

RIVER OUSE
(YORKS.)
CATCHMENT BOARD.

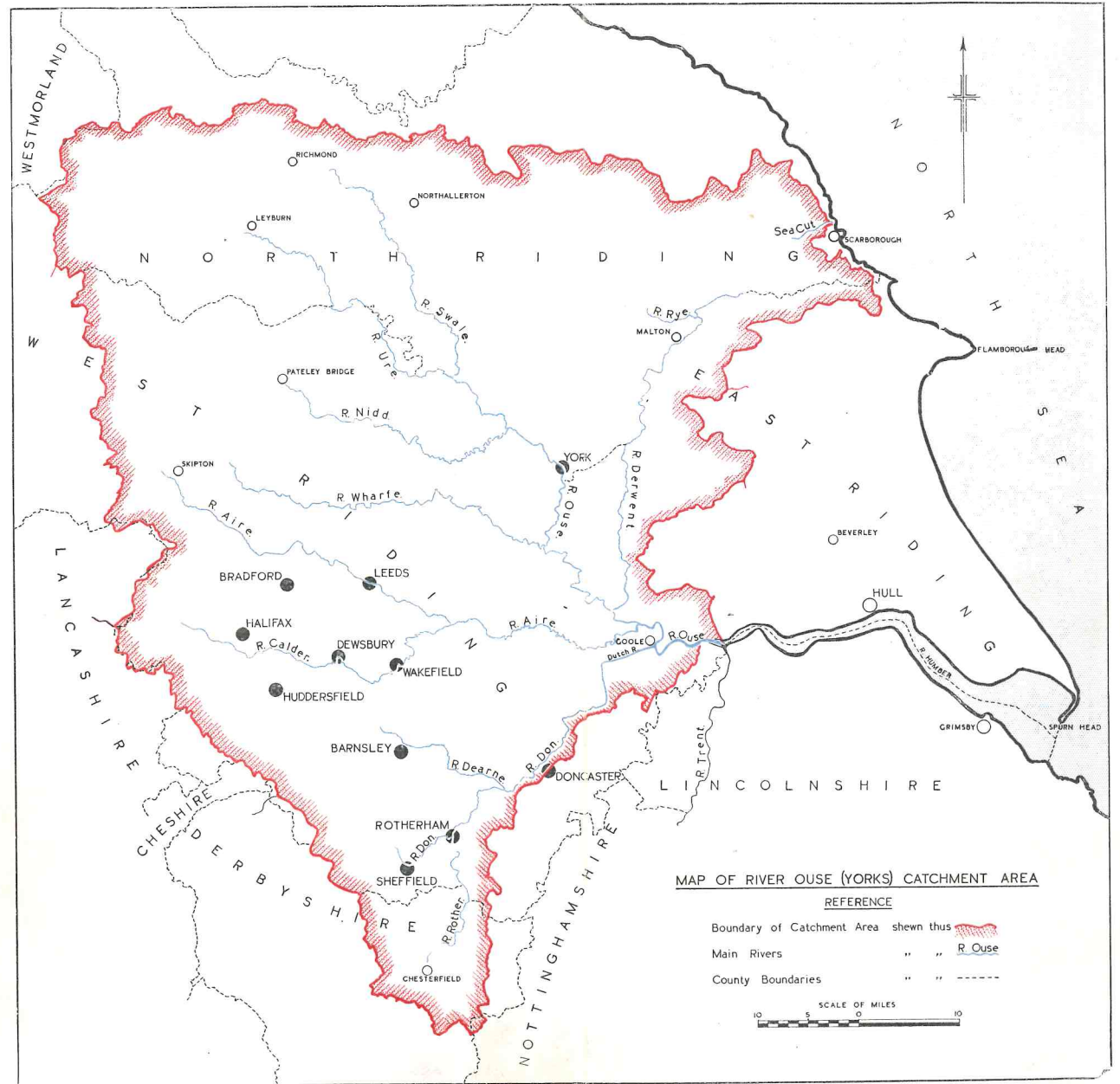
REPORT

for the year ended
November, 1938.

DEWSBURY,
The Stanley Press Ltd., 27, Bradford Road.

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ANNUAL REPORT

for the Year ended November, 1938.

Section I.—ADMINISTRATION.

The Catchment Board entered on its third triennial period of office on 1st November, 1937, when it appeared that twenty-five of the existing members had been re-appointed to serve for a further period of three years, together with eight new members.

CONSTITUTION OF THE BOARD.

The changes in the personnel of the Board arose as follows :—

The Minister of Agriculture and Fisheries included among the members appointed by him to represent Internal Drainage Boards and that portion of the Catchment Area for which Drainage Boards might be but had not been constituted :—

R. H. Coulman Esq. and T. P. Thompson Esq., in lieu of Lt. Col. the Right Hon. the Viscount Downe and C. W. G. H. Thompson Esq.

The City of Leeds appointed as their two representatives Alderman Lt. Col. E. J. Clarke and Councillor F. Barraclough in place of Councillor H. Spencer and L. J. Edwards Esq.

The Corporation of Huddersfield appointed Councillor F. Wrigley in place of Alderman A. E. Sellers.

The Bradford Corporation appointed Councillor L. Jessop in place of Councillor G. Muff, M.P.

Under the Constitution Order the Corporations of Wakefield and Dewsbury appoint members alternately and in the place of Councillor H. Shaw of Dewsbury, Councillor N. Hutchinson of Wakefield joined the Board. Similarly the Corporations of Barnsley and Doncaster appoint members alternately and in place of Alderman G. Smith, the Doncaster member, Councillor J. Guest of Barnsley took his seat.

The Board regretted to lose their old colleagues and extended to them their cordial thanks for their services as members of the Board. At the same time they extended a hearty welcome to their new colleagues.

In order that complete touch might not be lost with the County Borough of Doncaster representative, particularly having regard to his extensive knowledge of the problems arising through mining subsidence in the Doncaster district, the Board availed themselves of their power under para. 9 of Part II of the First Schedule to the Land Drainage Act, 1930, to make a rule authorising the Doncaster Area (Mining Provisions) Committee to co-opt, subject to their consent, an additional member. The rule was duly approved by the Minister, and the Committee, with the hearty approval of the Board, co-opted to their number Alderman G. Smith, of Doncaster.

A complete list of the members of the Board will be found in the appendix to this Report.

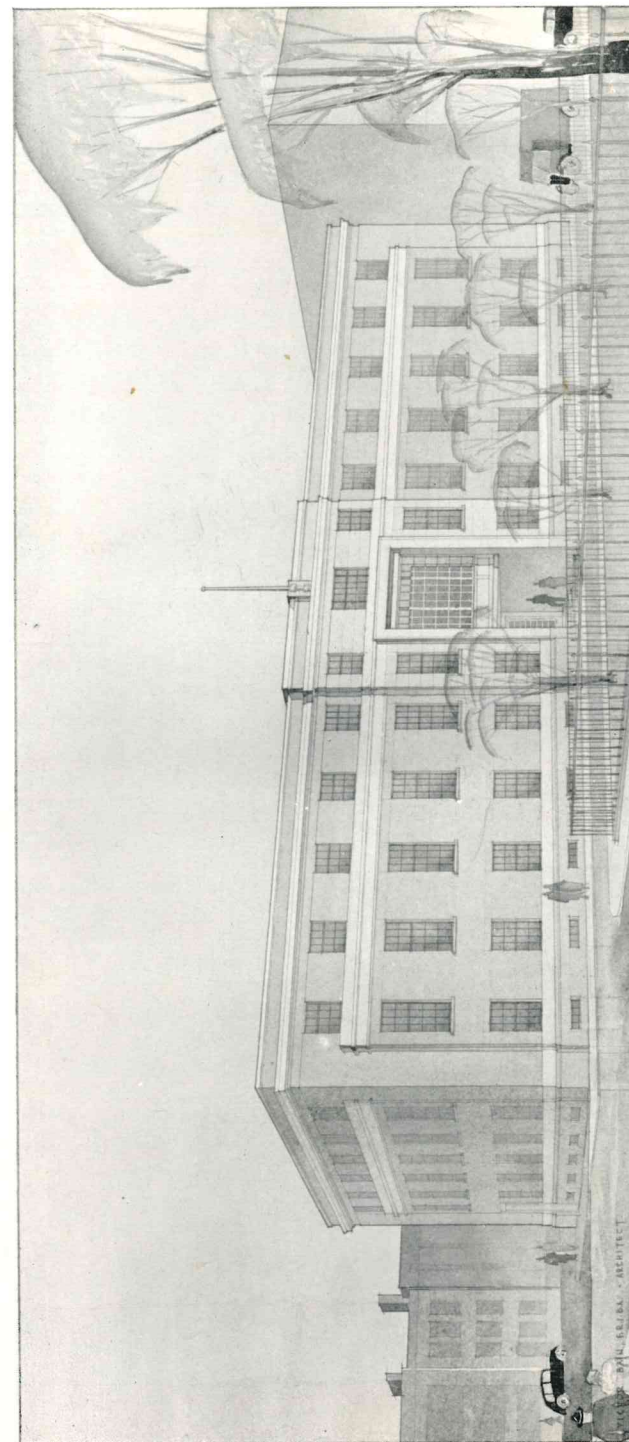
CHAIRMAN AND VICE CHAIRMAN.

The Board re-appointed County Alderman R. L. Walker as their Chairman to hold office for the period of three years, and Alderman E. Cruikshanks as Vice Chairman to hold office until the November meeting of the Board, 1938.

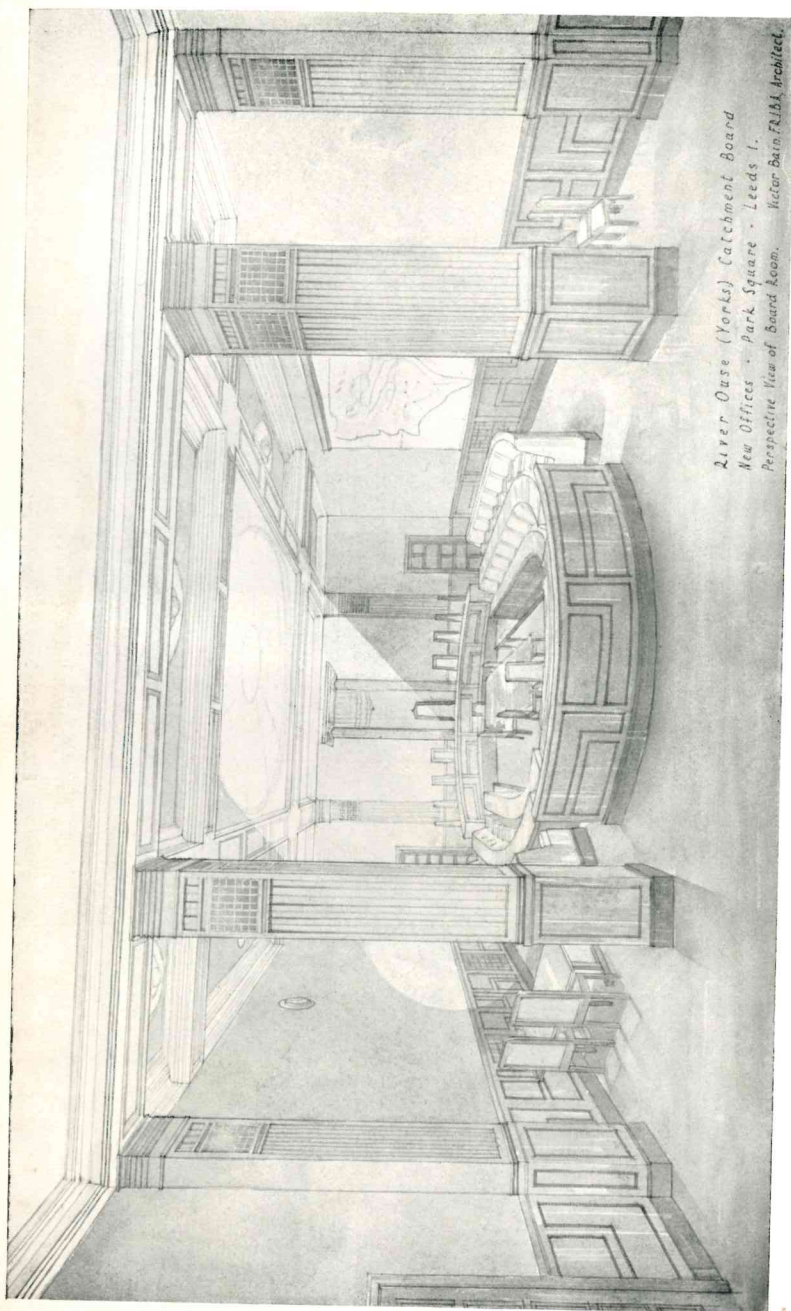
OFFICES.

As was intimated in last year's Report considerable delay was experienced in obtaining steel for the steel constructional work, which caused the erection of the building to be held up.

The Board are now glad to report that these difficulties have been overcome and that considerable progress has been made in the erection of the building.



Proposed New Offices.
Elevation to Park Square.



The general building contract has been entrusted to Messrs. William Airey Limited of Leeds and there is every hope that the offices will be ready for occupation in the summer of 1939.

A reproduction of a perspective drawing of the building when completed which has been prepared by the Architect, Victor Bain Esq., F.R.I.B.A., appears on page 6 of this Report.

CATCHMENT BOARDS' ASSOCIATION.

The Catchment Boards' Association is still fulfilling admirably the purposes for which it was established, and the Board through its representatives have continued to take an active part in its deliberations and in shaping its policy.

The Board re-appointed its existing representatives on the Association, namely :—

The Chairman (County Alderman R. L. Walker).

The Vice-Chairman (Alderman E. Cruikshanks); and

The Chairman of the Finance Committee (Alderman C. W. Beardsley).

The Annual Meeting of the Association was held on the 25th May 1938, when Lt. Col. A. P. Heneage, D.S.O., D.L., M.P., was re-appointed President.

The following matters of general interest have been dealt with by the Association during the year :—

(a) Amendment of Land Drainage Act, 1930.

A special Sub-Committee (on which the Catchment Board are represented) has been almost continuously engaged in carrying out a suggestion made by the Minister of Agriculture and Fisheries when he addressed the Annual Meeting in 1936, that the Association might usefully devote their attention to consolidating their proposals for the amendment of the Land Drainage Act, 1930.

The Sub-Committee had before them a print of an Amending Bill which was prepared by the Ministry in 1932 and also numerous suggestions from the various Catchment Boards constituting the Association.

The following are the principal amendments to the Act which are either included in the Minister's draft Bill or have been put forward by the Association to the Ministry.

Section 3—Constitution of Catchment Boards and appointment of members.

Under Section 3 of the 1930 Act two-thirds of the members of a Catchment Board are to be members appointed by the County Councils and County Boroughs in the area and of this proportion of two-thirds not more than one half may be County Borough members.

In the Ministry's draft Bill it was proposed to provide that the proportion of County Borough members might be two-thirds instead of one half of the combined number of County and County Borough members.

The Catchment Boards' Association decided to make no recommendation on this proposal but considered that a submission of all relevant facts should be sent to the Ministry. (It may here however be mentioned that the Catchment Board have expressed approval of this proposal).

Section 4—Schemes for transfer of powers and duties to Catchment Boards and re-organisation of internal drainage boards.

Under this Section the Catchment Board are required to submit schemes for a variety of purposes relating to internal drainage boards and districts. In practice the Section has been found to be deficient and the Ministry have been recommended to amend it so that schemes made thereunder may :—

- (i) include all financial provisions and adjustments necessary to protect minorities ;
- (ii) enable the Minister to approve provisions for differential rating.

Before a scheme can become effective under the Section it has first of all to be placed on deposit for a period of a month, first as a Scheme, then as a draft Order, then as a sealed Order.

The Association adopted the Catchment Board's recommendation that something should be done to speed up the procedure, and it has accordingly been suggested that one of the deposits at least might be omitted.

Section 7—Supervision of Internal Drainage Boards and Districts.

Under this Section a duty is laid on the Catchment Board to exercise a general supervision with respect to the drainage of the Catchment Area and they are empowered to give such directions as they consider reasonable for the guidance of the internal drainage boards with respect to the exercise and performance of those boards of their powers and duties as such.

Unfortunately any directions so given are not enforceable by any specific sanction.

The Association entirely approved therefore of the suggested clause in the Minister's Amending Bill to the effect that if any direction given by a Catchment Board to an internal drainage board is not complied with by that board within such time as may be specified in the direction, the Catchment Board may themselves do anything directed to be done and any expense reasonably incurred by them in so doing may be recovered by them summarily as a civil debt from the internal drainage board.

They also agree that the proposal contained in the Ministry's Bill that any consent given by the Catchment Board under Sub-Section (2) of the Section with regard to the construction of works which would in any way effect either the working of any drainage works belonging to any other internal board or the discharge of water from their district into the main river, might be given either absolutely or subject to conditions, with a right to appeal to the Minister in either case.

It has also been suggested to the Ministry that the Section be amended to require that notice be given to the Catchment Board by any internal drainage board proposing to carry out any new works or improvements in their area so that the Catchment Board may have an opportunity in good time of considering whether or not other internal drainage districts or the main river will be affected.

Section 9—Commutation of obligations to repair by reason of tenure, etc.

In the existing Section the only obligations to do main river works which can be commuted are those arising by tenure, custom or prescription. Moreover the Section makes it a duty of every Catchment Board to commute such obligations.

The Association recommend that commutation should cease to be obligatory and approved of the Ministry's suggestion that the Section shall apply to obligations however imposed.

Section 20—Expenses of Catchment Boards.

Under this Section the precepts issued by Catchment Boards to County and County Borough Councils are based on the rateable values in the Catchment Area as existing on the first day of the period in respect of which the precepts are issued.

The Association recommend that this Section should be redrawn so as to empower Catchment Boards to apportion expenses on the basis of the actual rateable values of the year immediately preceding that in which the expenses are chargeable.

Section 24—Rating powers of Drainage Boards other than Catchment Boards.

This Section provides that every drainage rate shall be an annual value rate and the Association recommend an addition to the Section by providing that such annual value shall be the one standing in the books of the Inspector of Taxes on the first day of April in the financial year in respect of which the rate is made. This addition is considered necessary because it has been found in practice that appeals against annual value are frequently allowed during the year and that doubts have arisen as to whether the drainage board should correspondingly amend its valuation list.

Section 32—Power of Local Authorities to contribute to expenses of drainage works.

Under this Section a local authority, if it thinks that the execution and maintenance of drainage works are desirable in the interests of public health or for the protection or better enjoyment of a highway, may contribute to the expenses of the execution or maintenance of such drainage works.

The Association consider that the Section should provide some machinery whereby an internal drainage board may request a contribution from a local authority where a drainage work is so desirable and in the event of a refusal of a local authority to contribute may appeal to the Minister of Health whose decision shall be final.

Section 35—Maintenance of Watercourses.

This Section makes it the duty of persons having control of watercourses to put them into proper order, but is limited in its operation to cases where agricultural land in the occupation of some other person is injured or in danger of being injured.

The Association are of opinion that the Section should be extended to apply to all lands whether agricultural land or not.

Section 38—Disposal of Spoil.

Under this Section in certain cases a drainage authority may deposit spoil from the watercourse on the banks thereof.

The Association seek to extend the usefulness of the clause by making it apply, first to the deposit of vegetable matter and, secondly, irrespective of whether it will improve the banks or not.

Section 44—Obstructions in Watercourses.

As the Section is drawn at present, only obstructions which are artificial in character and extend wholly across the waterway can be dealt with.

The Association consider it essential that obstructions should be able to be dealt with under the Section although they do not comply with the latter condition.

Section 47—Byelaws.

Under this Section drainage authorities may make Byelaws. The only remedy however permitted by the Section for a breach of Byelaws is to sue for a penalty.

The Association therefore welcomed the Ministry's suggested amendment to the effect that if any person failed to comply with a Byelaw the drainage board concerned could in lieu of taking proceedings for a penalty themselves do anything required by the Byelaw to be done, any expense reasonably incurred by them in so doing being recoverable by them summarily as a civil debt from the person in default.

The Association have also suggested to the Ministry that Catchment Boards should have power to make Byelaws as respects any watercourse not being part of a main river or a watercourse situate within an internal drainage district. These watercourses might be specially designated by being marked on a plan. Specific power should also be given by byelaw to enable Drainage Boards to compel occupiers to fence off stock from internal drains subject to the provision of reasonable facilities for the use of the drains by stock for drinking purposes.

Section 64—Restriction on construction of bridges over main river.

The Section as at present drawn is confined to main rivers and only requires the consent of the Catchment Board in cases of bridges which are not constructed by way of replacement or reconstruction of an existing bridge.

The Association suggest that the Section should be revised to read as follows—

“It shall not be lawful for any person to construct a bridge or to replace or reconstruct an existing bridge over any watercourse in a catchment area without the consent (not to be unreasonably withheld) of the Catchment Board or otherwise than in accordance with plans and sections approved by the Catchment Board.”

The Association also suggest that provision should be made for the removal of derelict or obsolete bridges which impede the flow of water in a watercourse either by the proprietors or on their default by the Catchment Board without paying compensation in respect thereof and that the Catchment Board should be empowered to recover the cost of removal.

They also suggest that the Section should be extended so as to require the authority responsible for the maintenance of an existing bridge to obtain the consent of the appropriate drainage authority before abandoning it.

Restriction of development of low lying land.

The Association have put forward a suggestion that provision might be made by the Amending Bill for conferring on local authorities generally powers to prohibit the use of unsuitable land for the erection of dwelling houses without payment of compensation.

(b) Air Raid Precautions.

The Association have given careful consideration to the Air Raids Precautions Act, 1937 under which grants are payable to County Councils, County Borough or County District Councils and certain other Local Authorities which do not include Catchment Boards.

A suggestion had been put forward that Catchment Boards should approach the various Local Authorities concerned in their area with a view to any necessary precautions to protect their works being included in the Authorities' Schemes which might be eligible for grant.

The Association however, after discussion, came to the conclusion that it was impracticable for Catchment Boards to take adequate precautions against air raids through the medium of the Schemes of Local Authorities, and that in relation to their drainage works, Catchment Boards should be placed in a corresponding position to that of Local Authorities.

A strong Committee on which the Chairman and Engineer of the Catchment Board have been appointed to serve has been set up to prepare a reasoned case for presentation to the Ministry.

(c) Central Advisory Water Committee.

A letter was received from the Central Advisory Water Committee stating that among the matters which they had been asked to consider by the Ministry of Health was the action necessary to co-ordinate water interests and that they had been pressed to investigate the question of the desirability or feasibility of constituting comprehensive river authorities for the control of rivers in England and Wales. They referred to the Fourth Report of the Joint Advisory Committee on River Pollution, containing a recommendation as to the desirability of such action.

The letter proceeded "Arising out of the general question, the following matters will require consideration :—

What are the areas best suited for the purpose if it is decided to constitute comprehensive authorities;

the existing functions and powers relating to the use of rivers (e.g. land drainage, control of abstraction of water, fisheries, prevention of pollution and navigation) which should be transferred to such bodies;

whether any additional functions and powers are necessary;

the constitution and methods of appointment of such bodies and the manner in which their expenses should be defrayed;

safeguards to ensure that the claims of the various interests are considered and co-ordinated; and

the relationship between any new bodies and the central departments."

The views of the Association on the questions raised were invited and after very grave deliberation the Association decided that the questions should be answered as follows :—

Question (a). What are the areas best suited for the purpose.

Answer

In general the areas comprised within the physical boundaries of Catchment Areas or a combination of Catchment Areas, such new watershed areas as may be necessary being constituted or added. It is essential that areas should be of sufficient size to ensure efficiency of working and the provision of adequate finance.

Question (b) The existing functions and powers relating to the use of rivers (e.g., land drainage, control of abstraction of water, fisheries, prevention of pollution and navigation) which should be transferred to such bodies.

Answer

Generally speaking all existing functions and powers should be transferred otherwise the objective implicit in a recommendation to establish comprehensive authorities would not be attained. The question of navigations presents obvious difficulties. On the one hand owners of navigations may be subject to liabilities as to maintenance, &c., which their receipts in respect of the use of the navigation are insufficient to meet. On the other hand owners of navigations may carry on commercial undertakings and derive considerable revenues from acting as carriers or the ownership of e. g. docks. It is considered that the existing functions and powers of navigation authorities should be transferred only in so far as they affect "main rivers" and are requisite to effect the co-ordination which is necessary. Careful provision would require to be made for the adjustment of properties and liabilities.

Question (c) Whether any additional functions and powers are necessary

Answer

Additional control and co-ordination of the abstraction of water seems necessary; the extent to which this is possible is no doubt receiving the consideration of the Advisory Committee. It is thought it should be made clear that the gauging of rivers for all purposes should be undertaken by the central authority. Subject to these points and to any amendments of the Land Drainage Act, 1930 which experience has shown to be necessary no additional functions and powers can be envisaged at present. If as a general rule all existing functions and powers are transferred experience of the working of the comprehensive authority will indicate whether any additions are necessary.

Question (d) The constitution and method of appointment of such bodies and the manner in which their expenses should be defrayed.

Answer.

Catchment Boards are ad hoc authorities constituted under the Land Drainage Act 1930 and Parliament has decided the representation to be given to and the burden of expense to be borne by the various interests, i.e. County Councils, County Borough Councils and Internal Drainage Boards. Any changes must not be such as will subordinate land drainage to other interests.

It is considered that the Catchment Boards' Association, as such, are not in a position to express any views as to the expenses of a new comprehensive authority and that these are a matter for consideration by the Government (after consultation with the various interests and authorities (including those represented on the Central Advisory Water Committee) who would be included or concerned in any new authority) and ultimate settlement by Parliament.

Question (e) Safeguards to ensure that the claims of the various interests are considered and co-ordinated.

Answer.

The question of safeguards largely depends on the constitution which is adopted. Having regard to the work already carried out by drainage authorities, the beneficial results obtained therefrom and the programmes now in hand or in contemplation it is imperative that the interests of land drainage should not be subordinated to any other interests and that a new authority should do work which is at least equal to that now being done by drainage authorities. The Association would wish to be consulted as to safeguards when the constitution and functions of the new authority are more precisely defined.

Question (f) The relationship between any new bodies and the Central Departments.

Answer.

It is considered that the same relationship which now exists between local and other statutory authorities and the Central Departments should exist as between those Departments and the comprehensive river authority; the various matters dealt with by the comprehensive authority being referred to the appropriate Department e.g. land drainage and fisheries to the Minister of Agriculture and Fisheries, navigation to the Minister of Transport, the usual consultations taking place between Departments where more than one is concerned.

It is thought that the comprehensive River Authority can co-operate most conveniently with the appropriate Regional Water Committee the latter consulting with and reporting to the Central Advisory Water Committee.

At the same time the Association passed a resolution that notwithstanding such answers the Association were of opinion that the time was not yet opportune for the establishment of comprehensive river authorities and that Catchment Boards were desirous of making further progress as at present constituted under the Land Drainage Act, 1930 in order to bring up to a state of efficiency the various "main rivers" in the Country, this being work which in the opinion of the Association should not be at any time subordinated to any other water interests.

Subsequently the Association were invited to give oral evidence in support of their views, and witnesses (including the Chairman of the Board) attended accordingly and gave evidence before the Committee.

(d) Electric Cables over Main Rivers.

On behalf of its members the Association has been in touch with the Electricity Commissioners urging them to bring to the notice of electricity undertakers the importance of the erection of overhead cables at a sufficient height above water level to allow adequate clearance for drainage operations and for the erection of posts and pylons in such a position as to avoid interference with land drainage works and it is hoped that it may be possible to deal with the matter in the saving clauses for Catchment Boards to be included in the Land Drainage Amending Bill.

(e) Gauging of Rivers.

The Association has also taken up with the Ministry of Agriculture and Fisheries the question of the gauging of rivers and the availability of grants in respect of such work and have recommended their members to undertake such work in view of the fact that grant would be available so far as schemes of improvement and new works undertaken by Catchment Boards including the provision of gauging apparatus were concerned.

(f) Grants to Internal Drainage Boards.

During the passing of the Agriculture Bill (now the Agriculture Act, 1937) through Parliament representations were made to the Ministry of Agriculture and Fisheries by the Association to the effect that applications for Government Grants should be accompanied by the observations and recommendations of the Catchment Board concerned or alternatively, that the Ministry should adopt the practice of consulting Catchment Boards before making grants in respect of internal drainage works. Although the Ministry did not find it possible to accept these suggestions the Association has been able to make arrangements under which the Ministry notify Catchment Boards from time to time of the various applications.

PARLIAMENTARY BILLS — SESSION 1937-38.

Among the private Bills deposited in the Private Bill Office of the House of Commons for the Session 1937-38 which have engaged the Board's attention have been the following :-

(a) Wakefield Corporation Bill.

By this Bill the Corporation sought power to construct new waterworks comprising the Oxygrains Reservoir, the Oxygrains Conduit, both in the Ripponden Urban District, the Castle Dean Catchwater to connect with the Oxygrains Reservoir, and a service reservoir and conduits in the Urban District of Stanley.

By Clause 31 of the Bill it was proposed to amend the provisions of the 1916 Act in so far as they related to (a) the power to take waters and (b) to compensation water, by substituting the above waterworks for the waterworks authorised by the Corporation's Act of 1916.

The Corporation also sought power by Clause 161 to carry out certain works for the prevention of flooding in the Ings Beck, the Alverthorpe Beck, the Westgate Beck, the Chald Beck, the Balne Beck and the Owler Beck in the city and in certain circumstances to recover the expenses incurred in so doing from the owners of lands which would be benefited by the works.

