "Pending Consideration"

It is presumed that, if planning permission is granted, the Commissioners will require this site to be dealt with in a similar manner to that utilised at the on-going development to the east of Berryfield.

It would be beneficial to receive the Commissioners' opinion and further instruction on the above to enable further discussion to occur to resolve the issues associated with the development of this site.

The applicant has submitted a completed post-application consultation form, therefore, if the planning application is granted planning permission any further discussion concerning this planning application and associated problems will not be at the Commissioners' expense.

Development Contributions

Contributions received in respect of discharge consent will be reported under the Agenda Item – '*Contributions from Developers*'.

Planning Updates & Consultations

To reduce the size of this consultant's report and to increase public transparency the section of this report which provides information on the various strategic consultations and issues that may affect the Middle Level Commissioners and administered/associated Internal Drainage Boards has been relocated to our website and can be found on www.middlelevel.gov.uk towards the bottom of the page under 'Strategic Planning Consultation Responses'.

Consulting Engineer

30 March 2022

March Fifth (314)\Reports\March 2022