After examining the proposals and hearing the report of their Engineer in the matter, the Board decided that the Corporation be requested to afford to them the same facilities for inspection and examination of gauges etc., as were conferred on other statutory bodies by the Wakefield Corporation Acts of 1916 and 1924. To this the Corporation agreed and provision to this effect has been made accordingly in the Act confirming the Bill.

(b) Sheffield Gas Bill.

By this Bill the Sheffield Gas Company proposed to extend the existing coke oven gas limits to include certain additional areas.

There was already in the Sheffield Gas Act, 1931, a section providing for the protection of watercourses which was however not entirely satisfactory. The Board therefore requested the Promoters to amend such section so that in the execution of the works under the Act allowance would be made for the widening of the channel of any watercourses in addition to cleansing, scouring or deepening thereof, and provision has been made accordingly.

(c) West Yorkshire Gas Distribution Bill.

By this Bill it was proposed to incorporate a Company to be called the West Riding of Yorkshire Gas Distribution Company for the purpose of purchasing, distributing and supplying gas within the limits of supply set out in the schedule therein.

As deposited the Bill contained no provision for the protection of drainage interests. The Promoters were accordingly asked to insert a clause in the Bill on the lines of the section in the Sheffield Gas Act, 1931 as was proposed to be amended in the Sheffield Gas Bill.

The Promoters agreed to give the protection asked for and provision has been made accordingly.

(d) Lancashire County Council (Rivers Board and General Powers) Bill.

This Bill proposed to provide for the incorporation of a Board to be called "The Lancashire Rivers Board" in respect of an area comprising the whole of the County of Lancaster and certain county boroughs situated in such County and parts of the Counties of Chester and Derby including a small portion of the area within the River Ouse (Yorks.) Catchment Area of which part is within the Earby and Salterforth Internal Drainage District.

By Clause 63 of the Bill it was provided that the Board and the Catchment Board of any catchment area or any internal drainage board whose area was situate within the Board's district might enter into arrangements for co-operation in the discharge of their respective functions.

No objection could be raised to such a proposal but the suggestions contained in Clause 61 were certainly of a novel character. By this clause it was provided that on the application of the proposed Rivers Board to the Minister of Agriculture, the Minister might, by Provisional Order, transfer to the Rivers Board such functions of the Catchment Board of any catchment area under the Land Drainage Act, 1930, as were exercisable within the Rivers Board's district provided that before a Provisional Order affecting the Catchment Board was made a draft thereof should be approved by such Catchment Board.

In view of the extremely small part of the Catchment Area within the Rivers Board's district, the Board did not consider it worth while to raise any opposition thereto. Nevertheless they have learned with interest that the Promoters subsequently decided to delete the clause from the Bill.

PROTECTION OF FISHERY INTERESTS.

In carrying out their duties the Catchment Board's policy has been to co-operate to the fullest possible extent with all interests affecting the rivers of the Catchment Area. In particular they have always had regard to fishery interests and have appointed a Standing Sub-Committee to confer with the Yorkshire Fishery Board on any matter affecting fishery interests which may arise.

Section II. INTERNAL DRAINAGE BOARDS & DISTRICTS.

LOWLAND AREA.

One of the largest tasks confronting the Catchment Board on its constitution was the bringing within internal drainage districts either by the formation of new districts or the extension of existing districts the whole of the lowland area within the Catchment Area.

The total acreage of the lowland area in the Catchment Area is approximately 388,437 acres as shown on the Lowland Area Maps prepared by the Ministry of Agriculture and Fisheries, of which an area of 161,144 acres was already within the existing twenty-nine drainage districts when the Catchment Board was first constituted in 1931.

A reference to the tabulated matter on pages 45 and 46 of this Report indicates the progress the Catchment Board has made in this direction, and from which it will be seen the Board have now practically reached the position when all that remains to be done to complete this portion of their task is to deal with comparatively small areas which in most cases can best be dealt with by including them in existing districts.

Two cases have however arisen during the year where it appeared new districts might with advantage be set up.

CREATION OF NEW DISTRICTS.

Bulmer.

The Catchment Board caused to be surveyed an area of land on the west bank of the River Derwent near Howsham which is drained by the Bulmer Beck and its tributaries, and have come to the conclusion that a new Drainage District comprising approximately 2,000 acres of such land could usefully be constituted an Internal Drainage District.

The proposed district includes parts of the following parishes:—

Terrington-with-Wigganthurpe, Sheriff Hutton-with-Cornbrough, Stittenham, Foston, Bulmer, Whitwell-on-the-Hill, Barton-le-Willows, Harton and Crambe.

In due course the proposal will be laid before an informal meeting to be held in the district of owners, occupiers and other persons interested when the project will be explained to them.

Holbeck.

One of the few remaining lowland areas to be dealt with is the lowland area draining into the River Ure comprising in all a total acreage of about 5,400 acres being for the most part a strip of land averaging one-third of a mile in width over a length of 23 miles of the river.

In particular, consideration has been given to a small area draining into the Holbeck or River Robert which appeared to differ in character from the rest of the area.

A meeting of owners and occupiers of land in the Holbeck district together with other interested persons was held when it appeared that the view locally was that it would be preferable to make a separate district of the Holbeck area rather than include it in a district which should comprise the lowlands of the River Ure generally.

The Catchment Board adopted this view and a scheme has therefore been placed on deposit for the formation of an internal district to be known as the Holbeck Internal Drainage District, having an area of 530 acres, in the parishes of Givendale, Bishop Monkton, Burton Leonard, Copgrove, and Westwick.

EXTENSIONS OF EXISTING DISTRICTS.

Dun.

As was reported in the last Annual Report the question of extending the boundaries of the Dun Drainage District is one which has given the Commissioners and the Catchment Board matter for serious consideration for some time. Finally an area was agreed upon which in the opinion of both bodies came within the description of land described in Section 1 of the Land Drainage Act, 1930 as proper to be brought within an internal drainage district, i.e. "such areas as will derive benefit or avoid danger as a result of drainage operations."

The proposed added areas consist mainly of strips of land situated along the south eastern and western boundaries of the district, and amount to 4,500 acres in all.

The Catchment Board therefore placed on deposit a Scheme together with a Map showing the proposed added area.

At the same time opportunity was taken by the Scheme to reorganise the Drainage Board and bring its procedure in line with the provisions of the Land Drainage Act, 1930.

The Ministry in view of the numerous objections which were received to the Catchment Board's proposals decided to hold a Public Local Inquiry in the matter. (Incidentally it may be mentioned that this is the first Inquiry of such a nature which has been deemed necessary by the Ministry in any of the numerous schemes which the Catchment Board have submitted to them).

The principal objections taken were that the proposed added areas had not in fact received benefit from drainage operations. It was however pointed out to the Inspector who conducted the Inquiry that the grounds upon which lands should be brought within internal drainage districts were not only that they actually received benefit but that they avoided danger as a result of drainage operations.

A strong contention was also put forward that "drainage operations" in the Section only referred to drainage operations carried out by internal boards and did not include any work carried out by the Catchment Board. This view was contested on behalf of the Catchment Board who are awaiting the result of the Inquiry with considerable interest.

River Kyle.

The Ministry have now issued their order for the extension of the River Kyle Drainage Board whereby to the original area of 2,000 acres adjacent to the River Kyle which discharges into the River Ouse above Newton-upon-Ouse, there has been added a further area of about 18,000 acres.

The new Board held its first meeting on the 26th April and has entered on its task of getting out a valuation list of the new area with commendable zeal. They have in addition availed themselves of the grants offered by the Government for drainage work by submitting a Scheme to the Ministry for clearing and sludging approximately fifty-four miles of main watercourses at an estimated cost of £1,700.

Selby Dam.

The Selby Dam Drainage District was formed under the Selby Dam Drainage Act 1885 and comprises about 14,500 acres.

There are however several areas immediately adjoining which it was felt could properly be included in the district, amounting in all to 950 acres.

The Catchment Board decided therefore to submit a Scheme to the Ministry for the district to be extended accordingly.

Before doing so however they conferred with the Drainage Board and regretted to find there was not agreement with them on all points as the Internal Board objected to the inclusion of certain parts of the proposed added area and were of opinion that it would be better to make a separate district of them.

The Catchment Board while giving sympathetic consideration to the Internal Board's suggestion came to the conclusion that the Scheme they had proposed was the most suitable under the circumstances.

The Scheme was accordingly submitted to the Ministry and duly placed on deposit when numerous objections were received.

In as much as the decision which the Ministry come to in the case of the proposed Dun extension previously referred to will apply to many of the objections taken to this Scheme the Board have decided to await such decision before proceeding further with the matter.

Went.

The Ministry have now issued their Order for the extension of the Went Drainage District whereby the remainder of the lowland area of the River Went which is a tributary of the River Don has been added to the district bringing its total acreage up to 19,100.

At the same time opportunity was taken in the Order to amend the provisions of the Went Act relating to the qualification of members of the existing Drainage Board and the election of new members so as to bring them in line with the procedure set up by the Land Drainage Act, 1930.

The new Board which consists of fifteen members held its first meeting on the 17th November, 1938 when it was reported that the valuation of the added area was practically complete and a programme of works to be carried out forthwith was agreed upon.

Wistow Cawood and Selby.

A Scheme has been prepared for the extension of the Wistow Cawood & Selby Drainage District by adding thereto 300 acres.

The proposals were submitted to the existing Board who have indicated entire agreement with them.

The Scheme was accordingly placed on deposit when certain objections were received.

On this case, as in the case of the proposed Selby Dam extension, the findings of the Ministry in the Dun District proposed extension will have a bearing, so until such findings are known the Catchment Board have decided to hold in abeyance their proposals for extending this district.

CONFERENCE WITH INTERNAL DRAINAGE BOARDS.

The Board have found that the annual conferences they have held during the past three years with representatives of Internal Drainage Boards has proved of increasing value and interest.

The fourth annual conference was held during the year under review when no fewer than forty-two Internal Drainage Boards intimated their intention of being represented and many interesting matters were discussed.

A report of the conference appears in the Appendix to this Report.

**INSPECTION OF
INTERNAL DRAINAGE BOARDS' WORKS.**

The Board have noted with satisfaction the considerable progress which has been made by nearly all the Internal Drainage Boards within the Catchment Area in securing the efficient drainage of their district, and it was felt that it would be a matter of great interest and serve a useful purpose if an inspection of work carried out by some of the Boards which was typical of the whole could be arranged.



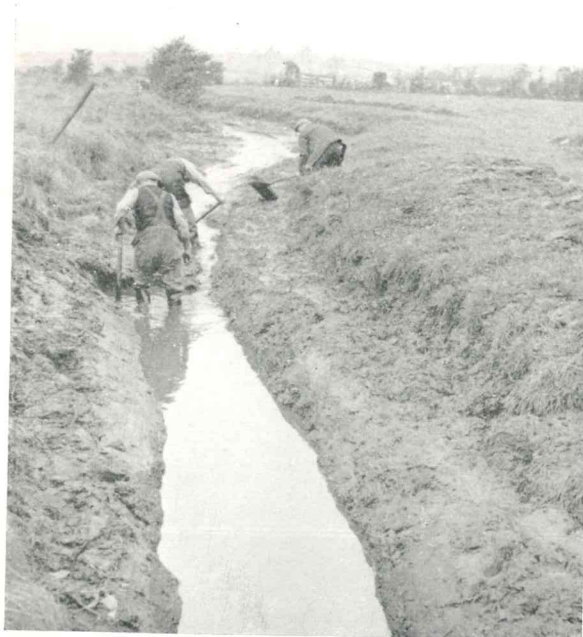
**Acaster Internal Drainage District.
Old Windpump.**



**Acaster Internal Drainage District.
New Windpump.**



**Dearne & Dove Internal Drainage District.
Granewell Dyke before clearing.**



**Dearne & Dove Internal Drainage District.
Granewell Dyke after clearing.**

An inspection was therefore held by the Internal Districts Committee of the Board when they visited the River Foss District and saw work being carried out by the Foss Board on the River Foss.

They then proceeded to Acaster and inspected the pump which had been erected by the Acaster Board for the purpose of draining Acaster Ings.

Afterwards an extended visit was paid to the Rye district where the Rye drain clearing scheme being carried out on the Acland Beck at Ryton and the schemes on the River Seven and Slingsby Carr Cut were inspected.

In each case representatives of the Internal Drainage Boards concerned were present and it was felt that the inspection had been of an instructive and informative character.

SUPERVISION OF INTERNAL DRAINAGE BOARDS.

Internal Drainage Boards are increasingly taking advantage of the services of the Catchment Board on both engineering and legal matters. During most of the year covered by this report two engineering assistants have been exclusively employed on work for the Internal Drainage Boards. In September a third engineering assistant was appointed for this work.

The following is a brief description of special engineering work carried out by Catchment Board officials. It must be appreciated, however, that in addition to the work described below, ordinary supervision, investigation of complaints, tabulation of returns etc. are carried out by the Catchment Board Staff.

Acaster Drainage Board.

The design and supervision during erection of a windmill pump erected at Acaster Malbis was carried out by the Board on behalf of the Drainage Board. Illustrations of the old and new pumps are shewn on page 25.

Improvement schemes have been prepared for three main drains in this area, involving a survey of the drains and preparation of the necessary plans.

Ainsty Drainage Board.

Improvement schemes for three main drains in this district have been prepared. The work has been commenced and is being supervised.

Airmyn Drainage Board.

A new outlet into the River Aire has been designed. This involves the laying of a 42 inch concrete tube through the bank, fitted with cast iron flap valve on its outlet into the River Aire. The work has necessitated the use of steel sheet piling.

Gowick Drainage Board.

This Board requested the advice of the Catchment Board as to what steps should be taken to improve the Carr Drain which is an important watercourse of the district.

A survey of the drain was made and an improvement scheme prepared. The work has been carried out by the use of a small dragline excavator, the whole scheme being supervised whilst in progress.

Dearne and Dove Drainage Board.

One of the major difficulties in this area is due to mining subsidence and the existence of unworked barriers beneath the main river and main drains, and it is essential that there should be the closest collaboration between the Catchment Board and the Drainage Board in the preparation and carrying out of any scheme of drainage improvement. Consequently the Drainage Board requested that the Catchment Board should prepare improvement schemes for dealing with the drainage of the area. This has been done and the schemes have been approved by the Ministry for grant purposes.

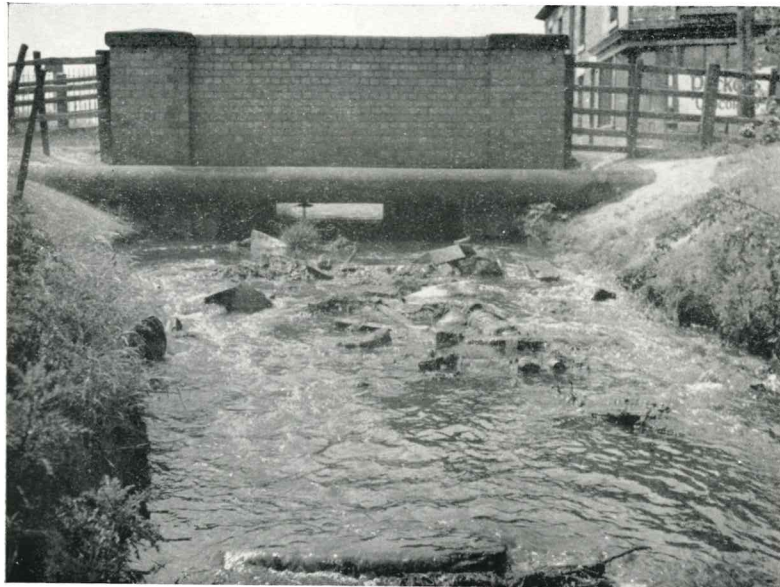
During the current year clearing, widening, and deepening works were carried out on the Ings and Carr Dykes, the Knoll Beck, Bulling Dyke and River Dove, these works being rendered possible in most cases by the lowering of the water level in the main river. In the case of the former drains a considerable area in the neighbourhood of Wath-upon-Dearne and Bolton-upon-Dearne was benefited, whilst the work on the Bulling Dyke and River Dove benefited the lands known as Wombwell Ings at Broomhill which were previously liable to frequent flooding and were waterlogged throughout the year.



**Dearne & Dove Internal Drainage District.
Bulling Dyke. Trench for Culvert under Broomhill Bridge.**



**Dearne & Dove Internal Drainage District.
Bulling Dyke. Forms for culvert shuttering.**



**Dearne & Dove Internal Drainage District.
North Dyke before clearing.**



**Dearne & Dove Internal Drainage District.
North Dyke after clearing.**

In the carrying out of this work it was necessary to deepen the Bulling Dyke by five feet in the neighbourhood of Broomhill, a barrier of coal having been left unworked in the locality, to construct a 4 ft. diameter culvert beneath the main road bridge, and to reconstruct the embankment of the River Dove.

The carrying out of these works was supervised by the Catchment Board staff, and this portion of the scheme has benefited considerably an area of about 140 acres. Works in the above districts are shown in photographs on pages 26, 29 and 30.

Marston Moor Drainage Board.

This Board requested the advice of the Catchment Board as to what steps should be taken to improve the drainage of an area near Rufforth. A survey of the main watercourses in the area was carried out and an improvement scheme prepared.

In addition to this work surveys of two other important watercourses in the district have been made and improvement schemes prepared. Work has commenced on all these schemes and is being supervised.

Ouseburn Drainage Board.

Improvement schemes have been prepared for four main drains in this area. The work has been commenced on these schemes and is being supervised.

Reedness and Swinefleet Drainage Board.

A survey of the Foulsey Dyke in this district has been carried out and an improvement scheme prepared.

River Foss Drainage Board.

The above Board are at present carrying out an improvement scheme on the River Foss, estimated to cost £6,000. The work, which was commenced in 1937, will take approximately three years to complete. A dragline excavator has been hired to the Board and also locomotive, tip wagons and track. The work is at present in progress and is being supervised. Typical views of the channel before and after improvement are shown on page 33.

River Wiske Drainage Board.

This is a comparatively new Board and commenced operations in 1937.

Altogether four improvement schemes have been prepared involving the improvement of Brompton Beck, the River Wiske and various small watercourses. The work is at present in progress and is being supervised. The improvement scheme on the River Wiske is being carried out by a dragline excavator hired from the Catchment.

River Kyle Drainage Board.

As previously stated in this Report this District has been extended from 2,000 acres to approximately 20,000 acres during the year under review.

The new Board requested the advice of the Catchment Board as to what works should be undertaken during their first year of operation. A comprehensive improvement scheme was prepared involving fifty-four miles of main drains. The work has been commenced and is being supervised.

Rye Drainage Board.

A survey of the Costa Beck in this area has been made and an improvement scheme prepared which is estimated to cost £6,000. The scheme has been sent to the Drainage Board for their consideration.

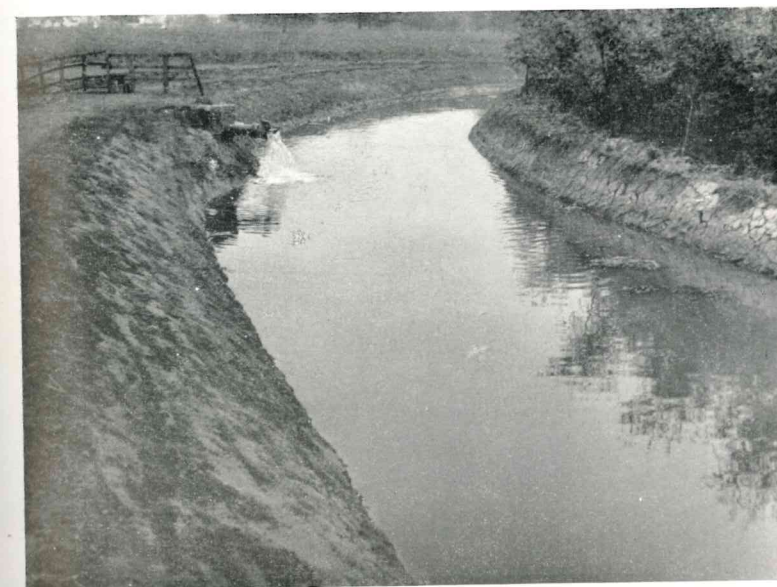
In addition to the above work improvement schemes have been prepared for other watercourses in the area estimated to cost £715. Work on these smaller schemes has been commenced and is being supervised. Illustrations of bank erosion and protection are shown on page 34.

Upper Swale Drainage Board.

Improvement schemes have been prepared for various watercourses in the Parishes of Kirby Fleetham, Scruton and Kiplin. Work has been commenced in the Kirby Fleetham area.



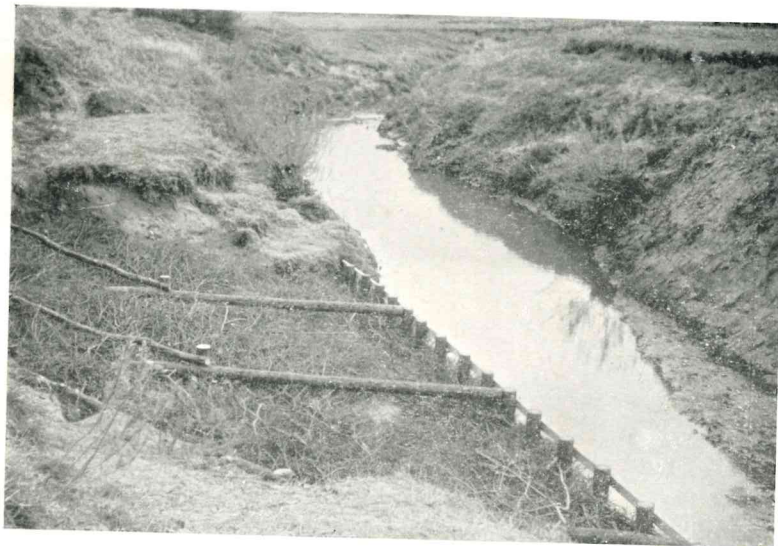
**Foss Internal Drainage District.
River Foss near Strensall before clearing.**



**Foss Internal Drainage District.
River Foss. Typical example of the improved channel.**



**Rye Internal Drainage District.
River Seven. Eroded bank.**



**Rye Internal Drainage District.
River Seven. Protection for bank.**

West Derwent Drainage Board.

A survey of Scarcemoor Dyke has been carried out and an improvement scheme estimated to cost £360 prepared. Work on this scheme has been commenced and is being supervised.

GRANTS TO INTERNAL DRAINAGE BOARDS.

The Catchment Board are glad to be in a position to report that the policy of the Government in giving grants to internal drainage boards on approved schemes of work has been continued during the present year on similar conditions to those in force last year.

The Ministry stated that the necessity of minimising any disturbance of normal agricultural operations was still paramount, and that the following conditions are again applicable :—

- (1) Work will be confined to the winter months (15th October to 30th April), and this period will only be extended in exceptional cases, for example, where schemes have been unavoidably delayed by bad weather, etc.
- (2) The wages paid to unskilled men will continue to be based generally on the local agricultural rate, except where in the case of schemes in the vicinity of large towns or industrial areas higher rates are general, when the rate of wage will be that commonly recognised in the district for the type of work involved.

The rate of grant received is 33½%, with an increase to 50% in cases where the installation of pumping plant or other constructional work involves the use of costly material. Schemes including drainwork and the provision of a pumping station are, if approved, eligible for a grant of 33½% in respect of the former work and 50% in respect of the latter work. It is to be observed that schemes comprising annual weed cutting operations are not eligible to be grant-aided.

The following is a complete list of the schemes of drainage works by internal drainage boards within the Catchment Area which have received the Ministry's approval up to the end of the period covered by this Report :—

Name of Drainage Board.	Description of Scheme	Estimated Cost .	Amount of Estimated Grant.
		£ s. d.	£ s. d.
Acaster Internal Drainage Board.	Provision of modern wind-mill and pump.	150 0 0	75 0 0
Ainsty Internal Drainage Board.	Piling Hole Beck.	130 0 0	65 0 0
Airmyn Internal Drainage Board.	Construction of new drain; widening and deepening derelict drain.	800 0 0	370 0 0
Bedale Drainage Board.	Regrading Snape Main Cut.	85 0 0	28 6 8
Bishopsoil Internal Drainage Board.	Cutting, making and grading main drains.	120 0 0	40 0 0
Black Drain Drainage Board.	Widening and deepening drains.	1489 0 0	744 10 0
ditto.	Piling Beck Drain (Moor-ends, near Thorne).	453 9 1	226 14 7
Cliffe Internal Drainage Board.	Purchase of Pumps. Construction of outfall. Improvement of drains.	1118 0 0	495 13 4
Cod Beck Internal Drainage Board.	Cleansing of two main drains.	49 4 6	16 8 2
ditto.	Cleansing of Dugdale Brook and drain discharging into Cod Beck.	49 4 6	16 8 2
ditto.	Cleansing Paradise Beck.	55 0 0	18 6 8
ditto.	Removing obstructions in Willow Beck.	147 0 0	49 0 0
ditto.	Removing obstructions and cleansing Spital Beck.	36 0 0	12 0 0

Name of Drainage Board.	Description of Scheme.	Estimated cost	Amount of Estimated Grant
Dearne & Dove Internal Drainage Board.	Removal of bushes and regrading of drains.	340 0 0	113 6 8
ditto.	Construction of culvert in Bulling Dike.	165 0 0	82 10 0
ditto.	The clearing of trees etc., from the channels and widening and deepening of watercourses at Cudworth and Bolton-on-Dearne.	440 0 0	146 13 4
Dempster Internal Drainage Board.	Swang Drain Improvement.	153 0 0	51 0 0
Dun Drainage Commissioners	Installation of pumping machinery and regrading of drains.	5710 0 0	2855 0 0
Lower Aire Drainage Board.	To take out an old wood outfall and fix a new outfall; make up to bank level and cut out existing door, River "Aire," Newland, Nr. Selby.	99 6 0	49 13 0
Marston Moor Internal Drainage Board.	Works at Rufforth Hessay and Long Marston.	1000 0 0	456 13 4
Muston & Yedingham Drainage Board.	Deepening and regrading drains and reconstruction of bridge.	240 0 0	95 0 0
ditto.	Underpinning bridges and drain work.	581 12 9	234 16 9

Name of Drainage Board.	Description of Scheme.	Estimated cost.	Amount of Estimated Grant
Ouse & Derwent Drainage Board.	Improvement of Wood Close Drain, Barlby	150 0 0	75 0 0
Ouseburn Internal Drainage Board.	Clearing of four main drains in the district.	220 0 0	73 6 8
River Foss Internal Drainage Board.	Widening, deepening and regrading River Foss.	1650 0 0	550 0 0
ditto.	Widening and deepening River Foss.	1436 0 0	478 13 4
ditto.	Clearing and sludging watercourses.	1070 0 0	356 13 4
River Kyle Internal Drainage Board.	Clearing of main drains.	1700 0 0	566 13 4
River Wiske Internal Drainage Board.	Widening Brompton Beck etc. (Brompton Ings Scheme).	70 0 0	35 0 0
ditto.	Clearing and sludging of drains.	300 0 0	176 13 4
ditto.	Improvement of Brompton Beck.	240 0 0	80 0 0
ditto.	River Wiske Improvement.	400 0 0	133 6 8
Rye Internal Drainage Board.	Piling and backboarding Slingsby Carr Cut, repairing bank of River Seven, construction of groyne at Marton; piling bank at Sinnington.	320 0 0	160 0 0

Name of Drainage Board.	Description of Scheme.	Estimated cost.	Amount of Estimated Grant.
Rye Internal Drainage Board.	Clearing and sludging Ackland Beck, River Dove, River Rye and small water-course near Normanby. Repairs to flood banks of River Riccal.	300 0 0	100 0 0
ditto.	Widening Slingsby Carr Cut; new flood bank on River Dove; new cut in River Riccal etc.	640 0 0	213 6 8
Selby Dam Drainage Commissioners	Improvement of drains.	757 0 0	252 6 8
Snaith Internal Drainage Board.	Diversion of main drains. Laying of 30 in. concrete pipes under main road and construction of two manholes or inspection chambers.	55 0 0	18 6 8
Upper Swale Internal Drainage Board.	Improvement of various drains.	165 0 0	55 0 0
ditto.	Improvement of Mill Beck, North Beck, Morton Beck, and Howbeck Stell.	165 0 0	55 0 0
Went Drainage Trustees	Construction of flood retaining wall.	515 0 0	257 10 0
West Derwent Internal Drainage Board.	Piling and backboarding Cheesecake Drain.	360 0 0	180 0 0
ditto.	Clearing, regrading and widening Scarcemoor Dyke.	466 0 0	155 6 8
Wistow, Cawood & Selby Drainage Board.	Provision of Pipe drain.	231 14 0	77 4 8

In addition to the foregoing schemes notifications have been received from the Ministry of applications for approval of schemes as follows :—

Name of Authority.	Description of Scheme.	Estimated Cost.		
		£	s.	d.
Ainsty Internal Drainage Board.	Clearing and sludging etc., in the Parishes of Moor Monkton, Wilstrop, Tockwith and Bilton.	350	0	0
Cowick Internal Drainage Board.	Improvement of Carr Drain.	170	0	0
Dearne & Dove Internal Drainage Board.	The clearing of trees and other obstructions from the channels, together with the widening and deepening of the Small Bridge Dyke, Cudworth, of the Carr Dyke, Billingley and the Highgate Lane Dyke, Bolton-on-Dearne.	440	0	0
Dun Drainage Commissioners.	New Cut and Outfall (part of pump re-organisation scheme).	6470	0	0
ditto.	Raising banks of Smallholm and Tilts Drain an average height of 2 ft., by means of a concrete wall. The purchase of 627 acres of land on Thorpe Marsh for washland. Forming a spillway at Norwood in the bank of the Smallholm and Tilts Drain.	23390	0	0
ditto.	Re-arrangement of the Old Ea and Skellow Ings drains and abandonment of the Adwick-Bentley Mill Dike. Bank raising consequent on the additional flow in the Old Ea. Reconstruction of Tilts Bridge.	16176	0	0
Lower Swale Internal Drainage Board.	Clearing Pickhill Beck.	380	0	0
ditto.	Clearing Cundall Beck.	290	0	0
Marston Moor Internal Drainage Board.	Widening and regrading Rufforth New Cut and subsidiary dykes. Piling and sludging Long Marston Bog Drain. Clearing and sludging Hessay Dyke and piping approximately 7 chains of this dyke with 15 in. concrete pipes.	1000	0	0
Rye Internal Drainage Board.	Clearing Black Syke and Low Bottoms Drain.	75	0	0
Selby Dam Drainage Commissioners.	Providing and driving sheet piling.	75	0	0
Upper Swale Internal Drainage Board.	Clearing and sludging Fiddale Beck, North & South Lowfield Drains and Mill Beck (Kirby Fleetham).	230	0	0

ELECTIONS.

All drainage boards formed under the Land Drainage Act or to which the provisions of the Act have been made applicable are required to hold a triennial election and this year elections have been held by the following boards :—

Ainsty	Ouseburn
Appleton Roebuck and Copmanthorpe	River Foss
Cliffe	River Wiske.
East Derwent	Upper Swale
Lower Swale	West Derwent

As has been necessary in previous years, the Board have had to obtain Orders from the Ministry authorising the extension of the period of office of certain newly created boards who were not in a position to hold the necessary election at the right time. The Ministry to meet this situation have made Orders in the cases of the Lower Swale and Upper Swale Internal Drainage Boards.

BYELAWS.

The Board has repeatedly drawn the attention of the Internal Drainage Boards in their area to the advisability of exercising their power of adopting, subject to the approval of the Ministry, Byelaws to assist them in the more efficient administration of their districts, and are glad to note that various Boards are moving in the matter.

The following further Internal Drainage Boards have during the year adopted Byelaws made under the Land Drainage Act, 1930 :—

Acaster	Marston Moor
Cliffe	River Foss
Dun	West Derwent

DIFFERENTIAL RATING.

Provision is made in the Land Drainage Act, 1930 whereby any internal drainage board, after consultation with the Catchment Board, may, if having regard to all the circumstances of the case they think it is just so to do, make and levy differential rates in their district.

The following Boards have consulted the Catchment Board on this matter during the year :—

In addition to the foregoing schemes notifications have been received from the Ministry of applications for approval of schemes as follows :—

Name of Authority.	Description of Scheme.	Estimated Cost.		
		£	s.	d.
Ainsty Internal Drainage Board.	Clearing and sludging etc., in the Parishes of Moor Monkton, Wilstrop, Tockwith and Bilton.	350	0	0
Cowick Internal Drainage Board.	Improvement of Carr Drain.	170	0	0
Dearne & Dove Internal Drainage Board.	The clearing of trees and other obstructions from the channels, together with the widening and deepening of the Small Bridge Dyke, Cudworth, of the Carr Dyke, Billingley and the Highgate Lane Dyke, Bolton-on-Dearne.	440	0	0
Dun Drainage Commissioners.	New Cut and Outfall (part of pump re-organisation scheme).	6470	0	0
ditto.	Raising banks of Smallholm and Tilts Drain an average height of 2 ft., by means of a concrete wall. The purchase of 627 acres of land on Thorpe Marsh for washland. Forming a spillway at Norwood in the bank of the Smallholm and Tilts Drain.	23390	0	0
ditto.	Re-arrangement of the Old Ea and Skellow Ings drains and abandonment of the Adwick-Bentley Mill Dike. Bank raising consequent on the additional flow in the Old Ea. Reconstruction of Tilts Bridge.	16176	0	0
Lower Swale Internal Drainage Board.	Clearing Pickhill Beck.	380	0	0
ditto.	Clearing Cundall Beck.	290	0	0
Marston Moor Internal Drainage Board.	Widening and regrading Rufforth New Cut and subsidiary dykes. Piling and sludging Long Marston Bog Drain. Clearing and sludging Hessay Dyke and piping approximately 7 chains of this dyke with 15 in. concrete pipes.	1000	0	0
Rye Internal Drainage Board.	Clearing Black Syke and Low Bottoms Drain.	75	0	0
Selby Dam Drainage Commissioners.	Providing and driving sheet piling.	75	0	0
Upper Swale Internal Drainage Board.	Clearing and sludging Fiddale Beck, North & South Lowfield Drains and Mill Beck (Kirby Fleetham).	230	0	0

ELECTIONS.

All drainage boards formed under the Land Drainage Act or to which the provisions of the Act have been made applicable are required to hold a triennial election and this year elections have been held by the following boards :—

Ainsty	Ouseburn
Appleton Roebuck and Copmanthorpe	River Foss
Cliffe	River Wiske.
East Derwent	Upper Swale
Lower Swale	West Derwent

As has been necessary in previous years, the Board have had to obtain Orders from the Ministry authorising the extension of the period of office of certain newly created boards who were not in a position to hold the necessary election at the right time. The Ministry to meet this situation have made Orders in the cases of the Lower Swale and Upper Swale Internal Drainage Boards.

BYELAWS.

The Board has repeatedly drawn the attention of the Internal Drainage Boards in their area to the advisability of exercising their power of adopting, subject to the approval of the Ministry, Byelaws to assist them in the more efficient administration of their districts, and are glad to note that various Boards are moving in the matter.

The following further Internal Drainage Boards have during the year adopted Byelaws made under the Land Drainage Act, 1930 :—

Acaster	Marston Moor
Cliffe	River Foss
Dun	West Derwent

DIFFERENTIAL RATING.

Provision is made in the Land Drainage Act, 1930 whereby any internal drainage board, after consultation with the Catchment Board, may, if having regard to all the circumstances of the case they think it is just so to do, make and levy differential rates in their district.

The following Boards have consulted the Catchment Board on this matter during the year :—

(a) Hatfield Chase Corporation.

The area administered by the Corporation and over which they have rating powers is situated for the most part in the River Trent Catchment Area. There is however a small rateable area within the River Ouse (Yorks.) Catchment Area.

Several attempts have been made by the Corporation to devise an equitable system of rating and their final proposals were that some relief should be afforded to the area within the Ouse Catchment Area.

They have therefore varied the existing Order by providing that the proportion which the amount per £ of annual value to be assessed upon the occupiers of hereditaments in this area should bear to the amount to be assessed on the occupiers of hereditaments in the sub-districts should be slightly reduced.

The Catchment Board approved of the proposal.

(b) Bishopsoil Internal Drainage Board.

Last year the Bishopsoil Drainage District was enlarged by bringing in a further 914 acres. When negotiations for bringing this about were on foot it was realised that it would only be fair if some arrangement was made with regard to the rating of the added area owing to certain privileges of drainage they had hitherto enjoyed. It was not possible in the Order extending the district to make such provision, but an understanding was reached with the existing Board whereby they would give attention to this matter.

After due deliberation the Drainage Board came to the conclusion that under all the circumstances an Order should be made whereby the existing district should continue to pay the full rate, a portion of the added area a half rate and the remaining portion a quarter rate, such an arrangement commending itself to all parties.

The Catchment Board approved of the proposal.

(c) Lower Swale Internal Drainage Board.

Proposals have been received from the Lower Swale Internal Drainage Board stating that they had passed a resolution to the effect that the portion of their district south of the Thornton Bridge together with an area between Topcliffe and Skipton Bridge should form a separate area for rating purposes, and owing to special circumstances that the rate in such area should only be half the rate levied in the rest of the area.

Having given the matter their careful consideration the Catchment Board regretted they could not support the proposal and they have so informed the Ministry and the Internal Board.

FISHLAKE INTERNAL DRAINAGE BOARD.

There is no Internal Drainage Board and District in the Catchment Area over which the Catchment Board have been required to exercise more constant supervision than the Fishlake Internal Drainage Board and District. This Board was set up in 1933 and has been entrusted with the management of a district comprising about 3,000 acres. There are about fifteen miles of main drains in the district and the Catchment Board have experienced considerable difficulty in getting the Internal Board to undertake the maintenance of these drains as they preferred the alternative method of serving notices under Section 35 of the Land Drainage Act, 1930, on the occupiers of lands adjacent to the drains to maintain them.

It has been repeatedly pointed out to the Internal Board that they are not likely to obtain satisfactory results by this method of procedure, and as a result of a great deal of pressure the Board are glad to be able to report that they have been able this year to persuade the Internal Board to take over the main drains and maintain them themselves.

It has also been fully explained to the Drainage Board that a great deal of the work upon which they are engaged could be made the subject of an application to the Ministry for a grant and the Internal Board have also undertaken to take into consideration the preparation of the necessary schemes.

A particularly troublesome matter affecting this Board and also the Dun Drainage Commissioners is the Clay Dike which is a large drain $3\frac{1}{2}$ miles in length which eventually discharges into the River Don through Blackshaw Clough.

A difficulty has always existed as to who is legally liable to maintain the drain which is not within any Internal Drainage District. The Dun Drainage Commissioners are however empowered but are not compellable to maintain it.

About 2,000 acres of the Dun Drainage District drains into it as does also a slightly smaller area of the Fishlake Drainage District. It was obvious therefore that here was a case in which the two Drainage Boards should co-operate and each contribute to the cost of maintaining the drain.

The Catchment Board have therefore met the two Drainage Boards when conflicting proposals were put forward by each of them. It is hoped however that eventually a working arrangement will be come to with the result that the Clay Dike will be properly maintained.

HIRE OF MECHANICAL PLANT TO INTERNAL DRAINAGE BOARDS.

To enable Drainage Boards to make more use of mechanical plant the Catchment Board have purchased three small dragline excavators for hire to them. Tip wagons, locomotive, light railway track, winches etc., have also been hired to Internal Drainage Boards to carry out various schemes.

LOWLAND AREA.

The following schedules show the progress which has been made in bringing all lands within the Catchment Area, likely to benefit or avoid danger as a result of drainage operations, under the jurisdiction of internal drainage boards :-

INTERNAL DRAINAGE BOARDS IN EXISTENCE WHEN THE CATCHMENT BOARD WAS CONSTITUTED on the 13th May, 1931.

NAME OF BOARD.	Area of Acres. District	District Drains to	Observations
Acaster	3245	Ouse & Wharfe	Part of.
Adlingfleet and Whitgift	1469	Ouse	
Airedale	2905	Aire	
Airmyn	2310	Ouse and Dutch River	
Aldborough	1080	Ure	Ministry gave area as 5557.
Appleton Roebuck and Copmanthorpe	4711	Wharfe	
Bellasize	1153	Ouse	
Bishopsoil	3782	Ouse	
Cowick	2702	Don	
Dempster	2696	Ouse and Dutch River	
Dun	14500	Don	
Dunsforth	1165	Ure	
Goole Fields	2643	Ouse	Part of.
Greenoak	1383	Ouse	
Hatfield Chase Corporation	871	Dutch River	
Howden	3532	Ouse	
Hutton Buscel and West Ayton	1781	Derwent	(Amalgamated with Muston & Yedingham D.D. 9th Jan., 1933).
Kyle River	2039	Ouse	21,200 acres rated in 1931.
Lower Aire	18700	Ouse and Aire	
Muston and Yedingham	16413	Derwent	
Norton (or Went)	4776	Don	
Ouse and Derwent	30000	Ouse	
Reedness and Swinefleet	4877	Ouse	
River Crimble	1502	Nidd	
River Tutt	1559	Ure	
Selby Dam	14500	Ouse	
Snaith	950	Aire	
Wilberfoss and Thornton Level	8200	Derwent	
Wistow, Cawood and Selby	5700	Ouse	
Total of 29 Districts	161144		

EXISTING INTERNAL DRAINAGE BOARDS WHOSE
BOUNDARIES HAVE BEEN EXTENDED
between 31st October, 1937 and 31st October, 1938.

NAME OF BOARD.	Area added to district. Acres.	District Drains to
Kyle River	18050	Ouse
Went	14324	Don
TOTAL	32374	

AREAS SURVEYED WITH A VIEW TO SETTING UP
NEW INTERNAL DRAINAGE BOARDS.

Name of Proposed Board.	Area Acres.	District Drains to
Holbeck	530	Ure
Bulmer	2150	Derwent
Total	2680	

EXISTING INTERNAL DRAINAGE DISTRICTS
SURVEYED WITH A VIEW TO ALTERATION OF
BOUNDARIES.

NAME OF BOARD.	Proposed to be added to existing District. Added Acres.	District Drains to River
Dun	4500	Don
Greenoak	2208	Ouse
Howden	1902	Ouse
Reedness & Swinefleet	294	Ouse
Selby Dam	2000	Ouse
Wilberfoss and Thornton Level	20233	Derwent
Wistow, Cawood and Selby	300	Ouse
TOTAL	31437	

A list of Internal Drainage Boards operating in the Catchment Area appears in the Appendix.

Section III.—MAIN RIVERS AND WORKS.

MAIN RIVER SYSTEM.

During the year an application has been received from the Rye Internal Drainage Board requesting the Catchment Board to apply to the Minister of Agriculture and Fisheries to vary the Map of the Catchment Area and to add to the main river that portion of the River Rye which lies between its confluence with the River Riccal and the point to which it is at present main river, i.e. at its junction with the River Seven, a distance of $3\frac{3}{4}$ miles.

The Rye Internal Drainage District is one of the largest within the Catchment Area, comprising over 30,000 acres.

In their letter to the Board the Internal Board pointed out that the three principal rivers within their district were the Rivers Rye, Dove and Seven, and that all of them were channels for conveying upland water from a watershed several times larger than the area of the Board's district, and that the length of the rivers, the extent of the flood banks, the constant erosion and the damage from floods which arose year in and year out were liabilities which were too great a burden for the drainage district.

They therefore requested the Catchment Board to adopt as main river a further 4 miles of the River Rye, i.e. from the point where it then ceased to be main river up to its junction with the River Riccal. The Board were impressed by the arguments put forward and after an inspection of the length in question by the Main Rivers and Works Committee, by a majority vote decided to apply to the Minister to extend the main river accordingly.

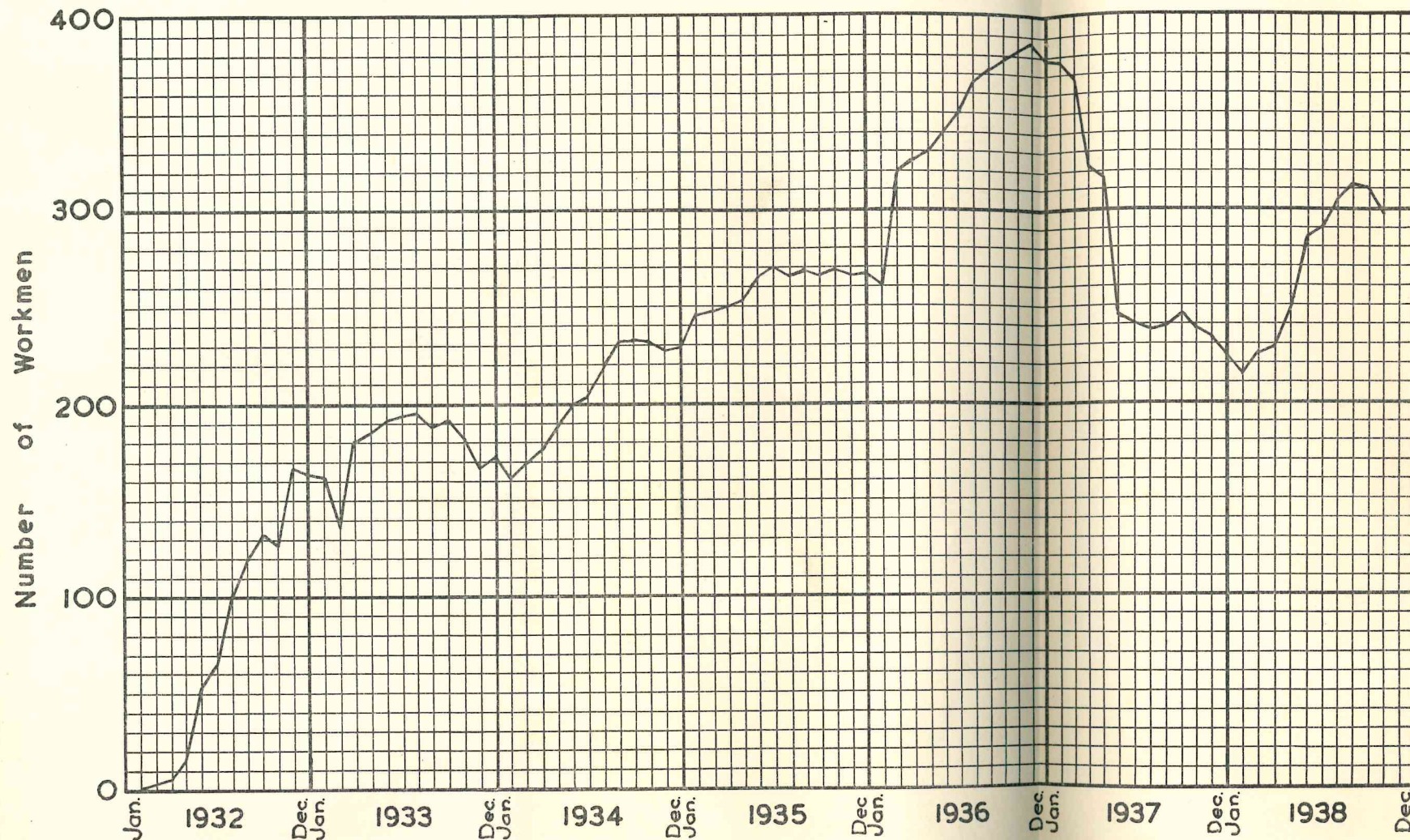
The Minister after carefully considering the arguments addressed to him for and against the proposal decided to approve of the application and has caused the Map of the Catchment Area to be amended accordingly.

The "main river" of the Catchment Area as shown on the official map of the area is now as follows :—

From	To confluence with	Length Miles	Water-shed Area Sq. Miles
Bedingham Bridge	Ouse	50½	757
Over Riccall	Derwent	11½	
Peirhead	North Sea	5	12
Sturminster Newton Bridge	Ouse	40½	569
Wensley	Swale	44	383
Wetherby Bridge	Ouse	43	254
Wilton Bridge	Ouse	48	408
Wymsha Bridge	Ouse	77	506
Yarmouth	Aire	47½	361
Yarlington Bridge	Ouse	45½	714
York	Don	21½	
Yorkshire	Don	23½	
York and Ure	Trent	56	235
		513½	4,199

DIAGRAM SHOWING NUMBERS OF MEN EMPLOYED

From January 1932 to October 1938.



WORKS — GENERAL.

Works carried out by the Board during the year are classified under two main headings:—

1. New Works and Improvement of existing works.

2. Maintenance of existing works.

The work made with all works during the year has been hindered by the weather conditions during the spring and summer months being very favourable.

During the year the cost of materials and plant has risen and there has been no reduction in the cost of labour to the Board's employees.

The work carried out is therefore materially less than was contemplated when the original estimates were made several years ago when the costs of materials, labour and plant were about 25 per cent lower than they are now.

It is still very difficult to find and to retain labour, a fact which is particularly noticeable in the engineering trades.

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TRACTOR MOWER.

(By courtesy of the Yorkshire Post, Leeds.)



River Don.
Widening and loading tip-wagons.



River Don.
Formation of Embankments.

The volume of maintenance work is steadily increasing as the works of the Board are becoming better known, and it is becoming increasingly difficult to satisfy the innumerable claims for attention to be given to the 1,000 miles of river banks under the control of the Board.

A problem which has caused considerable anxiety is mowing of grass and weeds on long lengths of flood banks. To be completely effectual this work should be completed within about two months as otherwise the weeds seed and blow on to adjacent agricultural land. The result has been in the past that a large number of men have during the most favourable months of the year had to be diverted from normal maintenance works and concentrated on scythe work in which many are by no means skilled or efficient.

The problem had assumed such serious proportions that it was found necessary to go into the question of whether or not power driven plant could be employed.

After considerable research, a special mowing equipment fitted to a tractor was found eminently suited to carry out the work, and this was acquired. As a result, the two men employed to operate it have replaced large gangs of scythe men and this has permitted them to be employed on other bank work in which they are specially skilled. An illustration of this machine is on page 49.

To deal with parts of the banks, inaccessible to the larger machine, several small power driven mowers have also been purchased and they also have proved efficient and economical.

The desirability of frequent mowing of the flood banks cannot be over-estimated as not only does it prevent the seeding of weeds, but also promotes the growth of a thick non-erodible turf and facilitates the inspection of banks subject to damage by vermin.

The more important works carried out during the year are described in the following pages—

NEW WORKS AND WORKS OF IMPROVEMENT.

(1) RIVER DON (Lower Section) and DUTCH RIVER.

The primary object of this portion of the improvement scheme is to increase the capacity of the River Don to such an extent that the river will be capable of discharging the flood flow amounting to 12,000 cubic feet per second, compared with the original capacity of 5,000 cubic feet per second. This

increase in discharge capacity of about $2\frac{1}{2}$ times is being effected mainly by widening, easing of bends, removal of obstructions, and by the raising of the flood embankments.

(a) Brief description of Scheme.

From Doncaster to the Aqueduct at Kirk Bramwith, the improvement in the discharging capacity is being obtained by widening and deepening the existing channel where practicable, together with the easing of bends and the removal of obstructions, the cutting of main river diversions at Waite House, Barnby Dun and Wilsick House and a very considerable raising of the river flood embankments throughout the length.

Between Kirk Bramwith and Jubilee Bridge, Thorne, there are further river diversions at Stainforth, Fishlake and Waterside but whilst small cradge banks are retained alongside the river, the main flood banks will be set back several hundred feet from the main channel thereby forming a berm or winter channel for floods.

From Thorne to Goole the embankments are again adjacent to the river and the improvement is being effected mainly by widening and embanking.

The scheme also provides for the training of bends, protective piling and stoning, the construction of new road bridges and reconstruction of existing road and railway bridges. The presence of roads, railways, canals and houses adjacent to the channel necessitate the construction of several miles of retaining walls.

(b) Construction of embankments.

The above scheme was adopted after lengthy negotiations with railway, navigation and other authorities, and differed materially from that originally proposed. Whilst the revised scheme included for a considerable widening of the river the amount of material obtained therefrom was frequently not sufficient to form the extra large flood embankments required. This applied particularly to the length of river between Goole and Thorne where a large volume of material is required to form the new flood embankments. Where sufficient material is not available from the channel widening, it is usually obtained from a spoil pit from which it is excavated by dragline excavator and loaded into tip wagons which are hauled to the site by diesel locomotive.

Similar methods are adopted for conveying the excavated spoil to the site of the new flood embankments.



**River Don.
Tractors and Carry-All Scrapers.**



**River Don.
Bulldozer in operation.**



**River Don.
Before formation of Embankment.**



**River Don.
Embankment nearly completed.**

The material is spread by hand and consolidated by power rammers, and on completion the embankment is sown down with grass seed. This work is illustrated on page 50.

An alternative method which is now being employed when the site is suitable is by using tractors and carry-all scrapers such as shown on page 53.

The plant consists of a 62 h.p. Caterpillar Tractor hauling the scraper mounted on giant pneumatic tyres. As shown on the photograph, the plant is in the hauling position, and when it is required to deposit the load the tractor driver, by operating the winch on the tractor, lifts the front apron and forces the load out by moving forward a baffle plate.

By proper control of the winch the material can be deposited in thin layers in any position and of the thickness required, and this coupled with the constant travelling of the plant over the deposited material makes for excellent consolidation.

The plant is self loading, being equipped with a cutting blade in the centre which can be lowered or raised, thereby controlling the depth of cut. The material is forced into the body of the scraper by the forward movement of the machine.

Two such units have been acquired and have proved very successful, having excavated, hauled, deposited and consolidated over 100,000 tons of material during the six to eight months since their purchase.

(c) Cowick Road (North) Embankment.

By November 1937 the excavation on the left bank of the river had proceeded as far as Jubilee Bridge, whilst the embankments had only been formed as far as Went Sluice. This lapse in time between these two operations is essential in order to allow the deposited material to dry out before it is formed into bank. When therefore the material was in a sufficiently dry state, No. 1 Excavator was travelled on to the top of the spoil bank and operating as a dragline rehandled the material to form the new flood embankment, the material being distributed by means of locomotives and tip wagons. The bank was completed by this method as far as a point 300 yards south of Oak Lane. At this point the embankment had to be constructed some distance away from the channel and the whole of the excavated spoil had consequently to be moved back. This work was carried out by means of bulldozers fitted to Tractors Nos. 1 and 2. These bulldozers which are shown in operation on page 53 consist of a steel blade about 12 feet in length carried in front of a Caterpillar

Tractor of about 40 h.p. The blade can be rapidly raised or lowered by means of a power driven winch. This plant has proved extremely useful for levelling, and transporting short distances large quantities of material, also for turf stripping and similar operations.

From this point as far as Ivy House there was a very considerable shortage of material for the formation of the new flood embankments and material had therefore to be obtained from a spoil pit.

The excavation and transportation of the material was carried out in the first place by means of a 62 h.p. Caterpillar Tractor and Le Tourneau Scraper, and completed by No. 1 Excavator loading the material into tip wagons. Photographs on page 54 show the length of bank before commencement of the work and the new embankment nearly completed.

It will be noted that the new embankment has been constructed immediately behind the existing bank, and the extent of the raising and strengthening will be observed. After the embankments have been completed they will be sown down with grass seed.

(d) Retaining Wall at Ivy House.

As previously mentioned several miles of retaining walls of varying sizes will have to be constructed as part of the improvement scheme where the site does not permit of the construction of embankments for the full width. The first of these walls has recently been completed near Wormley Hill Lane, and the various stages of the work are shown in photographs on pages 57 and 58.

The primary object of these walls is, of course, to retain the flood water in the river, and it is essential therefore that there should be no percolation beneath the base of the wall. Some trouble had been experienced at this point in the past through this cause, and it was necessary therefore that the existing bank should be made water tight prior to the construction of the retaining wall. This was carried out by driving a line of sheet steel piling in front of the site of the proposed wall.

The concrete work was carried out expeditiously by use of special shuttering constructed at the Board's Workshop at Thorne.

(e) Cowick Road (South) Embankment.

Above Wormley Hill Lane angledozers and scrapers continued with the distribution of the excavated spoil, but on the



**River Don. Ivy House.
Site of Retaining Wall.**



**River Don. Ivy House.
Pile-driver on site.**



**River Don. Ivy House.
Sheet steel piling for Retaining Wall.**



**River Don. Ivy House.
Retaining Wall completed.**

whole of the left bank from Ivy House upstream as far as Thorne there was a gross shortage of some 40,000 tons of material for the formation of the embankments. It was decided to obtain the major part of the material from the widening of the river above Jubilee Bridge, the material being excavated by means of No. 7 Excavator and loaded into tip wagons and conveyed varying distances up to $1\frac{1}{4}$ miles to the site of the new flood embankments.

Owing to the length of haul and the volume of material to be handled four trains of tip wagons were used, and during the last six months, about 33,000 tons of material have been obtained from this source.

On the opposite side of the river the widening has now been completed to a point 300 yards north of Jubilee Bridge. This work was carried out by No. 12 Excavator, 20,000 tons of materials having been removed during the year.

On completion of the work the machine was travelled back and employed on the construction of the new right embankment of the river.

(f) Thorne—New Bridge Embankment.

The construction of this embankment was commenced in 1937 and has now been completed as far as Hadds Nook Road. For certain lengths it was possible to utilise the material excavated during the widening of the river, and it was therefore only necessary to re-handle the material after it had dried out to its correct position.

For very considerable lengths, however, it was again necessary to obtain material from spoil pits and convey it to the site by railway track and tip wagons. In all a length of two miles of this embankment has now been completed, the work involving the excavation and placing in position of about 120,000 tons of material.

(g) Diversion at Waterside.

The excavation of this diversion was commenced in May, 1937, the work being carried out by Excavators Nos. 6 and 7. Apart from the removal of the end dams, the excavation of the channel is now complete, some 180,000 tons having been removed from the channel and placed behind the machines. As the site of the flood embankments is set back a considerable distance from the centre channel, the whole of the material has to be removed. The work is being carried out by means of tractors and scrapers, about 120,000 tons having been transported by this means to date.

(h) River Widening.

The river widening above Jubilee Bridge involved the removal of the existing flood embankment and it was therefore first necessary to construct the new flood embankment at the back thereof, the work being carried out in three stages. First the base of the bank was formed from surplus excavation from the Waterside Cut, and for this purpose a temporary bridge was constructed across the Sour Lane Drain and the material excavated and transported by tractor and scraper. In spite of the length of haul, which was between 200 and 450 yards, the single scraper transported 5,000 cubic yards in 150 hours, by which time the length of haul was becoming uneconomic.

The second stage was therefore to obtain the material from a borrow pit adjacent to the bank, and by thus reducing the length of haul, a 50% increase in output was obtained from the plant.

Finally the bank was finished off by means of No. 7 Excavator operating as a dragline and excavating from the same spoil pit. The widening of the river and easing of the bend could then be proceeded with and is shown in photographs on page 61.

Since the commencement of this work some 28,000 cubic yards of material have been excavated from this point by No. 7 Excavator, the whole of the material being loaded into tip wagons and hauled downstream to the site of the new embankment.

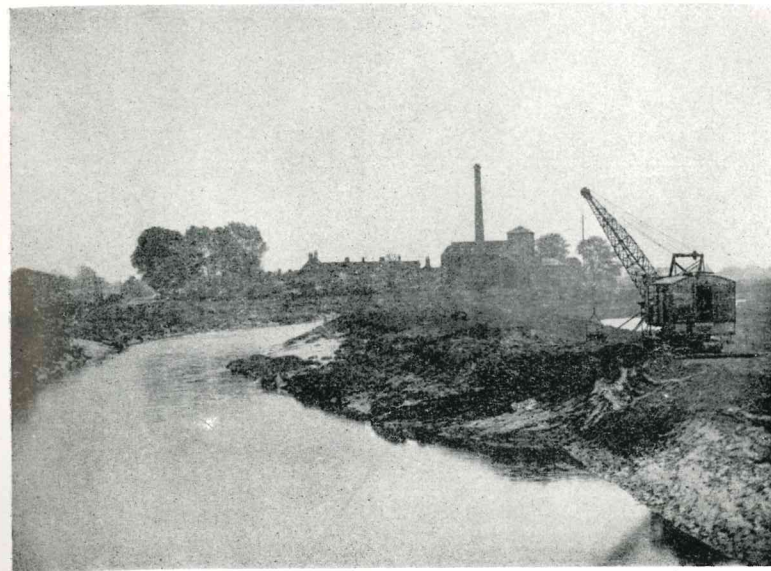
(i) Reconstruction of the Parapet Walls of Durham's Warping Drain Sluice.

Owing to the higher level of the new embankment on either side it was necessary to increase the height of the brick parapet walls of Durham's Warping Drain Sluice which is situated on the right bank of the River Don approximately two miles upstream from New Bridge.

On examination it was found that both walls were in poor condition, and it would be necessary to rebuild from the level of the crown of the arches.

The stone coping stones were therefore removed, the walls demolished, and any bricks capable of being re-used were set aside. A mass concrete slab was constructed at a level of six inches above the crowns of the arches and formed a footing for the new wall.

The new walls are of brick construction with stepped inner and vertical outer faces with stepped wing walls to



**River Don above Jubilee Bridge.
Before widening at bend.**



**River Don above Jubilee Bridge.
After improvement at bend.**



River Don above Jubilee Bridge.
20007





**River Don. Durham's Warping Drain.
During construction of walls.**



**River Don. Durham's Warping Drain.
Work completed.**

support the flanks of the new flood embankment. The stone copings removed from the original walls, were reset, and weep holes connected by pipes to a longitudinal drainage pipe line were formed through the landward face wall only.

The length of each wall inclusive of wing walls is 125 feet and each main wall is 4 feet thick at the base reducing by steps to 1 foot 6 inches thick at the top, while the height is 6 feet.

After the coping stones had been set, soil was filled between the walls and rammed to form the new embankment. This work is illustrated on page 62.

(j) Canal Overflow and Ice Disposal Outlet at New Bridge.

In the improvement of the bend at New Bridge, it was necessary to place a stone wall on its concave side to stabilise the channel and also to promote the necessary accretion of warp to render the flood embankment safe.

At one of the worst places in the bend, there was an outlet, through which the overflow from the canal was discharged into the river. The same structure provided a means for the discharge of ice from the canal into the river.

It was decided therefore to close the existing outlet and to provide upstream a new relief weir or ice overflow close to the river channel.

The new structure consists of a rectangular reinforced concrete culvert with a sloping invert and apron on the river face to form a chute for the discharge of ice. A chase is formed in the walls of the culvert to accommodate timber baulks for the control of the water level in the canal, the height of which may be increased by adding further baulks to prevent high tides or flood water entering the canal.

To ensure watertightness, the site of the culvert is surrounded by steel sheet piling of No. 1 G.B. section and the piling is continued towards the river and canal on each side to form wing walls, these walls being capped by a reinforced concrete cope.

The deck slab on which is set the new flood embankments, has a span of 8 feet 6 inches and is designed to carry the Board's largest excavators travelling over on timber mats placed on the new embankment.

The piling was driven from a steel frame equipped with a petrol winch and a one ton drop hammer. To avoid working the frame at two different ground levels (owing to the sloping invert and apron) the outer piles on the river face wall were lengthened by joining an extra temporary length

of pile by means of bolted fishplates to each pile before driving. These extra lengths were afterwards detached, and the permanent piles cut off to level.

After the pile driving was completed, walings were attached to the wing walls and tie rods placed and anchored back to steel plates formed of sheet piles sunk in the foreshore.

The reinforced concrete presented little difficulty as all bars were cut and bent on the site and the shuttering was constructed and erected in the Workshop before being taken to the site. Special care was necessary in the construction of the centering for the deck slab, as it was the heaviest portion of the structure and it had to be supported from the sloping invert.

A connection between the original canal overflow and the new structure was excavated. Finally the new outlet to the river was opened out, the side slopes stone pitched, and joined up with the stone wall. The completed structure is shown on page 65.

**(2) RIVER DON (Upper Section).
Rotherham Piling.**

The piling of the left bank of the River Don at the Rotherham Corporation Tramway Depot commenced on the 1st April, 1938.

The work consists of driving a steel sheet piled wall with reinforced concrete coping approximately 750 feet long. The piles are 27 feet 3 inches long and the finished top level is approximately the same as the roadway level at the Tramway Depot. The piles are held by tie rods of 2 inches and 3 inches diameter, secured to steel sheet piled anchorages with the exception of a length in front of the Tramway Shed where the tie rods are anchored into an inspection pit inside the Shed. See photograph on page 66.

The main piling plant used consists of one steam derrick crane of two tons capacity with rapid acting piling hammer and flexible steam pipe. This plant mounted on a pontoon carried out the steel sheet piling at Goole, but as the Rotherham piling was impossible from the water owing to the height of the piling, (see photograph on page 65) three bogies with rail wheels were constructed at the Board's Workshop at Thorne and the crane was assembled thereon.

A stationary derrick hand crane of two tons capacity was erected in the pile store yard and is used for the lifting of sheet piles, walings, etc., for transport to the steam crane.



**River Don. New Bridge.
Canal Overflow and Ice Disposal Outlet.**



**River Don. Rotherham.
Illustrating height of Piling.**



River Den. Rotherham.

The plant together with many items of a smaller nature has up to the present driven 303 piles forming 400 feet of wall.

All plant and materials were transported by canal from Goole to near the site, and transport and erection of plant on the site took a considerable time.

Piling was started on the 25th May at the downstream end of the work, and working upstream all operations including driving of anchorages and the setting of walings and tie rods are completed before the crane is moved.

The first 100 feet of piling was comparatively easy, as the space available permitted the crane rails to be laid on land without staging.

Beyond this length, however, the site is restricted by buildings and a roadway, and therefore the crane rails have to be mounted on a staging carried on timber king piles driven in the river. This staging shown in the photograph on page 69 is withdrawn in lengths on each upstream movement of the crane and reset ahead.

It is found that the greater proportion of the time spent is taken in driving, extracting, and setting the temporary stage, thus reducing the number of steel piles driven to 25 per week under the best conditions.

The preparations for the setting of the tie rods in the inspection pit were undertaken well in advance of the piled wall. For this purpose a compressor equipped with drilling tools was hired.

Openings about one foot square were driven through the inspection pit and main walls, and cement asbestos tubes were set to level for the gradient of the tie rods, the space between the main and pit walls being excavated and filled with concrete, with the tubes acting as cores through the concrete for 3 inch tie rods.

These anchorages are at centres of 21 feet and, in all, nine anchorages and tie rods are set in the shed, and ready for connecting to the steel piled wall.

The only anchorages which gave trouble were those under the roadway downstream from the shed, which had to be excavated and placed in position during the hours of least traffic entering the depot.

When completed 601 main steel sheet piles and 93 anchorage piles will have been driven and the total weight of steel in the work will be 320 tons. Further photographs are shewn on page 70.

(3) RIVER DERWENT.

(a) Channel Improvement.

A total length of $10\frac{1}{2}$ miles of the channel of the River Derwent from the confluence with the River Ouse at Barmby-on-the-Marsh to Cottingwith Ferry has now been improved by widening and deepening, a length of $1\frac{1}{2}$ miles of channel widening on the left bank and $2\frac{3}{4}$ miles of bank-forming on the right bank having been dealt with during the past year.

The work has been carried out by means of No. 8 and No. 3 Excavators which have deposited the excavated material on the banks. When the spoil heaps have dried out, an excavator which is equipped with a scraper plate, rakes down the soil to form a low and even mound which is re-sown with grass seed.

In some cases the landowner has agreed to this arrangement but in other instances the necessary area of land for the deposit of spoil has been purchased.

(b) Sutton Diversion.

The photographs on pages 73 and 74 show the diversion of the river which was carried out during the year at Sutton-on-Derwent. In the aerial view the long loop of the old channel which is cut off by the diversion is clearly seen and its position in relation to the new Elvington sluices may also be seen in the background. During the construction of the diversion, which took six months to complete, 58,000 cubic yards of earth, clay and gravel were removed by means of No. 8 Excavator, with the occasional assistance of No. 3 machine.

Spread mainly on the island formed between the old and the new channels, the excavated spoil was levelled down so that it may be brought back into full cultivation as early as possible.

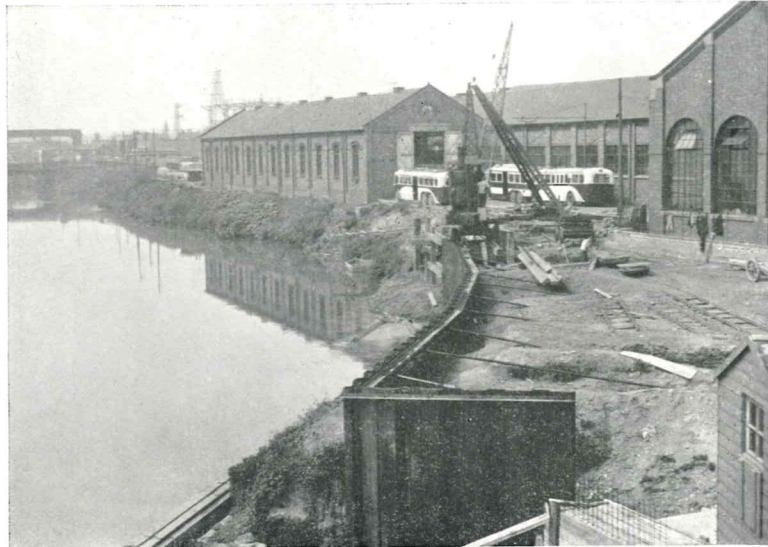
This diversion, together with the widening of the adjacent lengths of the new channel, will ensure that the full benefit of the new sluices at Elvington will not be lost owing to the undue backing up of the water on the downstream side.

(c) Elvington Sluices.

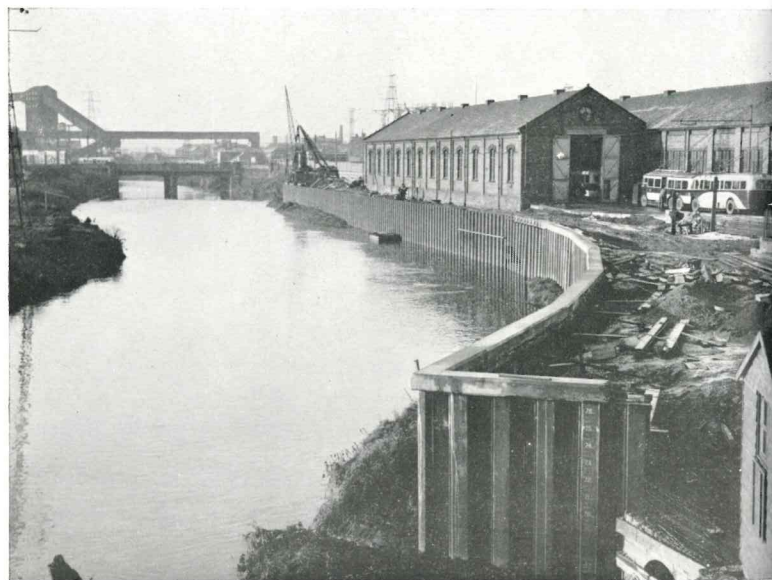
As stated in the last report, the old stone weir at Elvington has been removed and it has now been replaced by two automatic radial sluice gates which are the largest of their type so far erected in the British Isles. They will operate in such a way as to maintain a constant water level on



River Don. Rotherham.
Crane and rails mounted on staging.



**River Don. Rotherham.
Commencement of piling.**



**River Don. Rotherham.
Piling almost completed.**

the upstream side except in high floods. In future the severity and duration of floods upstream will thus be reduced by the new installation.

During the construction of the main sluices the river was diverted through the lock sluice which was completed last year, and a temporary dam was constructed above the old weir. This dam had to withstand a number of floods when the lock sluice was inadequate to take the whole flow of the river. On such occasions the dam then acted as a weir, the volume of water passing over it being sufficient almost to threaten its destruction. A substantial backing of earth protected by light sheet piling was therefore placed behind the dam after which no further trouble was experienced due to this cause.

Considerable trouble was entailed in removing the silt deposited by the floods, but eventually the concrete floor of the new sluices, together with the equalising ducts through it, were completed and the construction of the reinforced concrete abutments and the central pier went ahead more rapidly.

The total weight of concrete in the weir sluices was 2,100 tons with 10 tons of steel reinforcement bars, while the structural steelwork of the gates and control gear weighed 52 tons, each gate being counterbalanced by two $8\frac{1}{2}$ ton blocks of concrete.

Seven hundred and fifty feet run of Larssen Steel Sheet Piling have been driven to afford protection to the edges of the sluice floor and to the river banks immediately above and below the sluice. Photographs shewing the old weir and new sluices are on pages 77 and 78.

As the presence of the sluices would prevent fish from getting into the upper reaches of the river to spawn, in order to facilitate the free passage of migratory fish, a fishpass of the latest design is being constructed. This will consist of fourteen pools connected by streamlined passages through which the fish will be able to reach the upper level. So far six pools have been built and the remainder should be completed early next year though progress is naturally governed by the level of the river.

(d) Cloughs.

Two small cloughs have been constructed at the outfall of drains at South Duffield, and at the outlet of Scarcemoor Dyke a new 48 inch diameter clough was built.

(4) RIVER OUSE.

(a) General description of Scheme.

Steady progress continues to be made on the Improvement Scheme for the River Ouse.

As described in previous reports the object of the work is to raise and strengthen the flood embankments to the extent necessary to prevent either overflow or breaching in the future.

In cases where the existing flood banks are situated so close to the river margin as to render their foundations liable to erosion and undermining on the river side, it has been found advisable to construct new banks behind at some distance from the river. This not only ensures that their foundations will remain secure, but also provides a wider channel for the evacuation of floods.

When the new banks have been thoroughly consolidated and well grassed over, the material forming the old banks will be moved back to strengthen still further the new structures or to fill in pits from which spoil to form the new banks has been excavated.

In every case the method of construction is to strip the turf on the site of the new bank and then to excavate a central longitudinal trench, which not only discloses the presence of any transverse tile drains, but also keys the new bank into the virgin soil and forms an effectual "cut off."

The soil required to form the bank is obtained either by widening the river channel or from an adjacent spoil pit.

Consolidation is effected by power ramming and the surface is seeded down, and the grass frequently mown to promote the growth of a thick turf.

(b) Progress of Works.

The following schedule summarises the progress of improvement works on the River Ouse during the past year.

Site of Work.	Nature of Works.	Length dealt with 1937-38.
On right bank at Fareswell.	Reconstruction of flood bank which on an average is 12 ft. high, with a 6 ft. wide crest and $2\frac{1}{2}$ to 1 side slopes. Soil was excavated from foreshore by Excavator No. 5 (60 ft. jib) and either placed direct on existing bank or transported by wagons on light railway track.	31 chains.



River Derwent. Sutton Diversion.
First operation.



River Derwent. Sutton Diversion.
Second operation.



River Derwent. Sutton Diversion.
Almost completed.

Site of Work.	Nature of Works.	Length dealt with 1937-38.
On right bank at Ravensdell above and below Wistow Clough.	Construction of new flood embankment to an average height of 11 ft. Soil was excavated from spoil pits in Fields Nos. 580 & 575 in the Parish of Wistow. Excavator No. 5 was used for excavating the soil and placing it on the bank direct, or into tip wagons where necessary.	35 chains.
On right bank at Summercroft, Long Drax, between White House, Barlow and the west end of Long Drax Village.	Reconstruction of flood bank, the average height of which is 12 ft. The bank top was made 6 ft. wide at crest level. Spoil was excavated from foreshores and from the sides of two main arterial drains by Excavator No. 11, loaded into tip wagons and hauled on light railway track by diesel locomotive on to the bank.	130 chains.
On right bank at Airmyn, below Boothferry Bridge.	Construction of new flood embankment of an average height of 4 ft. with a crest width of 4 ft. The soil was excavated from the foreshore by hand and barrowed on to the site.	15 chains.
On right bank at Hook, on both sides of Goole Railway Bridge.	Construction of new flood embankment to an average height of 3 ft. Soil consisting of a good warp was dug by hand and barrowed on to the bank.	10 chains.
On left bank at Riccall Ings, between Long Ruddings and Angram Clough.	Construction of new flood embankment to an average height of 11ft. The average width of the base of the bank was 70 ft. Excavator No. 11 excavated the soil from Field Nos. 405 and 408 in the Parish of Riccall and loaded into tip wagons which were hauled by diesel locomotives on to the bank.	40 chains.

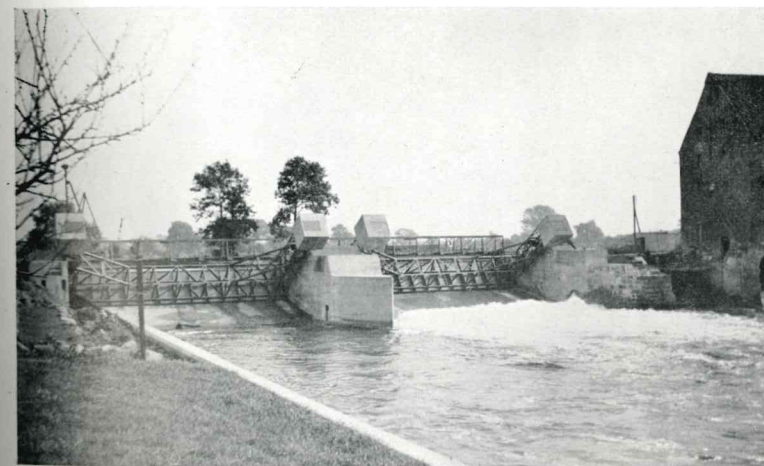
In addition to the foregoing works, 6,195 tons of stone and 590 tons of brick were deposited at the toe of banks subject to erosion, and 20,000 faggots were laid to accrete warp on weak lengths of bank.

WORKS OF MAINTENANCE.

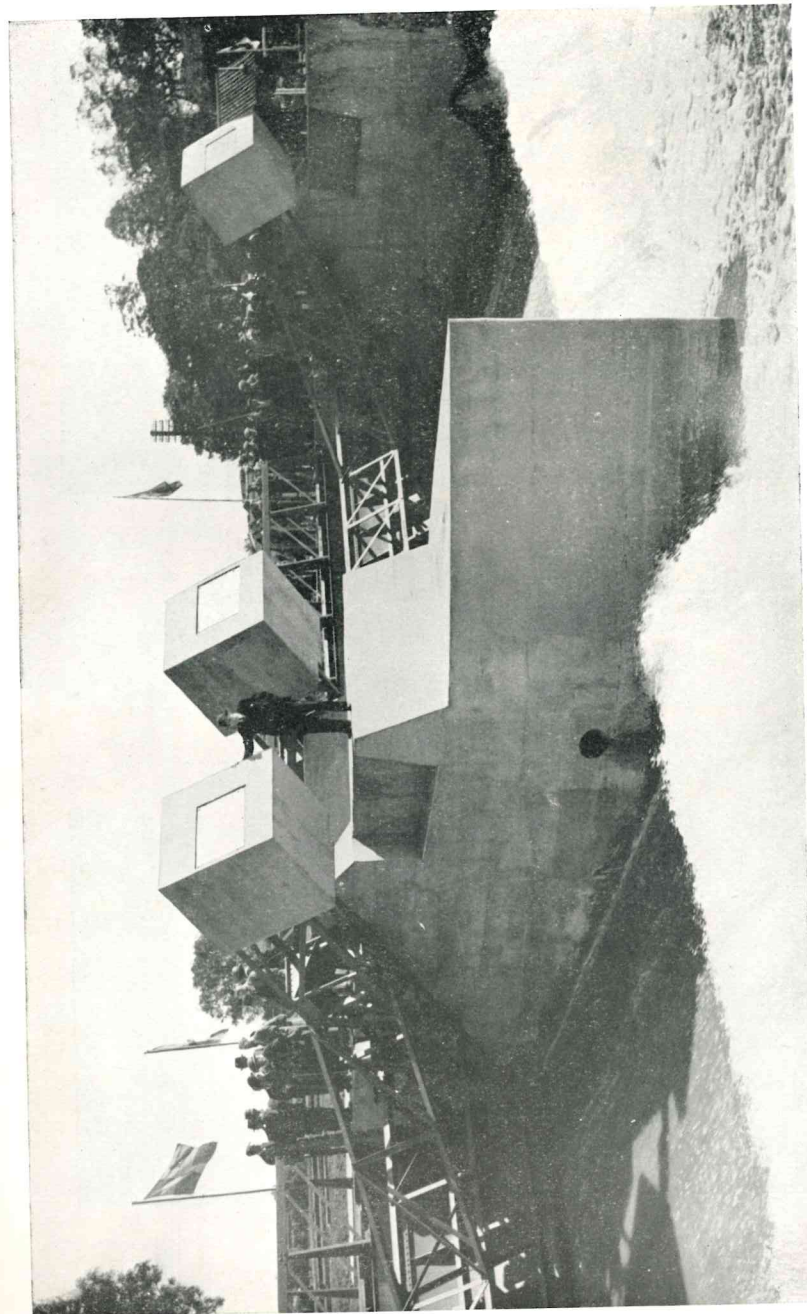
Situation.	Nature of Works.
(i) River Ouse.	
(a) Aire's Mouth to Trent Falls.	Weeds and grass cut twice by hand. Low and weak banks raised and strengthened.
Whitgift Village.	Disused flagstones placed in position at land toe of embankment.
Ousefleet and Whitgift.	Displaced pitching stone repaired.
Whitgift.	120 tons of stone deposited at the old slip at Whitgift to check erosion. Prior to each tide the flood bank received attention at this point.
(b) Derwent Mouth to Blacktoft.	
Barmby-on-the-Marsh	Fascine work and bank repairs.
Asselby.	Fascine work.
Boothferry Bridge.	Raising and strengthening flood bank above and below bridge.
Howdendike Lea.	Fascine work and raising and strengthening flood bank. Two cargoes of stone deposited at toe of bank.
Howdendike Shipyard.	Raising and strengthening flood bank and fascine work.
Blacktoft Clough.	Two cargoes of stone deposited to stabilise slip in bank.
(c) Wharfe's Mouth to Aire's Mouth.	
	Weeds and grass cut twice, once by hand and once by Caterpillar Tractor Mower, and in accessible portions by Allen Power Mower. Vermin killer continuously employed on all banks and the following vermin destroyed:— Rabbits 902, Rats 4703, Moles 6060, Stoats 280.



River Derwent. Elvington Weir.
Before installation of automatic Sluice-gates.



River Derwent. Elvington.
Automatic float-operated sluice gates.



River Derwent. Elvington.
Automatic float-operated sluice gates.

Situation.	Nature of Works.
(c) Wharfe's Mouth to Aire's Mouth—cont.	
Newland.	Low banks raised. Vermin burrows filled in and rammed.
Long Drax.	Overflows which occurred on high tides in January, 1938, disclosed low places in banks which were raised.
Barlow.	Low places in banks raised.
Selby.	Low places in banks raised and weak portions strengthened both upstream and downstream from Rosscurr, where numerous overflows occurred in January, 1938.
Wistow.	Digging out vermin holes, consolidating and returfing bank.
Cawood.	Removal of tree roots and stumps adjacent to bank. Consolidation of bank at vermin burrows.
Kelfield.	Vermin burrows made good. Tree roots removed by Caterpillar Tractor.
Riccall.	Digging out vermin burrows.
Barlby.	Low and weak places in bank raised and strengthened near Turnhead, Barlby Landing, Cherry Orchard; 500 tons of stone deposited at toe of bank near downstream end of Parish boundary.
Cliffe-cum-Lund.	Low places in banks near Turnham Hall and Cleek Hall and Barlow Lane End Farm raised subsequent to the overflowing of high tides in January. Fascines inserted at weak toe near Newland House, and below Barlow Lane End Farm. Bank repair between Goole Hall and Newhay. A quarter mile length of bank below Newhay has been raised to 20 ft. 6 in. O.D. widened to a 6ft. crest with 2½ to 1 side slopes.
Hemingbrough.	Vermin burrows made good. Leaky portions partially strengthened as far as available supplies of soil permitted.
(d) Wharfe's Mouth to Kirby Hall.	The lengths of bank between Naburn and Acaster Selby were mown where necessary. The Beningbrough bank between that village and Newton-upon-Ouse was mown twice.

Situation.	Nature of Works.
Acaster Malbis.	Right bank between Naburn Ferry and Naburn Swing Bridge repaired vermin burrows and thorn bush roots dug out. During the last week in April when the river level was lowered above Naburn Lock, numerous obstructions in the channel were removed.
Stillingfleet and Kelfield.	Gauge Board erected at Stillingfleet Landing. Caterpillar Mower cut the weeds and grasses on the left bank. Bank repairs carried out on Moreby Ings.
Naburn.	Repairs to left bank near swing bridge.
Bishopthorpe.	Obstructions in channel removed and suitable material growing on right bank formed into taggots for fascine work.
Fulford.	In April, during low water level, obstructions removed from channel.
Middlethorpe.	Minor repairs to right bank carried out.
York.	Repairs to the Board's floating craft carried out, and barges Nos 2, 3 and 4, Tug Aid, and Grab Dredger No. 1 scraped and painted. Board of Trade survey of dredger carried out. Stone and brick rubble from York Castle demolition loaded into barges at Marygate, Kings Staithe, Foss Basin, Dutton's Landing (River Foss) and Hungate, (River Foss) and transported to tidal river works, and Rivers Ure and Swale. Broken concrete from Skeldergate Bridge repairs loaded into barges by bridge contractors.
Clifton.	Obstructions removed from channel near Ferry and at Clifton Ings.
Moor Monkton	Repairs to low and weak portions of right bank between Red House and Nidds Mouth.
Neningbrough.	Subsequent to the flood in October two breaches on the left bank upstream from Warp Gate were repaired. Vermin burrows were dug out and consolidated. Fallen and decaying trees on the slopes of the bank in the Belt were removed.

Situation.	Nature of Works.
Linton-upon-Ouse.	Raising and strengthening banks on left bank at Garth End Ings and Butcher's Ings.
Widdington.	Several small breaches repaired and low places raised on right bank at Weddal Ings.
(ii) River Aire.	
(a) Aire's Mouth to Knottingley.	Four small gangs of men were employed throughout the year on maintenance works on this length, one being engaged in the Lower Aire District, and another in the Airmyn District. In these two districts the flood banks were mown during the summer and autumn, mostly by hand. A length between Haddlesey and field No. 19 Carlton Parish, was mown by the Caterpillar Mower and Allen Power Mower.
(b) Lower Aire District.	Vermin killer continuously employed on banks in this district.
Little Airmyn.	Weak banks strengthened and raised.
Lodge Farm, Newland.	Vermin burrows dug and low places raised.
Newland School.	Bank raised.
Mill Lane to Little Rusholme.	Raising and strengthening weak banks.
Rawcliffe Ferry.	Bank repairs. Vermin burrows dug out and consolidated.
Jermans Lane End, Newland.	Low places raised.
Jefferson's Clough, Newland.	Vermin burrows made good.
Eskamhorn.	Vermin burrows made good.
West Marsh, Carlton.	Raising and strengthening banks.
Carlton Marsh.	Low places in banks raised. Four cargoes of hard limestone delivered and placed in position at toe of weak left bank about half mile below Carlton Bridge.

Situation.	Nature of Works.
(b) Lower Aire District —continued.	
Hirst Courtney.	Bank made good in several places where bushes were stubbed out.
Temple Hirst.	Low places raised. Bushes on bank slopes stubbed out and holes made good. Low places in banks raised.
Chapel Haddlesey.	Bank repairs at low places.
(c) Airmyn District.	
(d) Rawcliffe to Hensall. Bell Lane, Rawcliffe.	Prior to each high tide the slip on the right bank was strengthened with soil carted from the wide foreshore near Rawcliffe Ferry. Willows were cut and fascine work strengthened.
Newland Railway Bridge and Cuckoo Park, Rawcliffe.	Raising and strengthening works on the right bank.
East End Rawcliffe.	Low places in banks raised, and vermin burrows made good.
Eskamhorn Ferry.	Low places in banks at fences raised and leaking portions of bank strengthened.
Snaith.	Low lengths of bank raised.
Gowdall and Heck Ings.	Digging out vermin holes, consolidation of bank and returfing.
(e) Hensall to Knottingley. Beal and Haddlesey.	Raising of flood bank and digging out of vermin holes on several lengths on both banks.
Kellington Marsh.	Low places in banks raised, and displaced stone repacked in position.
Hensall Ings.	Weak and low portions in banks near fences raised and strengthened.
Kellingley Ings.	Digging out vermin holes and bank consolidation on several lengths.



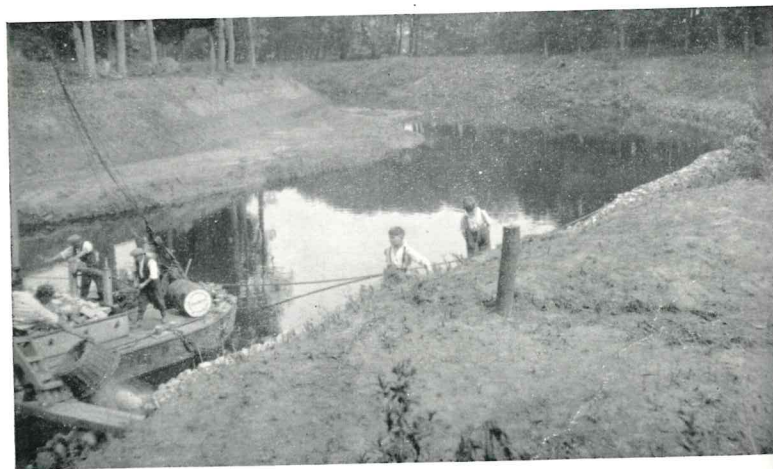
River Aire. Bingley.
Erosion of footpath.



River Aire. Bingley.
Rough stone wall to prevent erosion.



**River Swale. Myton Hall.
Bend before improvement.**



**River Swale. Myton Hall.
Bend cleared prior to dredging.**

Situation.	Nature of Works.
(f) Calverley to Keighley. Calverley Weir.	Large accumulations of obstructing trees and debris removed from the weir and major obstructions removed from channel between the weir and the London Midland and Scottish Railway Bridge.
Bingley.	A rough stone wall was constructed on the right bank of the river below Cottingley Bridge to prevent erosion; 438 tons of hard stone were delivered and placed in position. Light railway track and tipping wagons were utilised for delivery. Photographs illustrating this work appear on page 83.
(g) Airedale District.	Works recommenced in this District on the 28th March, 1938, after being held in abeyance since December, 1936.
Stirton-with-Thorlby.	Breaches on the left bank in field No. 59 were repaired. Trees and bushes were stubbed out. An old cutting which weakened the riverside toe of the flood bank was raised to the general foreshore level and along with the bank was thoroughly consolidated and re-turfed. Large shoals of gravel in the main channel below Ingha Bridge were removed. Bends were eased and projections trimmed back. Several lengths of embankment were raised.
Eastburn.	Large amounts of gravel were removed from the gravel traps situated on the right bank at the Eastburn Beck confluence.
(iii) River Wharfe.	
(a) Wharfe's Mouth to Tadcaster.	Grass and weeds growing on banks were mown by hand where necessary, and obstructions, debris, removed from channel and burned.
Acaster Selby.	Bank strengthening works in Field No. 3 at Wharfe Ings on left side commenced in October. Light railway track and tip wagons were utilised to convey spoil from wide foreshore opposite Button Hill Farm. Low place in bank near Sicklebit Wood was raised, and vermin holes dug out.
Ryther.	Low places in cradge embankment on right side in fields Nos. 1 and 4 raised.

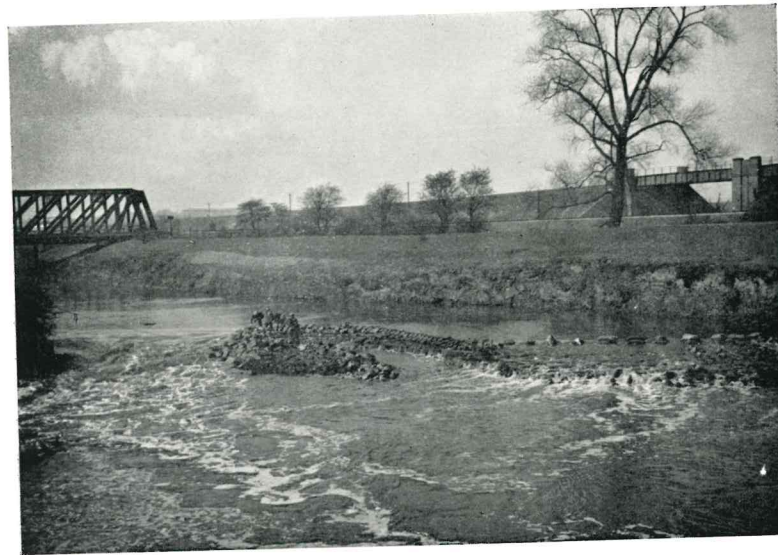
Situation.	Nature of Works.
Nun Appleton.	Four chains of cradge bank in West Ings repaired.
Ozendike.	Weak lengths of bank extending to six chains in Ozendike Ings strengthened.
Between Ozendike House and Manor House.	Willows cut and soil cast back into low place adjoining Boggar Lane.
Bolton Percy.	Weak portions of banks on left side were strengthened where necessary. Bank repairs at Hornington Ings.
Ulleskelf.	Six chains of bank raised and strengthened below Dunber clough. Six chains of bank strengthened by consolidating deposited soil, and returfing in Ulleskelf Great Ings.
Kirkby Wharfe between Kirkby Ings and North Ivy House.	Vermin holes dug out, and bank strengthened, raised and re-turfed over a length of five chains.
Grimston.	Bank on right side raised at low places near fences, and a length of four chains strengthened between Baffer Ness and Cock Beck.
Oxton.	Banks near Ouston Farm received attention.
Thorp Arch.	Obstructions were removed from Thorp Arch Weir. Repairs were carried out to the crest of the weir in August and September, when low and broken portions were filled in with concrete. The gravel was obtained from a shoal in the channel on the left side below the weir.
Boston Spa to Flint Mill.	Major obstructions removed from the channel.
(iv) River Nidd.	
(a) Nidd's Mouth to Skip Bridge.	During July a gang of six men were employed in removing obstructions, and lopping overhanging willows and bushes. The material was made into kids, and fascine works were inserted to protect flood banks from further erosion between Pool Bridge and Buckie Ings. Several low lengths of the bank were raised, vermin holes dug out, filled in, and re-turfed.

Situation.	Nature of Works.
(iv) River Nidd. —continued.	
(b) Skip Bridge to Ribston Park.	Works which had been held in abeyance since December 1936, were restarted in June 1938. A small gang was employed for the remainder of the year clearing the channel of sunken tree roots and timber washed down from the higher reaches. The Hunsingmore Weir was cleared of an accumulation of obstructive debris.
(v) River Ure.	
Kirby Hall to Boroughbridge.	Since December 1937, works on this length have been held in abeyance.
Myton Ings, bend above Dunsforth Ferry.	Two cargoes of brick and rubble were delivered and placed in position at the toe of the weak flood bank as a protective measure. The material was delivered by the Board's craft.
(vi) River Swale.	
(a) Swale Nab to Skipton-on-Swale.	A small gang was employed throughout the year on maintenance works on both banks. Numerous obstructions were removed clear of the main channel.
Myton, field No. 135.	A new bank five chains in length, was constructed behind the original breached bank. Light railway track and tip wagons were utilised in transporting the soil on the left side of the river.
Myton, field No. 127.	Four cargoes of stone were delivered to form a rough wall to protect the eroded toe of the bank.
Myton, field No. 131A.	Trees and bushes growing on the bank on the right side below Myton Bridge were stubbed out. The flood bank was thoroughly dug over to trace the numerous vermin burrows, and reconstructed with soil transported in tip wagons. The whole bank was rammed and re-turfed over a length of one furlong.
Myton, field No. 133.	Similar reconstruction works to that described above were carried out on the flood bank in this field over a length of a quarter of a mile.
Myton, field No. 126.	Five cargoes of stone and brick were delivered to the eroded right bank.

Situation.	Nature of Works.
(b) Swale Nab to Myton Landing.	<p>In order to complete the easement of the bend opposite Myton Hall where serious erosion occurred, the floating Grab Dredger No. 1 was transferred to this length at the end of March, 1938. To obtain the necessary flotation it was necessary to dredge a channel through obstructing shoals. Cross sections were taken and a gradient line and dimensioned channel, corresponding to the maximum waterway at the outlet, was adopted. This machine was engaged on this work during April May and June, and again during September and October. Near Myton Landing and on the site of an ancient bridge a particularly hard boulder and gravel bed was encountered, which retarded progress. In addition, about forty large timber piles, probably remnants of a former bridge foundation or a weir, were encountered and removed. This necessitated the use of the 25 cubic feet level cut grab and short radius hard bottom. The dredgings could only be deposited at the water's edge. Afterwards it was again moved nearer the bank's edge by using the 60 feet jib. At the end of the year this work had extended upstream to a point near the south end of field No. 131 in the Parish of Myton. Photographs illustrating these works are shown on pages 84 and 89.</p>
Myton, field No. 125A.	<p>Four cargoes of stone and brick were delivered and packed in position on the right bank, as a protective measure.</p>
Myton, field No. 27.	<p>Vermin holes dug out. Bank cleared of growing vegetation and trees, reconstructed and sown with grass seed. Length so dealt with one mile.</p>
Helperby, field No. 336.	<p>Bank cleared of large accumulations of undergrowth and trees, vermin holes dug out, filled in and consolidated. Flood bank reconstructed over a length of two furlongs.</p>
Myton, field No. 124.	<p>Four cargoes of stone and brick were delivered to protect the toe of the bank at the downstream end of the bend at Myton Hall.</p>



River Swale. Myton Landing. Dredging operations in progress.



**River Don.
Old Weir before removal.**



**River Don.
Weir removed.**

Situation.	Nature of Works.
Eldmire-with-Crakehill, fields Nos. 7 & 8.	Vermin burrows dug out and made good, and bank consolidated and re-turfed. Strengthening repairs carried out, and a section of new flood bank constructed on the left side of river.
Cundall-with-Leckby, fields Nos. 88, 89, 109, 121, 118, 114, 112, & 177.	Clearing works carried out and large growths of willows which were endangering the banks were utilised for making faggots. Some of these were transported to the River Ouse for work there, and others were utilised for fascine work on the left side of this river at Far Ings, Cundall.
Topcliffe, field Nos. 1, 3, 4, 5, 8, 9, 114, 115.	Vermin burrows dug out and holes filled in and material consolidated.
Aserby, field Nos. 38, 39, 89, 93 and 96.	Vermin burrows dug out and holes filled in and consolidated.
Thornton Bridge, fields Nos. 20, 34, 64 and 87.	Vermin burrows dug out, filled in and consolidated.
Brafferton, field Nos. 87, 160 and 167.	do. do.
Catton, fields Nos. 90, 88, 28 and 11.	do. do.
Baldersby, fields Nos. 86, 147, 184, 182 and 173.	do. do.
Skipton-on-Swale, fields Nos. 5, 18 & 20.	do. do. Over the whole length from the Swale Nab to Skipton Bridge, a vermin killer was continuously employed during the year on both sides of the river, and the following vermin were destroyed:— Rabbits 3,592, Rats 283, Moles 259 Stoats 23.
(c) Skipton-on-Swale to Morton Bridge.	The damage caused by the flood of December, 1936, was still evident in this section, and the limited funds available could only provide for a small gang which was continuously employed on repairs and breach mending.
Gatenby, field No. 24.	The right bank of the river near Thackwray House which was breached in three places in this field was rebuilt.

Situation.	Nature of Works.
Holme, fields Nos. 70, 72, 73 and 75.	Breaches caused by the 1936 flood were repaired on this length of bank on the right side below Wiske Mouth. Vermin holes dug out and consolidated.
Gatenby, field No. 30.	The breached and broken flood bank on the north side of this field was entirely reconstructed over a distance of 300 yards, whilst a further length of 35 yards was rebuilt on the east side. A toe consisting of fascines made from willows and thorns was formed as a protective measure.
Pickhill-with-Roxby field No. 338.	Extensive repairs and strengthening works were carried out on the weak and eroded bank at the south end of this field over a distance of 5 chains. Material was excavated from a drain-side on the south of field No. 337 and from a borrow pit on the west side of field No. 338, and loaded into tip wagons by hand. The wagons were hauled on to the site by diesel locomotive. The toe of the bank was protected against further erosion by a layer of concrete in bags. Gravel was obtained from a quarry near Swainby Lane and transported to the site by the owner. Certain willow bush obstructions were removed and adjoining lengths of bank were dug over to disclose vermin burrows which were filled in and consolidated by ramming and returned.
(d) Morton Bridge to Catterick Bridge. Scruton, field No. 295	Repairs to the two breaches on the right bank about 250 yards south of the Northern Boundary of Scruton Parish which occurred in 1936, were commenced in November, 1937. For one month the gang were employed in cutting thorns and hauling the material to the site for the protection of the toe. A fascine work was built in front of the breaches as well as along a weak adjoining length of embankment. About 200 cartloads of thorn were transported to the site by the landowner for this work. A borrow pit in field No. 287 provided the soil for reforming the flood embankment. The material was loaded into side tipping wagons and hauled by diesel locomotive No. 7 on to the site. The layers of deposited material were consolidated by ramming.

Situation.	Nature of Works.
Scruton, field No. 298	Bank repairs and vermin burrows dug out and bank returned.
Scruton, field No. 8	Vermin burrows dug out. Low places in bank raised. Protective groyne work repaired.
Skipton-on-Swale Bridge to Catterick Bridge.	A vermin killer was continuously employed on both banks on this length during the year, and the following are the numbers of vermin destroyed :— Rabbits 3,704, Rats 131, Moles 96, Stoats 25.
(vii) River Don. Doncaster to Thorne. Both Banks.	Weeds and grass cut by hand and motor mower. Repairing fences, making up low places in banks, general repair and supervision.
500 yards below Doncaster Mill Bridge.	Removal of remains of old weir, and making up eroded bank. This work is illustrated on page 90.
Long Sandall, Right Bank.	Removal of thorns and bushes. Digging out vermin holes, and making good the embankments.
Long Sandall to Barnby Dun, Both Banks.	Repairing weak places in banks and raising where necessary.
Barnby Dun.	Removal of thorns and bushes, digging out rabbit holes and making good the embankments including raising where necessary.
Thorpe-in-Balne, Right Bank.	Repairing slips.
Stainforth, Right Bank.	" "
Thorne Waterside, Right Bank.	" "
Thorne to Goole, Both banks.	Weeds and grass cut by hand and motor mower, and general repairs and supervision.
Jubilee Bridge, Right Bank.	Repairing slip at sewage outfall.
Swang Clough.	Repairing slip and making good embankment.
(viii) River Dearne. Marles Bridge, Wombwell.	Removal of shoal.

Situation.	Nature of Works.
(ix) River Rye. Parish of Ryton.	Repairs to flood banks and clearing of obstructions in river.
Between Habton and Ryton.	Bank maintenance.
Left bank near Garforth Hall.	Strengthening weak places in bank.
Ryton to Newsham Bridge.	Bank maintenance.
Left bank between Howe Bridge and Myton Bridge	Bank repairs.
Left bank between Howe Bridge and Ryton Bridge.	Strengthening and repairing bank.
Between Ryton Bridge and Garforth Hall.	Bank repairs.
Right bank below Howe Bridge.	Bank repairs.
Rye Mouth to Habton.	Weeds cut and removed on both sides.
(x) River Derwent. Left bank at Barmby-on-the-Marsh.	Repairs to bank after breach on 17th January, 1938. Bank has been temporarily repaired and maintained.
Left bank at Brighton Corner.	Bank repaired after slip.
Left bank at Bubwith.	Repairs to new bank which was breached on 17th January, 1938.
Wheldrake Ings Bridge.	This bridge was repaired to make it safe for traffic. New timber uprights and beams were provided—also lifting and guard chains.
Menthorpe Footbridge.	Repairs were carried out on this footbridge which carries the towpath over Howel Beck.
Between Rye Mouth and School House Hill.	Bank repairs.
Old Malton.	Bank repairs.
Derwent Meuth to Sutton	Banks mown both sides of river.
Kirkham to Yedingham.	Banks mown and bottom weeds cut and removed from channel.

(xi) Sea Cut.

A small gang of three men has been employed in general maintenance works which include the removal of gravel deposits and weeding of the Sea Cut Channel, the clearing of brushwood and weeds and the plashing and repairs to fences on the North and South banks between the Weir Head and Whitby Road Bridge and exterminating vermin.

Repairs were carried out where the bed of the stream had been badly scoured below Newby Weir and along the toe of the North Bank above Whitby Road Bridge. Owing to the tendency for silt to deposit on certain sections of the banks and its tendency to grow out towards the stream, a heavy accumulation of silt has been removed from the North bank a distance of 200 yards near the Weir Head.

The timber platform at Scalby Bridge was made good and part of the retaining wall at the Weir Head rebuilt. Repairs were also effected to one of the buildings at Mowthorpe.

A rough timber footbridge was constructed across the Sea Cut channel to give access to land owned by the Catchment Board and in the occupation of the tenant at Scalby High Mill. Post and wire fences were erected for a total distance of 1,900 yards to prevent poaching by stock, a portion of this material being provided by the Hackness Estate.

The subsidiary drains discharging into the Sea Cut channel were cleansed and scoured during August.

DETERMINATION OF MAIN RIVER WORKS.

(a) Cloughs in Main River Banks.

From time to time questions have arisen as to whether or not structures or appliances for regulating the flow of water in into or out of the channel of the main river (generally referred to as "cloughs" in this Catchment Area) and situate therein or in any part of the banks thereof should be regarded as "drainage works in connection with the main river."

"Main river" according to Section 81 of the Land Drainage Act 1930, includes any such structure or appliance other than those which are vested in or controlled by an internal drainage board.

The Board felt it was important to obtain a ruling on the point if possible, as by Section 6 of the Land Drainage Act the powers conferred by the Act on drainage boards are,

so far as concerns the main river including the banks thereof and drainage works in connection with the main river, to be exercisable solely by the Catchment Board.

When the Catchment Board were constituted there were already in existence several drainage boards within the Catchment Area in whose districts were several cloughs in the channels or banks of what were on the constitution of the Catchment Board marked as main rivers on the map of the Catchment Area, and all such cloughs were of course, under the control of the several drainage boards.

Since their constitution the Catchment Board have set up several new drainage districts the boards of which have adopted main drains in the district which discharge into the main river

The question was brought to a head when the Lower Swale Internal Drainage Board which was set up in 1937, wrote to the Board requesting them to take over the maintenance of the cloughs and clough doors adjoining the River Swale as regards existing cloughs and any that might be erected in the future.

According to a strict reading of the definition of main river in the Land Drainage Act, it was conceivable that in the case of drainage districts constituted since 1930, the cloughs in main river banks remained part of the main river. It was felt however, that such an interpretation would set up a position of undesirable inconsistency as between drainage boards set up before 1930 and those set up after 1930 in that in the one case the cloughs would be part of the main river and in the other case they would not. Section 6 of the Land Drainage Act before referred to provides that if any question arises under the Section whether any work is or whether any proposed work would if constructed be a drainage work in connection with the main river, the question should be referred to the Minister for decision.

The Catchment Board and the Lower Swale Internal Drainage Board therefore decided to be parties to a friendly submission of the point to the Minister who has given his ruling that the cloughs in question are not drainage works in connection with the main river.

(b) River Wharfe.

Otley—Drain near Bridge Avenue.

Another case in which it has been necessary to obtain the ruling of the Minister of Agriculture as to what should be included in the main river arose in connection with a question raised by the County Council of the West Riding of Yorkshire.

It appeared that at Otley there was a certain water-course discharging into the main River Wharfe near Bridge Avenue one view being that it should be regarded as part of the main river being merely a channel provided for the overflow of the main river. On the other hand it could equally be regarded as part of the internal drainage system of the district.

On the matter being submitted to the Minister he came to the conclusion that the channel was not a drainage work in connection with the main river of the Catchment Area.

INSPECTIONS.

In order that an opportunity might be afforded to members of the Board to obtain first hand evidence of the works being carried out by the Board and the problems with which it is faced it had been customary to arrange for an inspection of certain main rivers and works annually.

This year the Board conducted a two days inspection which took place on the 14th and 15th September, when many members were able to avail themselves of the opportunity thus given.

Representatives of the Ministry of Agriculture and Fisheries and of a number of the Counties and County Boroughs in the Catchment Area accompanied the members.

On the first day the party inspected the River Don where piling works opposite the Rotherham Corporation Transport Depot were in progress.

The party then proceeded to the River Rother Valley as far as Orgreave Colliery observing en route refuse tips alongside the river which reduce both the discharge and reservoir capacity of the river. Swamps and badly drained land resulting from mining subsidence were also observed.

The diversion of the river being carried out at Orgreave by the Rother Vale Collieries Ltd. was also inspected.

In the afternoon the party proceeded to Wath Main Colliery where works upon the River Dearne were inspected.

On the River Dearne the members saw the Knoll Bank which has been reconstructed and the Bolton Ings New Cut which was completed this year and which involved the excavation of about 28,700 cubic yards of material.

The party then proceeded to Thorne for an inspection of the improvement works being carried out on the River Don and referred to in detail on pages 52 to 63.

The river is being diverted at certain points by the construction of five new cuts. The first of these at Waterside was inspected and considerable interest was manifested in the machinery employed on the job.

An inspection was then made of the Board's workshop and store at Thorne.

The company then proceeded towards New Bridge noting on the way the embankments which had been formed, including the concrete wall opposite Ivy House which owing to the restricted site has been found necessary to take the place of the old embankment.

On the following day the party set off again from York and first viewed the construction of many miles of the flood banks of the tidal rivers.

To date the lengths of bank dealt with extend to a distance of $9\frac{1}{4}$ miles of which 8 miles have been reconstructed on the site of the existing banks and $1\frac{1}{4}$ miles of entirely new embankment.

The party then proceeded to the River Derwent, the river on which the Board first undertook a comprehensive scheme of improvement which consists of the widening, deepening and straightening of the channel for a length of over 50 miles and the installation of automatic float operated sluices in five masonry weirs.

At Elvington which is situated at the upper end of the tidal length of the Derwent the float-operated automatic sluice constructed by the Board was formally set in motion by the Chairman of the Board, County Alderman R. L. Walker, J.P., in the presence of a large and interested company.

The afternoon was devoted to an inspection of the existing weir and lock on the River Derwent at Kirkham Abbey where it is proposed to instal a second automatic sluice in order to alleviate the serious flooding which occurs in the Derwent valley above Malton.

During the inspection an opportunity was afforded of witnessing a Caterpillar Tractor with mower and cutting blade attachment efficiently and rapidly cutting weeds on the sides of large banks.

RIVER DERWENT.

Loftsome Toll Bridge.

A few years ago the East Riding County Council provided a free bridge about 200 yards away from an old toll bridge at Loftsome which was erected under powers obtained

by a private Act of Parliament passed in 1803 and the Catchment Board were interested to receive a letter from the owners of the toll bridge offering to hand it over to them. In as much as the presence of the bridge was an undoubted obstruction to the flow of the river, the Catchment Board would have been glad to take over the bridge with a view to demolishing it.

It appeared, however, on examining the Act authorising the construction of the bridge that the original proprietors or their successors were subject to several liabilities including one to support, maintain and keep the bridge forever in good and sufficient repair. A later provision in the Act provided that should the bridge become impassable or unsafe a ferry should be provided.

It therefore appeared that nothing short of another private Act of Parliament would be required authorising the demolition of the bridge and such action the Board did not feel justified in taking.

They however took the opportunity of making a recommendation to the Catchment Boards' Association based on their experience in this case that in the amending Land Drainage Bill which it is understood was being prepared, powers should be given to the Minister after proper inquiries to make an Order in such a case as this authorising the Catchment Board to demolish the bridge.

This suggestion commended itself to the Association who have accordingly included it in the amendments they have submitted to the Ministry of Agriculture and Fisheries for consideration when a Bill is introduced for the amendment of the Land Drainage Act, 1930.

RIVER DON.

Diversion of footpath.

In connection with the River Don Improvement, the Board have purchased a series of plots of land on the south side of the River Don in the Parishes of Fishlake and Stainforth for the purpose of carrying out a diversion of the river by the making of a new cut.

It appeared that there was a public right of way from Dunston Hill Swing Bridge (which crossed the Sheffield and South Yorkshire Canal) along the south bank of the existing course of the river to the easterly corner of Field No. 11 in the Parish of Stainforth which it was necessary to stop up and to provide in lieu thereof a new footpath along the outer toe of the right bank of the new cut.

The West Riding County Council as the appropriate authority were requested to apply to Quarter Sessions to enable this to be done and a certificate of the Justices has been obtained authorising the stopping up of the old path on the opening of the new path.

RIVER ROTHER.

(a) Catcliffe flooding.

The Rotherham Rural District Council have from time to time drawn the attention of the Board to flooding at Catcliffe and a great deal of time has been spent in investigating the matter.

The more immediate concern of the Rural Council has been the flooding of certain houses provided by them at Catcliffe together with the impassability of the highways from Catcliffe to Orgreave and Treeton in times of flood.

It should be mentioned that this area in addition to a natural tendency to flood has been subsided several feet including the site upon which the Council Houses have been erected.

Representatives of the Catchment Board have met representatives of the Rural Council on more than one occasion in the matter and at a conference three years ago it was suggested that relief might be afforded to the houses in question if a protective bank or barrier was erected along the side of the road in front of the houses.

The Engineer of the Catchment Board however, pointed out that the provision of such a bank would necessitate measures being devised for dealing with the surface water and sewage which would accumulate on the side of the barrier wall remote from the river.

No proposals, however, were forthcoming from the Local Authority for dealing with these matters and at a further conference recently held it was ascertained that the land upon which it had been proposed to erect such a bank had subsided a further three feet. It having been ascertained that further general subsidence in this area was not expected to be serious the Board have informed the Local Authority that they are prepared to reconsider the provision of a barrier bank or wall provided the proper authorities would deal adequately with any sewage and surface water which might accumulate behind such a bank.

(b) Pollution.

The River Rother is a main river of the Catchment Area from Chesterfield to its confluence with the River Don, a distance of $23\frac{1}{2}$ miles.

Owing to complaints received of flooding the Board instructed their Engineer to carry out a survey of the whole length of the river when he reported to them that both the river and its tributary streams were in a badly polluted condition and that shoals had in consequence formed in the channel in many places impeding the flow of water.

As it appeared to the Board that not only were their interests as a Drainage Authority suffering but that the matter would probably prove of interest to the West Riding of Yorkshire Rivers Board in so far as they were affected by the flow into the watercourses under their jurisdiction of such streams as were polluted, it was decided to request them to meet members of the Catchment Board in conference to discuss the matter.

The Rivers Board readily complied with this suggestion when after a full discussion it was unanimously resolved that the two Boards should make joint representations to the Derbyshire County Council requesting them to exercise their powers under the Rivers Pollution Prevention Act, 1876 to prevent obstruction and pollution in the River Rother.

It was further decided that if no action were taken on the representation the matter be referred to the Ministry of Health and the Ministry of Agriculture and Fisheries.

At the same time the Rivers Board agreed if the Catchment Board would undertake to procure samples of effluents and all matter deposited in the River Rother and its tributaries they would undertake to analyse the samples and supply particulars of the analyses.

Joint representations were accordingly made and subsequently officers of the Catchment Board and Rivers Board met officers of the County Council and discussed the matter with them when the County Officials undertook to bring the matter forward to the appropriate Committee for consideration.

RIVER SWALE.

Topcliffe Weir.

Topcliffe Weir is situate on the River Swale $11\frac{1}{4}$ miles above its junction with the River Ure and $6\frac{3}{4}$ miles below the confluence of the River Wiske with the River Swale, and provides water power for the adjacent mill.

There being a strong feeling locally that the presence of the weir was a contributory factor to the periodical flooding of the district the Board have caused the matter to be

gone into thoroughly when they ascertained that the normal water levels above and below the weir were such as to give a retention head of about nine feet and that as far as could be ascertained the weir was drowned during high floods when the difference in water level on the two sides was about twelve inches. Floods rise to about six feet above the normal water level above the weir.

The removal of the weir, in itself a costly operation, would also necessitate the purchase of the water rights. The alternative would be to instal expensive automatic opening sluices in the weir at a cost of several thousand pounds, which, whilst retaining the necessary head of water to operate the turbines in connection with the mill, would facilitate the free discharge of flood water.

In view of this and the fact that the effect of removing the weir would not be felt further than a point five miles upstream and that it was very doubtful if the outfall of the River Wiske would be affected in any way the Board decided to take no action in regard to the removal of the weir at the present time.

At the same time it was realised that if at any time a scheme for widening and regrading the River Swale below the weir was carried out the removal of the weir would have the effect of materially lowering the flood level below the site of the weir when the beneficial effect of either removing the weir or installing opening sluices would then be felt further upstream.

If and when such a scheme therefore is considered these considerations will be borne in mind.

RIVER WHARFE.

Otley Bridge.

In the last Annual Report reference was made to a Conference which was held in connection with an application which had been made by the West Riding County Council with reference to Otley Bridge over the River Wharfe.

The object of the Conference was to see whether the necessary consent could be obtained to the removal of the portion of the present bridge structure which was scheduled as an ancient monument.

The representatives of the Ancient Monuments Board promised that all the views which had been expressed would be carefully considered and submitted to the Chief Commissioners of Works. At the same time the Ministry of Transport representative requested that information as to levels

of the adjacent weir and other parts of the river should be obtained when the matter would receive full consideration by his Department.

The necessary levels were subsequently taken up by the Engineer of the Board and supplied to the Ministry who have intimated to the County Council that it was thought that consideration should be given to the construction of automatic sluices operating at a fixed flood level and designed to take the flood water estimated at 5,200 cu. secs.

At the same time it was suggested that the Board would appreciate that the increased velocity might affect the bridge foundations and that the incidence of expense must be arranged and it was suggested that the Board would not be entirely without responsibility regarding the cost of constructing the sluices.

The Board's Engineer however reported that the installation of opening sluices in Garnett's Weir below Otley Bridge and in Duncan's Weir above the bridge would not mitigate the flooding in the Farnley Lane area.

Under these circumstances the Board felt they would not be justified in entertaining the suggestion of sharing in the cost of the construction of such sluices should that Scheme be adopted.

WORKSHOP.

During the past year the Workshops have been continuously engaged on the manufacture of spare parts, repair work, and overhaul of the Board's plant in addition to the construction of timber shuttering for all concrete work carried out during the past season.

The joiner's shop is also engaged in making patterns for castings required for the production of excavator parts and in the machine and fitting shop extensive use is being made of welding for the building up of worn parts from excavators. After welding, these parts are machined to their original sizes. A photograph shewing a selection of new parts manufactured and parts built up together with blacksmith's work is shewn on page 105.

In the earlier part of this year one excavator was brought into the Yard, and thoroughly overhauled. The work necess-

itated the removal of the cab and bedplate from the travelling bogie, in order that the travelling gear could be inspected and overhauled.

New parts were made and fitted where necessary, and the engine completely overhauled. The cost of the overhaul has been amply repaid by the trouble-free running which has been obtained since the excavator was re-started.

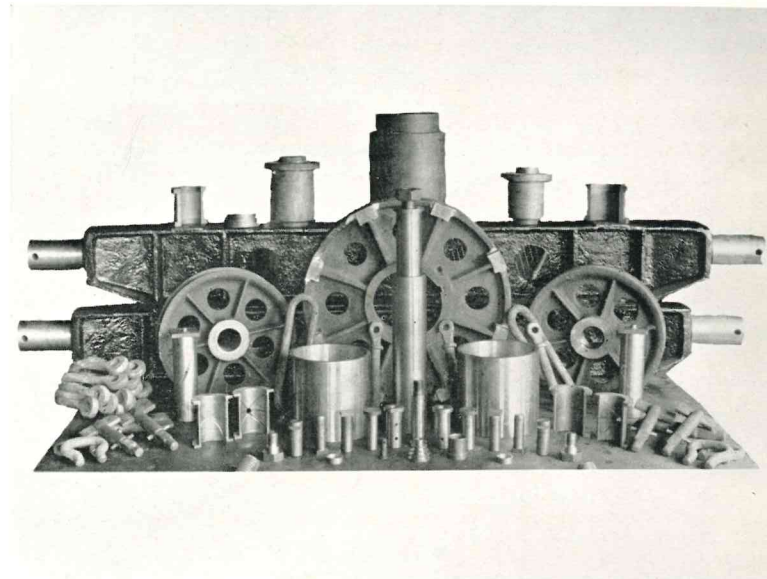
In the light of experience gained during the work it was apparent that during such an overhaul one lathe could not cope with the quantity of turned parts required to allow the re-assembly to proceed smoothly, and therefore authority was sought for the purchase of a smaller lathe of the precision type. This new machine should be delivered and put into service in the very near future.

A similar condition exists regarding welding. It has been found that an oxy-acetylene plant is very useful but on large work it has its limitations both as regards heating and speed. In addition much of the Board's plant is fabricated of steel sections and plates electrically welded, and some means of repair for these items of plant in the field had to be found. The welder at work is shewn on page 105.

Authority has now been given for the purchase of a portable petrol driven welding plant mounted on a trailer. Delivery is expected in a few weeks time and arrangements have been made with the makers so that one of the Workshop staff may spend a week at the makers' works for the purpose of tuition in the use of electric welding plant.

An interesting example of the advantage of having a Workshop occurred just before commencing piling at Rotherham. The crane to be used for piling had been arranged for fixing to floating craft and bogies were required to enable it to be used on land. Tenders were invited for the construction of three special bogies, but it was found that in addition to the cost being high, the time required for delivery would have delayed the erection of the crane.

It was decided therefore to construct the framework of the bogies in the Workshops. The necessary axles and wheels were purchased from stock second-hand. The three bogies were finished and delivered at Rotherham in time for the erection of the crane at a saving in cost over the original tender.



Thorne Workshop.
Selection of machined parts and built-up components.



Thorne Workshop.
Oxy-acetylene welder at work.

The advantage of having a Joiner's Shop with sufficient floor space for the construction of shuttering has been very evident. All shuttering required is completely erected in the shop and any adjustments made before being delivered to the site. Small faults which would result in time being lost during site erection are noted and remedied before delivery.

This is especially an advantage in repetition shuttering such as that necessary for long concrete retaining walls and careful design combined with ease of assembly has resulted in economy in erection cost and long life.

At the present moment the first excavator purchased by the Board is under complete overhaul. The entire undercarriage has been dismantled when it was found that extensive wear had taken place in most of the travelling mechanism. The main axles have been built up by welding and all wheels rebushed. The frame itself required re-rivetting and all components on the undercarriage are now overhauled and ready for reassembling. The engine is also undergoing thorough overhaul.

At present excavators brought in for overhaul are dismantled in the yard and as most of the work takes place in the Autumn and Winter, work is frequently interrupted due to inclement weather.

To improve these conditions a scheme has been prepared for the erection of twin corrugated iron and steel buildings, one to act as a shed for the dismantling of excavators or tractors and the second adjoining to be a fitting and erecting shop for components after manufacture in the machine shop.

PLANT.

The following items of plant have been purchased by the Board during the year :—

Plant.	Makers	Cost	Date of Delivery		Where worked
			1938		
Tractor and Scraper	H. Leverton & Co. Ltd.	2765 0 0	February		R. Don.
Tractor and Scraper	" "	2765 0 0	April		" "
Portable Pumping Set	T. W. Ward Ltd.	64 10 0	"		" "
Morris Car	Exelby Foster & Co.	128 10 0	"		All rivers
Power Rammer	C. H. Johnson & Son Ltd.	92 12 6	May		R. Ouse.
2-ton Hand Derrick Crane	J. Smith (Keighley) Ltd.	115 0 0	June		R. Don.
Excavator No. 14	Priestman Bros. Ltd.	1117 7 0	July		Internal Drainage Boards.
Power Rammer	C. H. Johnson & Son Ltd.	92 12 6	August		R. Ouse
Tractor and Power Mower	H. Leverton & Co. Ltd.	518 14 0	"		" "
Power Rammer	C. H. Johnson & Son Ltd.	92 12 6	Sept.		" "

RAINFALL AND RIVER FLOW 1938.

The figures given are for the "River Year" 1938, that is, from 1st October 1937 to 30th September 1938.

Throughout the year complete records giving rainfall for each day have been received from 48 stations in different parts of the Catchment Area. These stations are chosen so that the results represent as far as possible a true record of the rainfall over the area as a whole, and the figures are tabulated on special sheets kept for the purpose.

The general rainfall over the Catchment Area during this period was 97.7% of the average annual rainfall, some stations having records above the average and some below.

The maximum excess was 20% and the maximum deficiency 23%, these figures being recorded respectively at Tockwith School, near York, and Grimwith Reservoir, River Wharfe.

It is very noticeable that all the stations at high altitudes (with two exceptions) show a rainfall below the average in general about 13%. On the other hand, the stations in the low lands show readings on the whole slightly above the average.

Although the rainfall for the year was practically normal the distribution of the rainfall throughout the period was abnormal. At all stations the months of February, March and April were very dry whilst the summer months, May, June, July and August were wet.

In practically all stations drought conditions occurred from the 1st to the 20th October, 1937, and again from the 27th February to the 11th May, 1938.

A number of stations showed less than one tenth of an inch of rain throughout April, and many stations had less than half an inch of rain in March and April together.

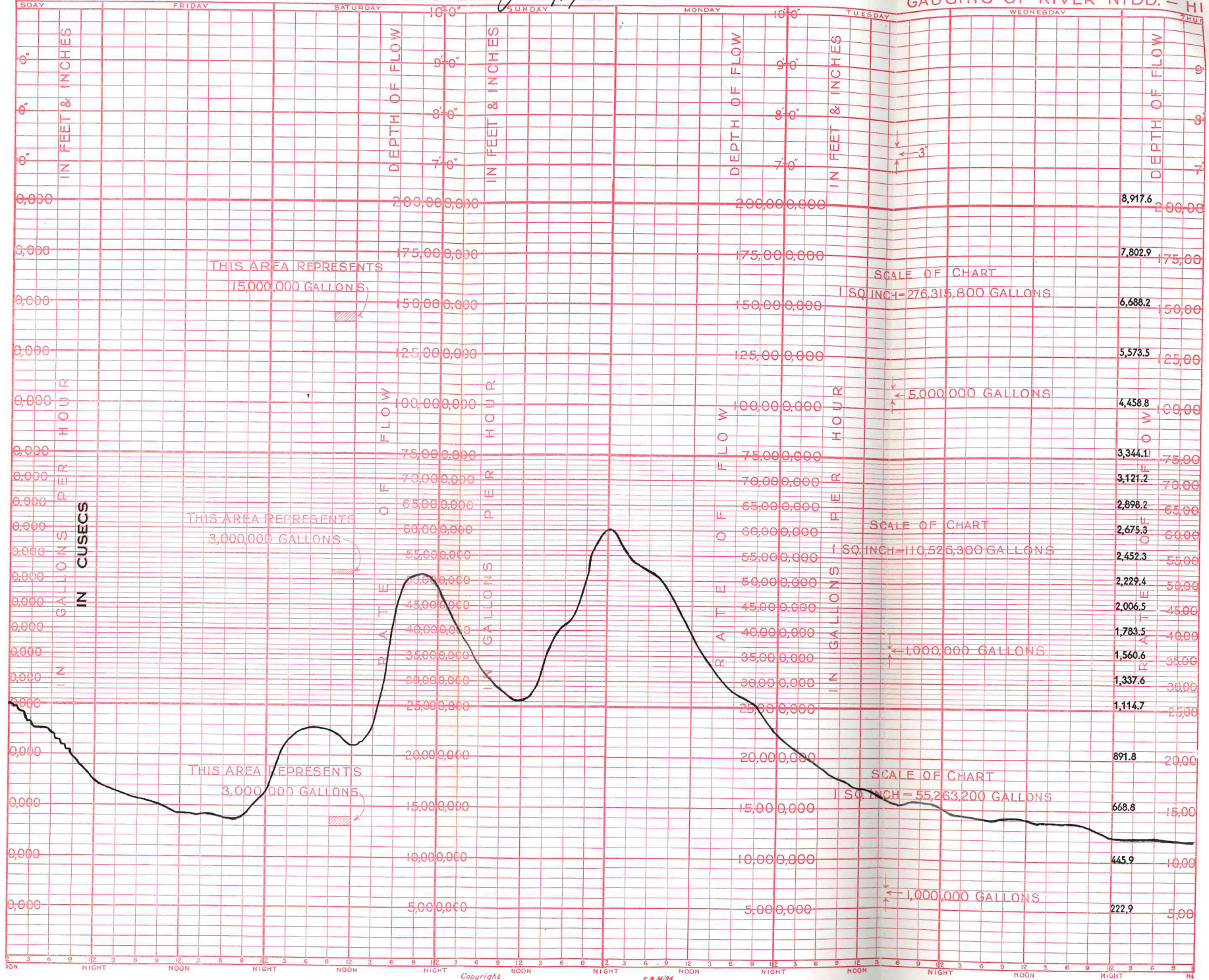
The flow of the rivers undoubtedly reflected the rainfall. The effect of the Spring drought was noticeable in the River Ouse where throughout March and April the water level at Naburn Weir never rose more than 2 feet above the crest level, whereas in June a reading of 6 feet was recorded on one occasion and 5 feet 6 inches about two weeks later. In both July and August the average level of the river was high for the time of year.

This was also shown very clearly by the recorder on the River Derwent at Stamford Bridge. The river level here never rose more than 11 inches above the weir crest level from the beginning of March to the end of May.

**E RIVERS BOARD.
JNSINGORE WEIR.**

DATE PUT ON 13th January, 1928 The Lea Recorder Co Ltd,
DATE TAKEN OFF 20th January, 1928 Manchester, England.

**WEST RIDING OF YORKSHIRE
GAUGING OF RIVER NIDD. - HI**



LOW RECORDERS.

or measuring the actual quantity of
en installed on the following rivers :
eal Weir.

- Kirkthorpe Weir.
- rotborough Weir.
- t Flint Mills Weir, near Boston Spa.
- Hunsingore Weir.

s were installed by the West Riding
rd and that Authority kindly allow
ess to the charts.

uges were installed by the Rivers
t Board jointly.

ecorder on the River Don has re-
curate due to works carried out to
e Sheffield & South Yorkshire Navi-
ork was necessitated by mining sub-
being made to find a new site which
lation of the instrument.

water level recorders on the River
d York (owned by the Ouse Navi-
e River Derwent at Stamford Bridge
Don at Rotherham.

ong to instal recorders on the other
jurisdiction.

t from a river flow recorder is shown
chart shows in gallons per hour or
amount of water passing down the
by computing the area bounded by
t and the curve, the total quantity
given time can be found.

ccurate records a suitable weir must
7 any means easy as there are many
weir to a greater or lesser degree
use. Amongst these are :—

- of a fishpass, sluice, lock or other
bypasses some of the flow.
- f the weir to be bypassed in flood
overflowing the banks upstream.
- y of the crest level or the type of
lopped, e.g. the provision of falling

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- (4) The liability of the water level on the downstream side to rise above the crest level and so "drown" the weir and render it inaccurate for discharge measurements.

After the site has been chosen, a float well is constructed in the bank and a pipe led from the well to the river above the weir. Thus the water level in the well is always the same as in the river. The instrument is then installed in a hut above the well so that the operating float is in the water. In this way any rise or fall in the water level is transferred to the instrument. The instrument is fitted with a special drum which has to be calibrated to suit each weir.

The calibration is arranged so that the water level is converted into discharge. This is recorded on a chart which is turned by clockwork mechanism and is changed every week. In this way a continuous record of the quantity of water flowing down the river may be kept.

These records are very useful for many purposes and the Ministry of Health Inland Water Survey Department encourage as many Authorities as possible to instal recording instruments.

From the point of view of pollution, the minimum flow of the river is of great interest. From a drainage standpoint, before it is possible to design and carry out an improvement scheme for a river, it is essential to have some data as to the maximum probable discharge.

A permanent record of flow going back for as many years as possible is of course the most reliable guide to such a figure.

SURVEY OF TIDAL RIVERS.

These surveys taken in June and October of the year, show the very unusual feature of scour taking place during the summer months. The average amount of scour in the River Ouse channel was 1.72 feet. In one place as much as six feet was scoured out from the river bed. The major portion of the scour took place in the upper tidal reaches where the effect of the fresh water is greatest.

The survey taken in June 1938, shows a slight accretion over that of the Autumn of 1937 which is very unusual as all previous surveys have shown an accretion throughout the Summer which is scoured away by the winter floods.

This reversal of the normal order may be attributable to the very dry Spring and comparatively wet Summer.

Similar surveys were carried out in Rivers Aire, Derwent and Wharfe, and the results of these surveys, except in the case of the Derwent, show corresponding departures from the normal, but not to such a marked extent.

The results of these surveys are shown in the following tables :—

RIVER WHARFE.

(TADCASTER WEIR TO WHARFE MOUTH).

Comparison of Surveys of River Bed 31st May, 1938 and 8th November, 1938.

Datum 30 ft. below O.D.

Mile Section.	Average height in feet above Datum.		Increase or Decrease.	
	May 1938	Nov. 1938	+ Feet	- Feet
Tadcaster Weir to 1 mile	35.49	34.78		.71
1 mile to 2 miles	34.00	34.45	.45	
2 miles to 3 miles	34.01	34.99	.98	
3 " 4 "	34.71	35.54	.83	
4 " 5 "	32.50	32.06		.44
5 " 6 "	31.57	31.20		.37
6 " 7 "	31.74	31.61		.13
7 " 8 "	30.05	30.42	.37	
8 " 9 $\frac{1}{4}$ "	29.90	28.57		1.33

Average level of bed of channel :—

31st May, 1938 — 32.66 ft. above datum.
or 2.66 ft. above O.D.

8th November, 1938 — 32.62 ft. above datum
or 2.62 ft. above O.D.

Average Scour .04 ft.

RIVER OUSE.

(NABURN LOCK TO GOOLE).

Comparison of Surveys of River Bed, 9th June, 1938 and 26th October, 1938.

Datum 30 ft. below O.D.

Mile Section.	Average height in feet above Datum.		Increase or Decrease.	
	June 1938	October 1938	+ Feet	- Feet
Naburn to 1 mile	29.76	28.82		.94
1 mile to 2 miles	31.62	29.94		1.68
2 miles to 3 miles	31.56	30.02		1.54
3 " 4 "	31.46	29.18		2.28
4 " 5 "	30.14	28.15		1.99
5 " 6 "	28.54	27.28		1.26
6 " 7 "	27.84	26.54		1.30
7 " 8 "	26.37	24.50		1.87
8 " 9 "	25.74	21.41		4.33
9 " 10 "	26.17	22.02		4.15
10 " 11 "	24.57	20.65		3.92
11 " 12 "	24.76	19.94		4.82
12 " 13 "	24.12	17.94		6.18
13 " 14 "	19.96	14.90		5.06
14 " 15 "	22.25	17.99		4.26
15 " 16 "	19.24	16.09		3.15
16 " 17 "	20.87	17.54		3.33
17 " 18 "	21.62	19.12		2.50
18 " 19 "	17.87	17.00		.87
19 " 20 "	19.21	17.81		1.40
20 " 21 "	19.29	18.74		.55
21 " 22 "	19.96	20.19	.23	
22 " 23 "	23.72	22.67		1.05
23 " 24 "	23.29	23.54	.25	
24 " 25 "	20.12	19.69		.43
25 " 26 "	22.26	22.96	.70	
26 " 27 "	15.74	16.52	.78	
27 " 28 "	21.64	20.96		.68
28 " 29 "	12.00	15.45	3.45	
29 " 29 $\frac{3}{4}$ "	13.00	15.57	2.57	

Average level of bed of channel :—

19th June, 1938 — 23.16 ft. above datum.
or 6.84 ft. below O.D.

26th October, 1938 — 21.44 ft. above datum.
or 8.56 ft. below O.D.

Average Scour 1.72 ft.

RIVER AIRE.

(HADDLESEY OLD LOCK TO AIRE'S MOUTH).

Comparison of Surveys of River Bed, 15th June, 1938
and 27th October, 1938.

Datum 30 ft. below O.D.

Mile Section.	Average height in feet above Datum.		Increase or Decrease.	
	June 1938	October 1938	+ Feet	- Feet
Haddlesey Old Lock to 1 mile	26.19	28.07	1.88	
1 mile to 2 miles	25.37	28.12	2.75	
2 miles to 3 miles	26.06	28.85	2.79	
3 " 4 "	26.80	29.22	2.42	
4 " 5 "	28.41	29.85	1.44	
5 " 6 "	25.71	27.62	1.91	
6 " 7 "	25.44	26.77	1.33	
7 " 8 "	24.84	24.30		.54
8 " 9 "	23.47	23.34		.13
9 " 10 "	23.22	23.19		.03
10 " 11 "	22.99	23.89	.90	
11 " 12 "	23.20	19.09		4.11
12 " 13 "	21.44	16.18		5.26
13 " 14 "	22.94	18.20		4.74
14 " 15 "	24.35	23.61		.74
15 " 16 "	24.85	23.28		1.57

Average level of bed of channel :—

15th June, 1938 — 24.70 ft. above datum.
or 5.30 ft. below O.D.

27th October, 1938 — 24.59 ft. above datum
or 5.41 ft. below O.D.

Average Scour .11 ft.

RIVER DERWENT.

(ELVINGTON LOCK TO DERWENT MOUTH).

Comparison of Surveys of River Bed, 28th June, 1938
and 31st October, 1938.

Datum 30 ft. below O.D.

Mile Section.	Average height in feet above Datum.		Increase or Decrease.	
	June 1938	October 1938	+ Feet	- Feet
Elvington Lock to 1 mile	31.26	31.80	.54	
1 mile to 2 miles	29.27	30.40	1.13	
2 miles to 3 miles	30.37	31.60	1.23	
3 " 4 "	30.94	31.06	.13	
4 " 5 "	30.76	30.59		.17
5 " 6 "	28.89	28.36		.53
6 " 7 "	27.95	27.38		.57
7 " 8 "	28.04	28.42	.38	
8 " 9 "	28.99	29.95	.96	
9 " 10 "	27.12	28.70	1.58	
10 " 11 "	28.70	29.30	.60	
11 " 12 "	28.95	29.95	1.00	
12 " 13 "	27.95	28.27	.32	
13 " 14 "	27.57	27.62	.05	
14 " 15 "	28.42	28.99	.57	
15 " 15 ³ / ₈ "	25.70	26.15	.45	

Average level of bed of channel :—

28th June, 1938 — 28.80 ft. above datum.
or 1.2 ft. below O.D.

31st October, 1938 — 29.28 ft. above datum.
or .72 ft. below O.D.

Increase in Level .48 ft.

Section IV—DONCASTER DRAINAGE DISTRICT.

From time to time the Board are called upon to consider drainage schemes proposed to be carried out to obviate or remedy so far as having regard to all the circumstances of the case is reasonably necessary, any loss of efficiency which has arisen or may arise in the drainage system and drainage works of the Doncaster District by reason of subsidence of the surface consequent on the abstraction of minerals. This is by virtue of the fact that on the dissolution of the Doncaster Drainage Board the Catchment Board were made the Authority to administer Part II of the Doncaster Area Drainage Act, 1929 in so much of the Doncaster Drainage District as is within the Catchment Area. The more important of these are the following :—

Dun Drainage District.

Probably the most difficult and complicated matter which has required to be dealt with during the past year has been a scheme submitted to the Board by the Dun Drainage Commissioners for the improvement of their drainage system and for facilitating colliery remedial drainage.

The Dun Drainage District at present comprises about 14,500 acres and is situated mainly on the left bank of the River Don, having a frontage thereto of about $13\frac{1}{2}$ miles from Doncaster to Fishlake.

Beside the ordinary problems of drainage the Commissioners are called upon to deal with great quantities of upland water which enter the western extremity of the district at Humber Head Bridge from the highlands behind, in addition to which extensive colliery workings have taken place in the district causing considerable subsidence of surface areas and such workings are still proceeding with the resultant difficulty of maintaining the efficiency of the drainage system.

It was explained to the Board by the Commissioners that at the present time some portions of their district were liable to flood, including the Thorpe Marsh area.

The general object of their scheme was so to organise the drainage of the district that all the upland water entering the district at the Humber Head and by way of the Skellow Mill Dike should be gathered into one stream, the Old Ea or Smallholme and Tilts Drain, and discharged into Thorpe Marsh when the River Don gates are floodlocked at the outfall of the drain, thus augmenting the periodical flooding in that area and preventing the flooding of the other areas which consist of valuable agricultural lands and urban property.

They further informed the Board that they were proposing to enter into arrangements with the colliery companies concerned whereby the latter should contribute such proportion of the cost of the scheme as would represent their obligations under the Doncaster Area Drainage Acts.

At once it was seen that important principles were involved. In particular it was necessary to examine very closely the suggestion that the area known as Thorpe Marsh which from time immemorial has been regarded as a natural washland for the overflow of the River Don and the Old Ea Beck would be made increasingly liable to flooding from the latter source. Indeed the situation had to be visualised of the Marsh eventually becoming a lake.

The main proposals of the Commissioners' scheme as finally amended were as follow :—

- (1) The diversion of the upland water from the Adwick Mill Dike into the Smallholme and Tilts Drain.
- (2) The installation of a pump on Bentley Ings to lift waters of Swaithe Dike, etc., direct into the river.
- (3) The installation of a pump at the junction of the Bowling Alley Drain with the Old Ea.
- (4) The formation of a low level spillway in the South Bank of the Smallholme and Tilts Drain near Norwood Sluice.
- (5) The utilisation of Thorpe Marsh as a washland for the water of the Smallholme and Tilts Drain.
- (6) The raising by the Catchment Board of the Bentley Barrier Bank and the Thorpe Marsh Cross Bank so as to prevent overflow into Bentley.
- (7) The raising of the South Bank of the Smallholme and Tilts Drain between Norwood Sluice and Tilts Bridge.
- (8) The provision of new and more powerful pumping machinery at Kirk Bramwith.
- (9) The cutting of a new drain connecting the Engine Drain and the Bramwith Drain to a point on the river midway between Kirk Bramwith and Stainforth.

The Catchment Board had also to bear in mind that part of their general scheme for the improvement of the River Don was the making of a cut through a portion of Thorpe Marsh and that the reservoir capacity of the Marsh would be reduced thereby.

The total estimated cost of the scheme was £86,000 (excluding a sum of £2,000 to be expended by the Catchment Board under item No. 6 for the raising of the Bentley Barrier Bank and the Thorpe Marsh Barrier Bank).

In discussing the proposal the question of an alternative scheme for the installation of a pump at the outfall of the Smallholme and Tilts Drain to deal with the whole of the water conveyed by such drain (thus avoiding the proposed utilisation of Thorpe Marsh for reservoir purposes and minimising the risk of claims for compensation for the carrying out of the scheme) arose and was considered.

It appeared however, that this larger scheme would mean an additional estimated outlay of £82,000 and was one which the Commissioners did not favour.

In view of the importance of the principles raised the whole of the facts were submitted to the Ministry of Agriculture and Fisheries, particularly with a view to ascertaining what grant, if any, would be made by them towards the carrying out of the scheme.

Finally, after several meetings and discussions with the Commissioners, the Board felt that subject to the necessary safeguards they might raise no objection to the scheme and approve for the purposes of Section 7 of the Land Drainage Act those portions of the Scheme which affected the main river.

The following works have already been completed as a part of this Scheme.

A 36 inch diameter concrete pipe has been laid alongside Bowling Alley Drain, and 24 inch diameter pipes in the bed of the Goosepool Drain.

Various lengths of the latter drain have been regraded to allow of a gravity flow to the new pump which has been erected at the outfall of the Goosepool and Bowling Alley drains adjacent to the Old Ea Beck into which the pump discharges.

Two electric automatic pumps have been installed at this station of 10,000 gallons per minute total capacity.

Askern Main Colliery.

The following are the principal matters dealt with in the royalty area of this Colliery.

(a) Askern Great Common Drain.

Cleaning out and regrading from the pump house north of Askern Common Lane for a considerable distance upstream, thus facilitating the flow of water to the pump.

(b) Haywood & Trumfleet Drain

To remedy the flooding and waterlogging of land alongside this drain a temporary electrically operated automatic centrifugal pump of 3,500 gallons per minute capacity has been installed in the Rushy Moor Plantation.

Further flooding and waterlogging of land has also been observed on an area to the north of the drain and in the vicinity of Rushy Moor House.

The attention of the Company has been drawn to this loss of efficiency in the drainage system with the result that a pump similar to the one referred to above has been installed.

(c) Askern Common Drain.

This drain has been deepened and regraded for a length of about 400 yards, and a temporary electrically operated automatic pump of 3,500 gallons per minute capacity has been erected at the junction of the drain with Fenwick Lane.

There are now in operation in this royalty area ten remedial drainage pumping stations.

Bentley Colliery.

Since the last report the Company have continued the work of forming a barrier bank between Adwick Common and Bentley Moor to the east of the drain which runs between the Mill Stream and Bentley Moor Drain, west of Bentley Colliery. The purpose of the bank is to prevent any flood water from lands to the westward of the above drain finding its way towards Bentley.

Bullcroft Colliery.

Common Drain—Holme Lane.

Flooding and waterlogging of land adjacent to this drain due to subsidence caused by colliery workings was observed during 1937 and the attention of the Colliery Company was drawn to the loss of efficiency in the drainage system.

As a result plans were submitted by the Doncaster Amalgamated Collieries showing their proposals for the drainage of this area. The Scheme includes the fixing of a permanent dam in the Common Drain to the west of Felhurst Bridge, deepening and increasing the cross section of the drain between Felhurst Bridge, Cockshaw Bridge and the north-west corner of Young Row Plantation, and cutting a new drain alongside the western boundary of the Young Row Plantation to join the existing drain at the north-east corner of the Sixteen Acre Plantation. From this point it is proposed to lay thirty-three inch diameter pipes in the bed of the drain alongside the eastern boundary of the plantation to the south of Thornhurst Farm, unless the nature of the soil is found suitable for an open cut.

The drain will then discharge through a new cut into the delph on the north side of the L. & N. E. Railway. The delph is to be sludged out westward alongside the railway to its junction with the culvert leading to the Duckholt Pump by means of which the water will be discharged into the Smallholme and Tilts Drain.

The above scheme has now been carefully considered and it is believed that it should effect a considerable improvement in the drainage system of the area.

Thorne Colliery.

Black Drain Drainage District.

Flooding or waterlogging of land within this drainage district to the east of the Black Drain and north of the Thorne Moor Level Crossing and also at the junction of the Black Drain with the Marsh Dike was observed in December 1937 during very severe rainfalls.

These areas have been effected by subsidence due to the extraction of coal at Thorne Colliery and schemes of remedial drainage works are now under consideration by Messrs Pease & Partners.

General.

During the year the following drains have been levelled :

Markham Main Royalty Area	Carr Drain and Hodge Dike.
Thorne Colliery	North Common Drain and Black Drain.
Askern Colliery	Haywood & Trumfleet Drain, Mill Dike and Thistle Dike.

As subsidence is continuing from day to day during and for some time after the extraction of coal, constant levelling is required to record changes in surface levels. Approximately 2,500 acres of land have been levelled and bench marks established for this purpose.

There are now 17 remedial drainage pumping stations operated by the various Colliery Companies within the Doncaster District and their effect in maintaining the efficiency of the drainage system is kept under observation.

Section V.—FINANCE.

ACCOUNTS.

By virtue of Section 223 of The Local Government Act, 1933, the financial year of the Catchment Board is reckoned from the 1st April in any year until the succeeding 31st March. The Accounts of the Catchment Board and their officers are subject to audit by the District Auditor who has completed his audit of the Accounts for the year ended 31st March, 1938.

An abstract of the Accounts as audited appears in the Appendix to this Report.

FINANCIAL YEAR BEGINNING 1st APRIL, 1938.

The following particulars with regard to the financial year beginning 1st April, 1938, are set out :—

Expenditure of Catchment Board.

The following estimate of expenditure was adopted by the Board :—

1. *Under the Land Drainage Act, 1930 :*

	£	s.	d.
(a) Administration	26,068	0	4
(b) Works of Maintenance	20,750	0	0
(c) Improvement of existing works	53,450	0	0
(d) Execution of new works	13,800	0	0
(e) Contributions to Internal Drainage Boards	1,500	0	0

2. *Expenditure and charges incurred before the passing of the Land Drainage Act, 1930*

Nil.

£115,568 0 4

Income of Catchment Board.

To meet this expenditure the Board had the following resources of revenue to fall back upon (apart from sundry small receipts) :—

- Government Grant.
- Precepts on Internal Drainage Boards.
- Precepts on County and County Borough Councils.

(a) Government Grant.

As has previously been reported the Ministry of Agriculture and Fisheries in approving the Main River Improvement Scheme of the Catchment Board to be carried out at an estimated cost of £1,190,000 undertook to contribute by way of grant 33 $\frac{1}{3}$ % of the cost thereof. Instalments of grant are paid in respect of expenditure on the Scheme and to the 19th day of November, 1938, instalments of grant amounting to £85,775 have actually been received as against the sum of £253,329 which had been spent to that date in carrying out the Scheme.

(b) Contributions by Internal Drainage Boards.

It is laid down in the Land Drainage Act, 1930, that a Catchment Board shall by resolution require each internal drainage board to make towards the expenses of the Catchment Board such contributions as the Catchment Board may consider to be fair.

It is clear that no hard and fast rules can be laid down as to what such contributions shall be in as much as the circumstances in each case vary so greatly.

The Board have now to deal with 54 internal drainage boards and a special Sub-Committee has devoted a considerable amount of time to considering each case separately on its merits. For the financial year beginning 1st April, 1938, contributions in all amounting to £3,909 have been required to be paid by the internal drainage boards.

Particulars of the individual amounts paid by each Board will be found in the Appendix to this Report.

(c) Contributions by County and County Borough Councils.

Section 20 of the Land Drainage Act provides that the expenses under the Act of a Catchment Board in so far as they are not met otherwise shall be paid to the Board by the Councils of Counties and County Boroughs which are situate within or extend into the Catchment Area in proportion to the rateable values of the hereditaments in such areas within the Catchment Area.

In the Appendix to this Report appears a Statement of the totals of the rateable values at 1st April, 1938, of all such hereditaments in the respective areas of those Councils as are situate within the Catchment Area, together with the amounts payable in respect of Precepts for the financial year beginning on that date.

The aforesaid estimated expenditure of £115,568 0s. 4d., was raised from the above three sources as follows :—

	£	s.	d.
Government Grant	22,500	0	0
Precepts on Internal Drainage Boards	3,909	0	0
Precepts on County and County Borough Councils	89,159	0	4
	£115,568	0	4

**CAPITAL EXPENDITURE,
SURVEY OF PROSPECTIVE WORKS.**

The Board, in common with Local Authorities generally have been requested by the Ministry of Health to furnish them with a survey of their probable capital commitments for the ensuing five years, particularly in connection with projects involving building work.

The Ministry stated that in their view the review of questions of capital expenditure upon which they were embarking was of special importance under present conditions, not merely in order to secure the smooth progress of Local Authorities' operations but as a matter of national policy.

Particulars have accordingly been forwarded to the Ministry of the expenditure still to be incurred in the provision of the new offices in course of construction together with the amounts the Board have provisionally agreed should be spent during the period in question of a grant earning character.

CONTRIBUTIONS TO INTERNAL DRAINAGE BOARDS.

Section 21 (3) of the Land Drainage Act, 1930, provides that where it appears to an internal drainage board that by reason of the quantity of water which their district receives from lands at a higher level or by reason of the time which will elapse before their district obtains any relief from the operations of the Catchment Board on the main channel of the river, it is fair that a contribution towards their expenses should be made by the Catchment Board they may make an application to the Catchment Board and that Board may resolve to make to them such contribution, if any, as may be specified in the resolution.

During the year applications from 25 internal drainage boards have been received for contributions and to enable the Board to deal with them a great deal of information has had to be considered and checked. As in the case of precepts on internal drainage boards individual consideration has been given to each application and a total sum of £1,838 has been paid to the various boards. Particulars of these payments will be found in the Appendix to this Report.

BORROWING BY INTERNAL DRAINAGE BOARDS.

During the year several new internal drainage boards have been set up and have held their first meetings.

One of the first questions facing every new board is as to whether or not they will commence drainage operations immediately or wait until they have levied and collected their first rate. Should the latter policy be adopted it would mean that for the year at least after they were first set up they would not be able to do any work and would doubtless have unusual difficulty in collecting the first rate.

It has therefore been the policy of the Board to encourage new boards, with the sanction of the Ministry of Agriculture and Fisheries to incur an overdraft at the Bank by way of loan to enable them to function pending the receipt and collection of the first rate.

The following table shows the action taken by the several new boards set up during the year :—

Name of Board.	Amount sanctioned by Ministry of Agriculture and Fisheries to be borrowed.
Upper Swale Internal Drainage Board.	£1,000
East Derwent Internal Drainage Board.	£250

In addition to the above the following boards have obtained sanction for the raising of loans during the year for the purpose of execution of works in their district :—

Name of Board.	Amount sanctioned by Ministry of Agriculture and Fisheries to be borrowed.
Cowick Drainage Board.	£250
Snaith Drainage Board.	£150
River Tutt Drainage Board.	£200
Dunsforth Drainage Board.	£200
Knottingley to Hensall Drainage Board.	£500
River Kyle Drainage Board.	£3,000

The period of repayment of loans of £300 and £750 taken up by the South Wharfe and River Foss Drainage Boards respectively has been extended with the approval of the Ministry.

LOCAL GOVERNMENT SUPERANNUATION ACT, 1937.

As was mentioned in the last Annual Report this Act comes into operation on the 1st April, 1939, and applies to the Catchment Board in as much as they had adopted the 1922 Act.

Employees of the Board become compulsorily superannuable in so far as they are within the following classes :—

- (a) every whole-time officer.
- (b) every servant or part-time officer who belongs to a class which the Board may by resolution specify as a class the members of which are to be contributory employees.

In accordance with the regulations issued by the Minister of Health under the Act, the Catchment Board gave early consideration to the question as to which of the persons in their employment would, if they remained in their employment in the posts occupied by them until the appointed day i.e. 1st April, 1939, become on the appointed day contributory employees, and resolved that so far as possible according to the age of the employee the posts of all officers not then appointed to designated posts under the Superannuation Act of 1922 should be so designated and further that the statutory notice required by the 1937 Act should be given to all such officers together with those officers whose posts had been

already designated that if they remained in the employment of the Catchment Board on the 1st April, 1939, they would become contributory employees under the Local Government Superannuation Act, 1937. It was also resolved to serve the same notice on the two officers who could not by reason of their age have their posts designated under the 1922 Act.

With regard to the workmen generally, having regard to the fluctuating nature of their employment the Catchment Board resolved that no scheme be submitted at the present time.

HOSPITAL CONTRIBUTIONS.

Under the voluntary system suggested by the Boards' workmen whereby a sum of one penny in the pound per week is deducted from their wages the sum of £114 0s. 7d. has been so deducted during the year ending 31st March, 1938, and distributed among hospitals suggested by the men.

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Section VI—MISCELLANEOUS.

TRUNK ROADS ACT, 1936.

By virtue of the Trunk Roads Act, 1936 the Minister of Transport as from the 1st April, 1937 became the Highway Authority for the trunk roads of Great Britain, except so far as they run within the County of London or any County Borough.

As in many cases it might be desired to carry a trunk road across a main river by means of a bridge it was felt that Catchment Boards should not be in any worse position with the Minister of Transport as Highway Authority in place of County Councils who were subject to the provisions of Section 64 of the Land Drainage Act, 1930 which provides that it shall not be lawful for any person except by way of replacement or reconstruction of an existing bridge to construct a bridge over the main river of a catchment area without the consent (not to be unreasonably withheld) of the Catchment Board and unless the bridge is constructed in accordance with plans and sections approved by the Catchment Board.

As the matter affected all Catchment Boards it was taken up by the Catchment Boards' Association, and on their behalf a question was addressed to the Minister of Transport when the Bill was passing through the House. In reply the Minister stated, "With regard to Catchment Boards I will say that I would not construct a bridge over a main river of the catchment area without consulting the Catchment Board concerned and in default of agreement with them I would not proceed further without consulting with the Minister of Agriculture."

By Section 1 (3) of the Act, if the Minister is satisfied that it is expedient to construct a new road or improve any road with a view to superseding any part of a trunk road by the creation of a new route for through traffic he may, after serving upon the Council of every County within whose area the part of the trunk road to be superseded or the route which is to supersede it is situated, notice of his intention to do so, and after considering any representation made by any such Council within three months after service of the said notice and after holding a Local Inquiry if he thinks fit so to do or if a request therefor is made by any such Council within the said three months, make an Order providing that such new or improved route shall become a trunk road.

So far as the Board's area is concerned the Minister has been very active in this direction and it has become necessary for the Board to enquire closely into several proposals of which due notice has been given in order to see that land drainage interests will not be injuriously affected.

The following Table gives particulars of the by-passes and diversions of which notice has been received :—

Name of Trunk Road.	Site of By-Pass or Diversion.
Liverpool—Preston—Leeds Trunk Road.	Stirk House. Rakes Plantation. Gisburn. Sullside. Monk Bridge. Bentha Plantation. West and East Marton. Broughton Bridge. East of Bull Inn, Broughton. Skipton. Draughton. West of Chelker Reservoir. East of Chelker Reservoir. Ilkley. Burley-in-Wharfedale. Otley. Addingham.

Name of Trunk Road.	Site of By-Pass or Diversion.
Liverpool—Leeds—Hull Trunk Road.	Selby. Hambleton. Howden.
Sheffield—Grimsby Trunk Road	Thrybergh-Hooton Roberts. Conisbrough.
London—Edinburgh—Thurso Trunk Road.	Doncaster By-Pass. Micklefield. Boroughbridge. Wetherby. Aberford. Walshford. Wentbridge. Bramham. Brotherton.

In every case of a proposed crossing of a main river the Ministry of Transport have agreed to consult the Catchment Board with regard to the proposed width and location of the bridge and to submit to them details before the work is put in hand.

With regard to the crossing of watercourses other than main river the Ministry have also agreed to comply with the Catchment Board's suggestions for the protection of land drainage interests.

In particular, attention is drawn to the by-passing of the Liverpool-Leeds-Hull Trunk Road at Selby.

In the last Annual Report particulars were given of an Order the Minister of Transport proposed to make under Section 1 (3) of the Trunk Roads Act, 1936 in respect of the Selby By-Pass Scheme.

Included in the proposal was the provision of a bridge over the River Ouse about 300 yards East of the London & North Eastern Railway Bridge at Selby.

The Minister caused a Public Local Inquiry to be held in the matter when on behalf of the Catchment Board it was represented that they desired to raise no objection to the new bridge as proposed by the Minister, namely, with a central opening span of 120 feet. It was pointed out however that flood arches might also be necessary and a request was tabled that in accordance with the Minister of Transport's statement in the House plans would be submitted to the Catchment Board in due course.

Subsequently a letter was received from the Ministry stating that as a result of the examination of the representations made at the Inquiry the Minister did not propose to

proceed with his original proposal, but was satisfied that it was expedient to construct a new road with a view to superseding that part of the Liverpool-Leeds-Hull Trunk Road at Selby. The proposed alternative route showed that the bridge across the River Ouse would be erected one mile to the south of Selby.

Plans of the bridge were submitted by the Ministry's Consulting Engineer showing the provision of a navigation opening of 120 feet clear span with headroom above high water of fifteen feet at the piers, increasing to sixteen feet at mid-span. In considering the side spans necessary, the Engineers had had in view to provide a cross section of waterway through the bridge at high and low water as well as under conditions of extreme flood, in excess of that given at present on this section of the river. This had been effected by diverting the flood banks outwards at each side of the river by about twenty-five feet and providing a clear span of forty feet behind the main piers for flood purposes.

After careful consideration of the matter the Catchment Board informed the Ministry that they did not desire to raise any objection to the location of the proposed bridge at the site indicated or to the scheme of permanent works as shown on the plans subject to certain conditions being observed.

TOWN AND COUNTRY PLANNING.

It has been necessary for the Board increasingly to give their attention to the various Town Planning Schemes which are being formulated from the point of view of the zoning of different areas thereunder.

In the past the Board have found that areas liable to flooding have been deliberately utilised for building purposes with subsequent demands that something shall be done to relieve flooding which has taken place periodically for many years. Indeed in some cases the areas in question have been regarded as natural washlands to receive temporary or seasonal overflowings of various rivers.

There are undoubtedly many such areas upon which, owing to being liable to flooding, building should not be allowed, but should be reserved as open spaces.

The Board have therefore examined all cases of town planning which have come to their notice from this point of view, and where they were satisfied in any particular case that an area has been shown to be allowed to be used for buildings of domestic or industrial nature they have not

hesitated in cases where such areas were liable to flooding to report such fact to the Planning Authority, generally with good results as the following cases, which have been dealt with, will show :—

(a) City of York Planning Scheme.

In a scheme prepared by the York Corporation it was observed that industrial development might take place or houses might be built in an area which the Board were informed by their Engineer was liable to flooding. They therefore suggested to the Corporation that this area should not be permitted to be used for building, but should be reserved as open spaces.

As a result of the Board's intervention the Corporation in their final scheme decided to amend the definition of such areas and describe them as "undetermined" so that no building could take place thereon without the consent of the Corporation.

(b) City of York (Acomb) Planning Scheme.

A further scheme prepared by the Corporation of York was examined when the fact was revealed that about twenty acres of land included in such scheme for development were liable to flooding. This information was conveyed to the Corporation who pointed out that a large part of the area in question had been acquired by the York Waterworks Company who had already constructed thereon extensions of the waterworks, and that under the circumstances it was not proposed to alter the zoning as suggested.

(c) Chesterfield & District Regional Joint Town Planning Committee.

The Board have secured representation on this Committee through their Engineer who avails himself of the opportunity of assisting the Committee by attending meetings of the Technical and Advisory Sub-Committee at a recent meeting of which a draft scheme for the planning of a part of the area was considered when it was noted that certain areas particularly in the neighbourhood of Staveley which were liable to flooding from the River Rother had been included for industrial development.

A difficult problem from the Board's point of view has already been created in this area by the development of land previously liable to flooding by first raising the area by tipping colliery and other refuse on to the land and then constructing works on the top thereof. Whilst this method

effectually prevents the works from being flooded the confining of the flood channel of the river by tipping results in increased flooding of land above and the practice is not therefore to be recommended from a land drainage point of view. It is moreover desirable that no land be scheduled for industrial or other development which may in the future be liable to flood from the main river, or alternatively that a strip be reserved alongside the river upon which development or tipping shall not be allowed which would interfere with the flow of the river in flood time and any buildings constructed on the remaining area should be raised above the flood level. The latter alternative appears to be the ideal solution as mining operations are taking place throughout the Rother Valley which by subsiding the land will materially alter from time to time the area flooded and it is quite realised that the Planning Committee may find it impracticable to incorporate such conditions in their scheme.

It has been decided therefore that a survey be made of the area which is at present flooded and in the meantime the Town Planning Committee have been informed that the Board's observations on their scheme will be forwarded after the completion of the survey.

(d) Ilkley Urban District Council.

Other schemes which have been examined are those of the Ilkley Urban District Council Nos. 1 and 2, from which it was observed that buildings might be erected on lands which were liable to flooding from the River Wharfe. These areas were pointed out to the Urban Council and it was suggested to them that no buildings should be permitted to be erected on such lands but that they should be reserved as open spaces.

So far the District Council have not seen eye to eye with the Board in this matter who have therefore acquainted the Ministry of Health of the position.

(e) North Riding County Council.

Notice has been received of the deposit by the North Riding County Council Planning Committee of schemes and maps in relation to the following districts in the North Riding of Yorkshire :—

- (1) Stokesley Rural District.
- (2) Croft Rural District.
- (3) Northallerton Rural District.

Prior to the preparation of the schemes the County Council were supplied with a plan on which was indicated a line showing the approximate areas liable to flooding, and the

Board were glad to observe that the plans on deposit showed that this line, to a very great extent, had been closely followed, and that the land liable to flooding had been scheduled with a permanent restriction upon building, and that in the areas where flooded land had not been scheduled as permanently restricted it had in the majority of cases been scheduled for normal rural development with a building limit of one house per ten acres.

REPRESENTATION ON JOINT TOWN PLANNING COMMITTEES.

In addition to the Committees upon which it has already been reported that the Catchment Board have secured representation, a communication has been received from the Secretary of the Skipton & District Joint Town Planning Committee to the effect that in the event of a Technical Advisory Committee being appointed, the Catchment Board's request for representation will be further considered.

MINISTRY OF HEALTH INQUIRIES.

The following cases of applications to the Ministry of Health for sanction to borrow monies have been investigated with a view to seeing that land drainage interests would not be injuriously affected by the works proposed to be carried out :—

Name of Authority	Purpose of Inquiry.
Aysgarth Rural District Council	Works of Water Supply.
Bedale Rural District Council	Works of Water Supply.
Doncaster County Borough	Works of Sewerage.
Doncaster Rural District Council	Works of Sewerage and Sewage Disposal.
Doncaster and Tickhill Joint Water Board.	Works of Water Supply.
Easingwold Rural District Council	Works of Sewerage and Sewage Disposal.
Hebden Royd Urban District Council	Works of Water Supply.
Holmfirth Urban District Council	Works of Water Supply.
Ilkley Urban District Council	Works of Sewerage.
Kirbymoorside Rural District Council	Works of Water Supply.
Nidderdale Rural District Council	Works of Sewage Disposal. (Ferrensbury).
Nidderdale Rural District Council	Works of Sewage Disposal. (Little Ouseburn).

Name of Authority.	Purpose of Inquiry.
Northallerton Rural District Council	Works of Water Supply.
Penistone Urban District Council	Works of Water Supply.
Pickering Rural District Council	Works of Water Supply.
Queensbury and Shelf Urban District Council	Works of Sewerage and Sewage Disposal.
Ripon and Pateley Bridge Rural District Council	Works of Sewage Disposal.
Rothwell Urban District Council	New Outfall Sewer.
Silsden Urban District Council	Works of Sewage Disposal.
Tadcaster Rural District Council	Works of Sewage Disposal.

In every case where necessary, representatives of the Local Authority have been seen and suggestions made in the interests of land drainage, and in every case have been adopted.

COAL BILL.

The Board have naturally been greatly interested in the Government's Bill for the unification of coal royalties particularly having regard to the provisions of Part II of the Doncaster Area Drainage Act, 1929 under which obligations were placed on persons working minerals in the Doncaster Drainage District.

That Act made it the duty of any such person to construct and maintain in proper condition such works and do such things as might by reason of any subsidence which resulted or might result from the working of the minerals be requisite in order to obviate or remedy, so far as having regard to all the circumstances of the case was reasonably necessary, any loss of efficiency which had arisen or might arise in the drainage system and drainage works of the Doncaster District.

By a further section of the Act any royalty owner is liable to make a contribution to any expenses so incurred.

The Board desired to know therefore whether if the Government became the royalty owner they would consider whether the Doncaster Act would apply to them. The matter was therefore taken up with the Secretary for Mines and his attention drawn to the fact when an assurance was re-

ceived that the position of royalties under the Doncaster Area Drainage Acts would not be lost sight of in the framing of the Government's proposals for the unification of coal royalties.

A further point taken up with the Mines Department was the leasing of coal under main rivers outside the Doncaster Area and they were informed that it would be of the utmost assistance to the Catchment Board in dealing with land drainage problems in the area of the coal fields which were outside the Doncaster Drainage District, if on the Bill becoming effective the Catchment Board could be furnished from time to time with particulars of any projected coal workings. On this point also the Board have received an assurance that there need be no apprehension of action on the Government's part deleterious to the interests of public bodies such as the Board.

COAL (REGISTRATION OF OWNERSHIP) ACT, 1937.

Under the above Act the Board of Trade are required to establish a Register to be called the Coal Holdings Register and to receive applications for the registration of such proprietary interests in coal as in the Act are referred to as "the holding."

The Catchment Board having acquired several pieces of land, the mineral interests in which are vested in them, have made the necessary application for the registration of such interests.

SOCIETY OF ANTIQUARIES OF LONDON.

A letter has been received from the Assistant Secretary of the Society of Antiquaries of London stating that in the course of the execution of works of clearing and widening streams and rivers in various parts of the country, many objects of great archaeological and antiquarian interest have at various times been dredged from rivers, some of the most interesting objects in the British Museum having come from this source.

The letter requested that any such objects should be carefully preserved and their occurrence reported to some competent authority either in the neighbourhood or in London.

The local representative of the Society is :—

Lt. Col. Kitson Clark, F.S.A., Meanwoodside, Leeds.

The Society were informed that the Catchment Board would be happy to co-operate with them as far as possible on the lines indicated in their letter, a copy of which was forwarded to all Internal Drainage Boards in the Catchment Area.

It was a matter of considerable interest to the Board when a few weeks later it was reported to them that in the course of the excavation for the foundations of the new Swang Clough on the south bank of the Dutch River a clay jug had been discovered.

In accordance with the suggestion of the Society the jug was submitted to the local representative in Leeds who reported that it probably dated back to the XIIIth or XIVth Century.

The Board decided that the jug be offered to the Doncaster Art Gallery and Museum, maintained by the Corporation of Doncaster, for preservation and exhibition. The Corporation have accepted the gift and have accordingly placed the jug in the Museum.

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND.

The Board have had before them a communication from the Council for the Preservation of Rural England stating that the Council had given attention to the question of the unnecessary uprooting of trees near rivers and watercourses and asking for co-operation in the Council's attempts to preserve the amenities of the river.

A reply has been forwarded to the Council assuring them that in carrying out their works every effort will be made by the Catchment Board to preserve the amenities of the river.

VERMIN.

One of the ever present problems with which the Board is faced is the ravages in main river banks due to vermin burrows, and much consideration has been given to the question of dealing with vermin.

The co-operation of all landowners and occupiers has been encouraged and in large measure obtained.

Among methods for dealing with the problem the question of using poison gas has been seriously considered.

The following extract is taken from the Report of the Select Committee of the House of Lords on "Agriculture (Damage by Rabbits)" :—

Gassing has been strongly recommended as a substitute for gin traps. In the experience of several witnesses, it is a good method of exterminating rabbits, and undoubtedly in some places and under certain conditions it is most effective; but those who advocated the use of gas admitted that there are places where gas is ineffective. It would be of no use where rabbits live in rough cover and have no holes, and of little use in walls, cliffs or anywhere where it is not possible to close every opening. The legal position with regard to the use of gas is uncertain. The Committee consider that its employment should be legalised beyond doubt.

The matter was taken up with the Ministry of Agriculture and Fisheries who agreed that there was some doubt as to the strict legal position, as for instance it might be possible to hold that the Protection of Animals Act applied to rabbits and precluded their destruction by poison gas.

It was gathered that the Ministry were contemplating a Rabbits Bill which would make it quite clear that poison gas could be used against rabbits.

Under the circumstances the Board decided that in any campaign against rabbits poison gas be not used until the legal situation is cleared up.

IN THE COURT OF THE RAILWAY AND CANAL COMMISSION.

It is the practice of the Court of the Railway and Canal Commission to direct that notices of any Application to work coal shall be served upon a Catchment Board in the area in which the coal is situate.

During the year the following Applications have been received and investigated.

(a) Amalgamated Denaby Collieries Ltd.

This Company applied to the Commission for a grant to work coal under land in the Urban District of Conisbrough. The matter was taken up with the Company who were requested to give an assurance that they would remedy to the reasonable satisfaction of the Board any loss of efficiency in the drainage system which might occur as a result of their operations, and a letter has been received from the Company giving the necessary assurance.

(b) Manor Haigh Moor Colliery Ltd.

(c) Messrs. Terry Greaves & Co. Ltd.

Both these Companies made an Application to work coal under the City of Wakefield and adjoining area, and in both cases including coal under the main River Calder. Negotiations were entered into with both Companies who were asked to agree to the insertion in any Order which might be made by the Court of a clause to the effect that if as a result of working the specified minerals the banks of the main River Calder were lowered, the Company would if and when required by the Board raise such banks to the extent they were so let down, to the reasonable satisfaction of the Board. At the same time the Companies were requested to give the Board, on being so required, such information as they might reasonably require from time to time with respect to the working and projected working of any minerals under lands within 500 yards measured from the centre of the River Calder, and also supply the Board with copies of all plans, sections, and levels including surface levels relating to the workings. In both cases the Companies concerned have agreed to the inclusion of such clauses in any Orders they may obtain.

AIR RAID PRECAUTIONS.

In addition to the activities of the Catchment Boards' Association in regard to Air Raid Precautions reported on page 13 of this Report the Board have availed themselves of the opportunity of nominating a member of the Engineer's Staff for attendance at the Government Civilian Anti-Gas School at Easingwold for a course of training to enable him to qualify as an Instructor.

The Assistant Clerk of Works (Mr. A. E. Whitaker) duly attended the School and a communication has been received from the Home Office, Air Raid Precautions Department stating that he had qualified as a Second Class Instructor and had received a certificate to that effect.

CROSSINGS OVER WATERCOURSES.

By Section 1 of the Land Drainage Act, 1930 the Catchment Board are a drainage authority for the whole of their district, i.e. the Catchment Area and the section places on them the duty of exercising "a general supervision over all matters relating to the drainage of land within its district."

They are glad to report that it is now the general practice for all local authorities within the district to submit particulars of any works to be carried out by them which may affect the drainage of land within the Catchment Area.

A particular branch of a local authority's activities which concerns the Board is the crossing of any watercourse whether by bridge or pipe in order to see that no obstruction is formed in the channel or which would be inconvenient should it be desired at any time to widen or deepen the watercourses and cases relating to, among others, Hebble Brook; Moor Beck Bridge (Stainton); Priorpot Bridge; River Hipper (Chesterfield) and River Drone (Chesterfield) have been dealt with during the year.

STORM SURGES IN THE NORTH SEA.

The Board have given consideration to a communication received from the London County Council with reference to an inquiry which as the result of the overflow of the River Thames on the 7th January, 1928, was made in that year into the whole subject of tides in the Thames.

The investigation, which was carried out by the Liverpool Tidal Institute, in co-operation with the Hydrographic Department of the Admiralty and the Meteorological Office of the Air Ministry, was hampered by lack of data regarding storm surges in the North Sea, and was limited by the urgency for completing the inquiry. It was, however, clearly shown that storm surges affected large areas and were not of local origin.

The three investigating authorities stated that a "widening of the area of investigation and the investigation of future surges, together with the supply of adequate data, would result in the obtaining of much additional knowledge, and possibly even in the advance prediction of dangerous tides at particular places." They recommended that such investigation should be a national, not a local, matter financed from national funds.

In view of the undoubted necessity of obtaining the full information regarding storm surges from the point of view of flood prevention, the Council was considering whether if the other authorities would give support it should initiate the inquiry itself. The Liverpool Tidal Institute which carried out the previous investigation had been tentatively approached and had agreed to undertake the further inquiry (which would be spread over four or five years) into storm surges

for a total sum of £1,100. They had therefore approached all Catchment Boards and Sewer Commissions from the Humber to the Thames whose areas included lands subject to inundation from the North Sea, and in addition to the Port of London Authority and the County Borough of West Ham.

The Engineer reported to the Board and when the matter was considered by the Engineers of the various Catchment Boards the opinion was expressed that if timeous warning of the coming of extraordinary high tides could be given, the information would be of the utmost value to Catchment Boards responsible for maintenance of tidal river embankments.

In the case of this Catchment Board there were still many miles of such embankments which had been in the past and which might be in the future, overtopped by extraordinary high tides. Such banks were being steadily raised but many years must elapse before all such banks could be deemed to be of sufficient height. It would be of the greatest assistance in the meantime if the Engineering Staff received even six hours warning of the approach of an extraordinary tide, as bank patrols could then be organised and equipped with the necessary plant and material such as sandbags to deal with overflows before they had assumed such proportions as to endanger the stability of the bank, or to flood to any serious extent the adjacent land behind the bank.

The Catchment Board decided to make a contribution of £100 towards the expenses of such survey.

UNIVERSITIES COUNCIL FOR UNEMPLOYED CAMPS.

As in previous years the Universities Council for unemployed Camps which has for its object the promotion of useful schemes of work for the unemployed, again approached the Board with reference to proposals for continuing the work already done through the auspices of the Council on the River Rye and requesting the co-operation of the Catchment Board in the matter. This co-operation was readily given and a Camp authorised by the University of Cambridge was established at Harome consisting of 100 men and 10 undergraduates.

The work carried out consisted of the extension and improvement of the diversion carried out last year on the non-main portion of the river which had been partly blocked by gravel during the winter floods. The new diversion was made across the next loop of the river and the shoal further

downstream was removed. The progress of the work was delayed by bad weather and a minor flood and it was therefore impossible to carry out certain other works which had been contemplated. An average of about eighty men were engaged daily on the work during the four weeks the Camp was held. Excellent progress was made with the work and the men taking part benefited greatly in health by the exercise and work in the open air. The equipment lent by the Board has been returned in good condition.

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APPENDIX.

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MEMBERS OF THE CATCHMENT BOARD, 1937-8.

Name and Address.	Person or Body Appointing.
1. Coun. F. Barraclough, 25, Dorset Mount, Leeds, 8.	Leeds City Council.
2. Ald. C. W. Beardsley, 96, Bent's Road, Ecclesall, Sheffield, 11.	Sheffield City Council.
3. Ald. Lt.-Col. E. J. Clarke, "Parkfield," 22, Park Crescent, Leeds, 8.	Leeds City Council.
4. Robert Clive, Esq., (Box No. 77), Royal Victoria Station Hotel, Sheffield.	South Yorkshire Coal Trade Association.
5. Coun. R. Colver, 239, Graham Road, Sheffield.	Sheffield City Council.
6. Cty. Coun. A. Corfield, 182, Castleford Road, Normanton.	West Riding County Council.
7. R. H. Coulman, Esq., The Hall, Eastoft, Scunthorpe, Lincs.	Minister of Agriculture and Fisheries.
8. Ald. E. Cruikshanks, (Vice-Chairman), "Conway," Old Wortley Road, Rotherham.	Rotherham Town Council.
9. Capt. P. R. Davies-Cooke, Skellow Hall, Doncaster.	Minister of Agriculture and Fisheries.
10. W. T. Everatt, Esq., Faircote, Parker Lane, Mirfield.	West Riding County Council.

MEMBERS OF THE CATCHMENT BOARD—Continued.

Name and Address.	Person or Body Appointing.
11. Coun. J. Guest, 4, Queensway, Queen's Drive, Barnsley.	Barnsley Town Council.
12. C. W. H. Glossop, Esq., Bramwith Hall, Doncaster.	Minister of Agriculture and Fisheries.
13. Cty. Coun. A. E. Hall, The Limes, Eckington, via Sheffield.	Derbyshire County Council.
14. Coun. J. Hargrave, 23, Howe Hill Road, York.	York City Council.
15. W. Hinchcliff, Esq., Grange Farm, Hunmanby, nr. Filey.	Minister of Agriculture and Fisheries.
16. Coun. N. Hutchinson, 150, Stanley Road, Wakefield.	Wakefield City Council.
17. Coun. L. Jessop, 152, Horton Grange Rd., Bradford.	Bradford City Council.
18. Ald. F. Austin Leach, 36, Reservoir Road, Halifax.	Halifax Town Council.
19. Coun. J. Lennon, Belle Vue Cottage, Thackley, Bradford.	Bradford City Council.
20. A. Penty, Esq., The Gables, Burneston, Bedale, Yorks.	North Riding County Council
21. Cty. Ald. J. H. Preston, Flasby Hall, Gargrave, Skipton, Yorks.	West Riding County Council.
22. Capt. E. A. Raimes, Acaster Manor, York.	West Riding County Council.

MEMBERS OF THE CATCHMENT BOARD—Continued.

Name and Address.	Person or Body Appointing.
23. Cty. Coun. Lt.-Col. H. Rhodes, Oaklands, Whixley, York.	West Riding County Council.
24. Col. P. Saltmarshe, Saltmarshe, Howden, E. Yorks.	Minister of Agriculture and Fisheries.
25. Cty. Ald. G. Schofield, Harrington Villa, 51, Park Road, Mexborough, Rotherham.	West Riding County Council.
26. A. R. Thomlinson, Esq., Hall Cross Chambers, Doncaster.	Mineral Owners Association.
27. T. P. Thompson, Esq., Scurff Hall, Drax, Selby.	Minister of Agriculture and Fisheries.
28. Cty. Ald. W. H. Turner, Fairhaven, Wood Lane, Rothwell Haigh, Nr. Leeds.	West Riding County Council.
29. Cty. Ald. R. L. Walker , (Chairman), Boothferry House, Airmyrn, Goole.	West Riding County Council.
30. Cty. Coun. M. Whittock, 46, Front Street, Glasshoughton, Castleford.	West Riding County Council.
31. W. Wood, Esq., Flaxton, York.	Minister of Agriculture and Fisheries.
32. Coun. F. Wrigley, "Thorsgrif," Somerset Road, Huddersfield.	Huddersfield Town Council.
33. Cty. Ald. Col. E. York, Hutton Hall, Long Marston, York.	West Riding County Council.

SCHEDULE OF PROPERTIES

In addition to the properties vested in or acquired by the Board which were included in last year's Annual Report the following additional properties have been purchased :—

Situation.	Area			Purpose for which acquired.
	a.	r.	p.	
RIVER DEARNE.				
Bolton-on-Dearne	6	1	28	Making new channel.
RIVER DERWENT.				
Ellerton.	0	0	37	Widening existing channel and improving existing embankment.
North Duffield.	1	1	24	do.
do.	0	3	22	do.
Wressle.	15	2	7	do.
Bubwith.	2	0	3	do.
Ellerton.	2	2	2	do.
Barmby.	3	1	21	Constructing new embankment.
Wheldrake.	15	2	18	Widening existing channel and improving existing embankment.
do.	0	2	32	do.
Barmby.	0	1	14	Constructing new embankment.
Sutton-on-Derwent.	7	3	8	Making new cut.
Ellerton.	2	2	2	Widening existing channel and improving existing embankment.
Bubwith.	0	2	26	do.
Bubwith.	1	1	34	do.
Bubwith.	2	0	29	do.
Thorganby.	0	0	29	Widening existing channel.
Thorganby.	2	0	17	do.
Weldrake.	0	0	34	do.
North Duffield.	3	0	16	do.
RIVER DON.				
Thorne.	1	0	8	Widening existing channel and improving existing embankment.
Fishlake.	17	3	8	Making new cut.
Fishlake.	37	2	36	do.
Thorne.	2	1	5	Widening existing channel and improving existing embankment.
Snaith and Cowick & Sykehouse.	6	0	8	do.

SCHEDULE OF PROPERTIES—(continued).

Situation.	Area			Purpose for which acquired.
	a.	r.	p.	
Snauth & Cowick.	1	0	16	Widening existing channel and improving existing embankment.
Stainforth.	1	1	16	Making new cut and embankment
Thorne.	5	0	22	Widening existing channel and improving existing embankment.
Fishlake.	1	1	28	do.
Sykehouse.	12	0	21	do.
Stainforth.	1	2	20	Constructing new embankment.
Fishlake.	4	2	19	Widening existing channel and improving existing embankment.
Fishlake.	1	2	12	Constructing new embankment.
Stainforth.	1	3	5	do.
Fishlake and Stainforth.	46	1	0	Making new cut and embankment
Fishlake.	18	2	3	Widening existing channel and improving existing embankment.
Stainforth.	3	1	16	Constructing new embankment.
Fishlake.	3	3	26	Widening and improving existing channel.
Fishlake.	4	0	28	do.
Fishlake.	7	0	34	do.
Stainforth.	1	2	34	Making new cut and embankment
RIVER OUSE. Riccail.	3	1	5	Constructing new embankment.

INTERNAL DRAINAGE DISTRICTS
wholly or partly within the Catchment Area.

Name of District.	Act under which constituted.	District Drains to River	Area.		As at 1st April, 1938.		Total Annual Value for rating purposes. £
			Acres.	Annual Value.	Agri-cultural Land. £	Other hereditaments (rated at one-third Annual Value). £	
Acaster	Under West Riding of Yorks. County Council (Drainage Act) 1923.	Onse & Wharfe	3245	3660	2150	4377	
Adlingfleet and Whitgift (part)	Under Act of Parliament dated 1767.	Onse	1469	2804	342	2918	
Ainsty	Under Land Drainage Act 1930.	Nidd	5370	5515	732	5759	
Airedale	Under Act of Parliament dated 1861.	Aire	2905	5739	22552	13256	
Airmyn	Under West Riding of Yorks. County Council (Drainage Act) 1923.	Onse and Dutch River	2310	4379	2871	5386	
Aldborough	Under West Riding of Yorks. County Council (Drainage Act) 1923.	Ure	1080	1535	236	1613	
Appleton Roebuck and Copmanthorpe	Under Land Drainage Provisional Confirmation (No. 1) Act, 1922.	Wharfe	4711	5019	6627	7928	
Bedale	Under Land Drainage Act, 1930.	Swale	5363	4477	603	4678	
Bellasize	Under Land Drainage Acts, 1861 and 1918.	Onse	1153	1231	887	1526	

Name of District.	Act under which constituted.	District Drains to River	As at 1st April, 1938.			
			Area. Acres.	Agri-cultural Land. £	Other hereditaments (rated at one-third Annual Value). £	Total Annual Value for rating purposes. £
Bishopsoil	Under Act of Parliament dated 1767 and under Land Drainage Act, 1930.	Ouse	6655	4444	3634	5655
Black Drain	Under Doncaster Drainage Act, 1929.	Dutch River	4223	3813	11943	7794
Cliffe	Under Land Drainage Act, 1930.	Ouse & Derwent	5330	7405	6872	9695
Cod Beck	Under Land Drainage Act, 1930.	Swale	4100	4728	1843	5342
Cowick	Under West Riding of Yorks. County Council (Drainage Act) 1923.	Don	2702	2262	2995	3261
Dearne & Dove	Under Land Drainage Act, 1930.	Dearne	5300	2553	21786	9815
Dempster.	Under West Riding of Yorks. County Council (Drainage Act) 1923.	Ouse and Dutch River	2696	3796	3046	4812
Dun	Under Act of Parliament dated 1873.	Don	14500	12350	84032	40360
Dunsforth	Under West Riding of Yorks. County Council (Drainage Act) 1923.	Ure	1184	1432	333	1543

Name of District.	Act under which constituted.	District Drains to River	As at 1st April, 1938.			
			Area. Acres.	Agri-cultural Land. £	Other hereditaments (rated at one-third Annual Value). £	Total Annual Value for rating purposes. £
Earby & Salterforth	Under Land Drainage Act, 1930.	Aire	574	834	278	927
East Derwent	Under Land Drainage Act, 1930.	Derwent	10838	9031	5287	10793
Fishlake	Under West Riding of Yorks. County Council (Drainage) Act, 1923.	Don	3150	2210	2259	2963
Goole Fields	Under Act of Parliament dated 1889.	Ouse	2643	3987	607	4189
Gowdall	Under West Riding of Yorks. County Council (Drainage) Act, 1923.	Aire	1664	1346	1798	1945
Greenoak	Under Land Drainage Acts, 1861 and 1918.	Ouse	1383	1318	127	1360
Hatfield Chase Corporation (part)	Under Act of Parliament dated 1862.	Dutch River	871	741	395	872
Howden	Under Land Drainage Acts 1861 and 1918.	Ouse	3518	3040	1936	3685
Knottingley to Hensall	Under Doncaster Drainage Act, 1929.	Aire	5806	5549	34200	16949

Name of District.	Act under which constituted.	District Drains to River	As at 1st April, 1938.				
			Area.		Agricultural Land.	Other hereditaments (rated at one-third Annual Value).	Total Annual Value for rating purposes.
			Acres.	£			
Lower Aire	Under Land Drainage Act, 1918.	Ouse and Aire	18700	18055	18212	24126	
Lower Swale	Under Land Drainage Act, 1930.	Swale	8450	(Valuation not completed)			
Marston Moor	Under Land Drainage Act, 1930.	Ouse	11741	15464	19640	22011	
Muston and Yedingham	Under Act of Parliament dated 1800.	Derwent	18194	14068	3000	15068	
North Wharfe	Under Land Drainage Act, 1930.	Wharfe	4371	4326	355	4444	
Ouse and Derwent	Under Act of Parliament dated 1854.	Ouse	31283	29648	66307	51750	
Ouseburn	Under Land Drainage Act, 1930.	Ouse	3551	2885	1615	3423	
Rawcliffe	Under West Riding of Yorks. County Council (Drainage) Act, 1923.	Aire and Dutch River	2700	3545	11577	7404	
Reedness and Swinefleet	Under Act of Parliament dated 1884.	Ouse	4877	10225	2332	11003	

Name of District.	Act under which constituted.	District Drains to River	As at 1st April, 1938.			
			Area	Agricultural Land.	Other hereditaments (rated at one-third Annual Value).	Total Annual Value for rating purposes.
River Crimple	Under West Riding of Yorks. County Council (Drainage) Act, 1923.	Nidd	1502	1502	129	1605
River Foss	Under Land Drainage Act, 1930.	Ouse	20000	19980	27813	29251
River Kyle	Under Land Drainage Acts, 1861 and 1918.	Ouse	20172	(Valuation of extended district not completed)		
River Tutt	Under West Riding of Yorks. County Council (Drainage) Act, 1923.	Ure	1559	1717	225	1793
River Wiske	Under Land Drainage Act, 1930.	Swale	9104	8384	3365	9506
Rye	Under Land Drainage Act, 1930.	Rye & Derwent	30470	28306	10016	31645
Selby Dam	Under Act of Parliament dated 1885.	Ouse	14500	13347	16265	18768
Snaith	Under Doncaster Area Drainage Act, 1929.	Aire	950	973	5190	2703
South Wharfe	Under Land Drainage Act, 1930.	Wharfe	5473	6210	7292	8640

Name of District.	Act under which constituted.	District Drains to River	As at 1st April, 1938.			Total Annual Value for rating purposes. £
			Area Acres.	Agri-cultural Land. £	Other hereditaments (rated at one-third Annual Value). £	
Sykehouse	Under Land Drainage Act, 1930.	Don	2775	1642	1806	2244
Thornton	Under Land Drainage Act, 1930.	Derwent	12970	14058	2546	14907
Thorn tree	Under Doncaster Drainage Act, 1929.	Dutch River	1924	2807	833	3085
Upper Swale	Under Land Drainage Act, 1930.	Swale	7150	7428	733	7672
Went	Under Act of Parliament dated 1831 and Land Drainage Act, 1930.	Don	19100	(Valuation of extended district not completed)		
West Derwent	Under Land Drainage Act, 1930.	Derwent	13140	11665	7075	14023
West Haddlesey	Under Land Drainage Act, 1930.	Aire	5300	6611	1960	7264
Wilberfoss and Thornton Level	Under Land Drainage Act, 1861.	Derwent	8200	6781	3622	7989
Wistow, Cawood and Selby	Under Land Drainage Act, 1918.	Ouse	5700	8329	7042	10677

CONFERENCE OF REPRESENTATIVES OF
INTERNAL DRAINAGE BOARDS

and

MEMBERS OF THE CATCHMENT BOARD,

held at York

29th September, 1938.

REPORT OF PROCEEDINGS.

PRESENT :

Representing the Catchment Board :—

County Alderman R. L. Walker, Chairman of the Board and Chairman Main Rivers and Works Committee.

W. Hinchcliff, Esq., Chairman Internal Districts Committee.

County Alderman Col. E. York, Vice-Chairman Internal Districts Committee.

A. Penty, Esq., Chairman General Purposes Committee.

Councillor F. A. Leach, Vice-Chairman Finance Committee.

Councillor N. Hutchinson.

County Councillor Lt.-Col. H. Rhodes.

County Councillor M. Whittock.

T. P. Thompson, Esq.

The following Internal Drainage Boards were also represented :—

Airmyn.
Appleton Roebuck
and Copmanthorpe.
Bedale.
Bishopsoil.
Cliffe.
Cowick.
Dearne & Dove.
Dun.
Dempster.
Gowdall.
Knottingley to Hensall.
Lower Aire.
Lower Swale.
Marston Moor.
Muston & Yedingham.
North Wharfe.

Ouseburn.
Ouse & Derwent.
River Foss.
River Kyle.
Rye.
Reedness & Swinefleet.
Selby Dam.
Snaith.
South Wharfe.
Sykehouse.
Thorntree.
Thornton.
West Derwent.
West Haddlesey.
Went.
Wistow, Cawood & Selby.

H. T. Tate, Esq. (East Riding County Land Agent) was also present.

APOLOGIES FOR ABSENCE.

The following apologies for absence were received :—

Members of the Catchment Board.

Alderman C. W. Beardsley.
R. Clive, Esq.
C. W. H. Glossop, Esq.
A. R. Thomlinson, Esq.

Other representatives.

S. Dougill, Esq. (North Riding County Land Agent).
W. P. Richardson, Esq. (West Riding County Land Agent).
Will Bentley, Esq. (Clerk, Went Drainage Board).
J. Bramley, Esq. (West Derwent Internal Drainage Board).
H. B. Simpson, Esq. (Clerk, Adlingfleet & Whitgift Drainage Board).
R. Bosomworth, Esq. (River Wiske Internal Drainage Board).
C. M. H. Glover, Esq. (Hatfield Chase Corporation).
J. Hunt, Esq. (Clerk, River Wiske Internal Drainage Board).
J. Leach, Esq. (West Haddlesey Internal Drainage Board).
H. Middlebrook, Esq. (West Haddlesey Internal Drainage Board).
W. L. Killingbeck, Esq. (Knottingley to Hensall Drainage Board).

The Chairman of the Catchment Board, County Alderman R. L. Walker, welcomed the representatives of the Internal Boards as he considered them as partners in the great work of land drainage required in the Catchment Area. He pointed out that had it not been for the international situation several other Boards would also have been represented. Forty-six Boards had intimated their intention of sending representatives to the meeting. One effect of the present situation was that it brought to the minds of people that their work was of such a nature that it must be carried on. He wished the mass of the population in this country would regard agriculture as a peace time occupation and not merely a war time necessity. He thought the advantages derived from land drainage very noticeable in all parts of the country, and called upon Mr. Hinchcliff, the Chairman of the Internal Districts Committee, to preside over the meeting's deliberations.

Mr. Hinchcliff also welcomed the representatives and called on the Engineer of the Catchment Board to present his report, copies of which had been circulated.

The Engineer submitted the following Report, and commented briefly thereon :—

At the conference with Internal Drainage Boards held in York last year, a brief outline was given indicating the activities of the Catchment Board in setting up Internal Drainage Districts since its constitution in 1931.

Most of the lowland area has now been formed into Internal Drainage Districts and since the last Conference of Internal Drainage Boards, a further 18,050 acres has been added to the Kyle Drainage District.

At last year's Conference, a few examples of drainage works undertaken by the different Boards were given. These examples were spread over the whole period since the constitution of the Catchment Board.

This year the following details are given of drainage works which have been carried out since the last Conference of Internal Drainage Boards in 1937.

The **Acaster Internal Drainage Board** have recently completed the installation of a new windmill and pump costing approximately £130. This pump only serves a small area and it was found too expensive to instal an engine driven pump. It is satisfactory to note that the wind pump has up to the present proved adequate to deal with the run off.

The **Ainsty Drainage Board** which have only been in existence for approximately two years, were faced with taking over a large number of watercourses which were in a deplorable condition. They have tackled the work in a businesslike manner and partly completed a scheme involving the piling of one of the main drains at considerable cost.

The **Bishopsoil Drainage District**. This District has recently been extended and the Board took over a number of almost derelict drains. A comprehensive scheme to restore the efficiency of these drains has been carried out with great benefit to the area concerned.

The **Black Drain Drainage Board** have carried out an extensive scheme of piling and other works in the Black Drain to enable water to gravitate more freely to the pump, the scheme costing approximately £1,490.

The **Cliffe Drainage Board**, a comparatively new Board have purchased existing pumps from a landowner in the area and now operate and maintain them, the purchase price being approximately £625.

The **God Beck Drainage Board** have carried out a scheme of improvement on two main drains in their district.

The **Dun Drainage Commissioners** have carried out a scheme involving the installation of pumping machinery, and regrading of drains at Goosepool, costing approximately £5,700.

The **Dearne & Dove Drainage Board** have recently completed a scheme of improvement on the Bulling Dyke and also on the River Dove, costing approximately £900.

The **River Foss Drainage Board** are at present engaged in an improvement scheme on the River Foss estimated to cost £6,000. This work will be completed in about two years' time. The Board have in addition spent considerable sums in other parts of their area on various main drains.

The **Muston & Yedingham Drainage Board** have carried out the reconstruction of a bridge over the River Hertford and also the regrading of the River Hertford and Semer Drains, costing in all £240.

The **Rye Drainage Board**. In addition to the normal maintenance work, the Board have carried out improvement schemes in the Slingsby Cut, Acland Beck, River Seven and the River Riccall, costing approximately £620.

The **Selby Dam Drainage Board** have carried out an improvement scheme on the Bishop Dyke, costing approximately £760. This dyke is an important high level drain in the district.

The **Upper Swale Drainage Board**, constituted in September, 1937, have already carried out various improvement schemes on main drains in their area at an expenditure exceeding £200.

The **River Went Drainage Trustees** have carried out a scheme involving the construction of a flood retaining wall costing approximately £515.

The **West Derwent Drainage Board** have piled an important drain in the district at a cost of approximately £400.

The **Wistow Drainage Board** have carried out a scheme involving the piping of a main drain in their district costing approximately £230.

The **River Wiske Drainage Board** are at present carrying out an extensive scheme of widening and regrading the River Wiske for a length of approximately 6 miles.

The above schemes can all be classed as "Improvements" and it should be appreciated that the Drainage Boards referred to, have all dealt with normal maintenance work in addition.

Most of the schemes referred to were carried out during the winter months and received a grant towards their cost from the Ministry of Agriculture and Fisheries.

It is interesting to note that the total estimated cost of all grant schemes in the River Ouse (Yorks.) Catchment Area was £13,061 18s. 6d., and out of this, grants totalling £5,944 6s. 2d., were received by the various Drainage Boards from the Ministry of Agriculture and Fisheries. These figures are based on estimates as the Catchment Board have not got information as to the actual cost of the schemes which were carried out.

Mr. Hinchcliff then addressed the Conference and pointed out that owing to the activities of Drainage Boards there were thousands of acres of land ready to be made use of which could not be made use of if Drainage Boards had not done what they had done. Referring to the international crisis, he said there was no doubt that if the situation got worse that the work of Internal Drainage Boards would have to go on. It was a pity in his opinion that it took something of this sort to make people drainage minded. He referred to the recent inspection of main rivers where very good work had been done, and expressed the hope that members of the Catchment Board would see fit to have an inspection of Internal Drainage Boards' works which he thought would prove an eye opener to them. He concluded by stating that whether in peace time or war time if Drainage Boards did their job they would be public benefactors and that would be some consolation.

Owing to the international crisis the representatives of certain Boards who had desired to raise matters at the Conference had at the last moment found themselves unable to attend.

The following matters which were down on the Agenda for consideration were therefore not dealt with :—

Nature of matter.	By whom to have been raised.
(1) Rating of cottages not exceeding £10 annual value.	Wilberfoss & Thornton Level Drainage Board.
(2) Rating of houses in course of reconditioning under Housing (Rural Workers) Act, 1926.	River Wiske Internal Drainage Board.
(3) Voting power of ratepayer whose appeal against assessment is pending.	Wilberfoss & Thornton Level Drainage Board.
(4) Electoral Districts.	Wilberfoss & Thornton Level Drainage Board.
(5) Contributions by Catchment Board to Internal Drainage Boards.	Hatfield Chase Corporation.
(6) Turning of sewage matter into water-courses by local sanitary authorities.	Wilberfoss & Thornton Level Drainage Board.

The remaining items on the Agenda were then considered :—

GOVERNMENT GRANTS TO INTERNAL DRAINAGE BOARDS.

Mr. H. Simpson, Cliffe Internal Drainage Board, explained that the Cliffe district though only a small area—about 5,300 acres—had to deal with twelve cloughs which he thought was quite a big number according to the land they had to drain, and that they were faced with large expenditure.

Several of the cloughs were in a bad state and his Board were desirous of dealing with them. Such work would under the Government Scheme rank for a 50% grant, but the Board could not obtain the grant because the cloughs they had to put in were summer time jobs, whereas the Ministry said in the Grant Scheme the work must be carried out in the winter. He pointed out that it was impracticable to carry out a lot of the work in winter and moreover the cost of attempting to do it in the winter was much greater. He appealed for support to his motion that the Ministry should be asked to allow grant earning schemes to be carried out in the summer in such cases.

Mr. D. Blenkhorn also of the Cliffe Drainage Board seconded the motion and gave a practical illustration of a case where a contractor would have been prepared to do certain work for £300 in the summer but would require at least £750 in the winter when he could not do it so well.

The Chairman of the Catchment Board, while agreeing with all that had been said, pointed out that the Ministry had received numerous objections from all kinds of people who objected to farm labour being diverted in the summer time, and that in order to get the proposal through Parliament it had been necessary to attach the condition to the period when works had to be carried out.

The resolution was then put to the meeting as follows, and unanimously adopted :—

“That representations be made to the Ministry of Agriculture and Fisheries with a view to relaxing the existing condition that work on grant earning schemes undertaken by Drainage Boards must be confined to the winter months in cases where the nature of the work to be carried out requires summer conditions for its satisfactory execution.”

It was suggested that as the National Farmers' Union had taken a great interest in this question a copy of the resolution might be sent to their branches in the Catchment Area. Accordingly it was also resolved that a copy of the foregoing resolution be sent to the branches of the National Farmers' Union in the Catchment Area.

ASSOCIATION OF DRAINAGE AUTHORITIES.

Mr. A. W. Taylor, Clerk to the Dun Drainage Commissioners, raised the question of the formation of district branches or local committees by those drainage boards which had become members of the Association of Drainage Authorities.

It was not known how many Internal Boards in the Catchment Area had joined the Association, but at the first meeting of the Association recently held in London it had been suggested that in order to get the fullest use and advantage of membership the formation of local branches was to be recommended in order that matters of local interest might be discussed.

He had accordingly circularised a number of Boards in the southern part of the Catchment Area and immediately adjacent thereto, but the replies had been disappointing, and he desired to know whether other Boards had any views on the subject.

Sir R. Newbald Kay, Clerk of the River Foss, Ainsty, and Marston Moor Drainage Boards stated that the view of his Boards was that a Conference such as the present one filled the need for the discussion of matters purely of local interest and there was therefore no need for setting up of District Committees.

The importance of Boards joining the Association was pointed out by several speakers as providing a means of watching over the interests of Internal Drainage Boards and for discussion of common problems and also to provide a central organisation for approaching the Ministry of Agriculture and Fisheries and other Government Departments.

Mr. C. E. Farran, Engineer to the Dun Drainage Commissioners stated that he had prepared certain proposals for the amendment of the Land Drainage Act, 1930, which had been forwarded to the Association of Drainage Authorities, which he thought might be of interest. The main proposals were as follows :—

(1) AREA OF INTERNAL DRAINAGE DISTRICTS.

Section 1 (5) of the Land Drainage Act, 1930, which now reads as follows :—

“The districts (other than catchment areas) to be constituted as drainage districts under this Act shall be such areas as will derive benefit or avoid danger as a result of drainage operations.”
to be amended by the addition of the following words :—

“together with areas the drainage of which is directed to the areas the subject of the operations.”

Power should be given to Catchment Boards to define in Section 4 (1) (b) Schemes the limits of the areas which were the subject of the operations, and Internal Boards should, under Section 24 (6), retain their power of rating such areas differentially, the areas outside the benefit area being rated at a lesser rate.

Several members spoke on this suggestion from which it appeared the Conference was generally in favour of it.

(2) PRECEPTS ON INTERNAL DRAINAGE BOARDS BY CATCHMENT BOARD.

Proposal that the contribution to be demanded from drainage boards should not exceed one-tenth of the rate levied for the purposes of the internal board.

(3) SECTION 24 (2) : RATING.

That the Catchment Board's Precept on internal drainage boards should be raised by the internal board as under :—

The portion relating to new works and improvements should be chargeable to the owner; and the portion chargeable to maintenance and administration to the occupier.

(3) SECTION 38 : DISPOSAL OF SPOIL.

Proposal that the definition of material which could be deposited on banks should be amended so as to allow the deposit of vegetable matter.

(4) SECTION 47 : BYELAWS.

Default powers for non-compliance with Byelaws were necessary.

(5) SECTION 34 : GENERAL POWERS OF DRAINAGE BOARDS.

Proposal that the general powers should include power for a drainage board to construct and repair bridges over watercourses.

(6) RESTRICTION ON CONSTRUCTION OF BRIDGES OVER MAIN RIVER OF CATCHMENT AREA.

The power given to a Catchment Board to restrict the construction of bridges over the main river should be extended to drainage boards in respect of non main rivers in their areas.

(7) SECTION 81 : DEFINITIONS.

“Defence against water” should also include ‘works for preventing the spreading of sea water over the banks or preventing cliff erosion.’

The Clerk of the Catchment Board stated that many of the proposed amendments referred to were being put forward to the Ministry by the Catchment Boards' Association for inclusion in the Amending Bill.

HOUSES DEMOLISHED DURING CURRENCY OF RATE.

The Clerk of the Ouseburn Internal Drainage Board reported a case where an assessment had been made on certain cottages and that shortly after the rate was paid the cottages were demolished. Should there be a refund of any portion of the rate?

The Clerk of the Catchment Board stated that there appeared to be nothing in the Land Drainage Act, 1930, which would justify such a course.

INTERNAL DRAINAGE BOARD ELECTIONS.

- (a) Nomination of candidates by owner if drainage rates of nominee are unpaid.

The Wilberfoss & Thornton Level Drainage Board had desired to raise the question of the validity of the nomination for election as a member of a Drainage Board of a candidate nominated by an owner where the nominee's rates were unpaid.

Sir R. N. Kay, Clerk of the River Foss Drainage Board, expressed the opinion that the validity of the nomination was not affected by such circumstances, as the candidate was merely the nominee of the owner.

- (b) Number of votes of owners etc. of several properties : aggregation of properties for purpose of allotment of votes.

Sir R. N. Kay raised the question of the number of votes to be allotted where several properties were owned or occupied by one individual and enquired whether the values of such properties should be aggregated for the purpose of deciding the number of votes to which he was entitled or whether each property should be taken separately.

He submitted that there was a serious inconsistency between the Act and the Election Regulations made by the Minister. In Part I of the Third Schedule it was stated that the maximum number of votes to be allotted to an elector was ten. There was nothing stated in the Act with regard to separation of properties. It might be construed that the maximum number of votes, namely, ten, represented the entire holding or holdings on the electors' roll.

On the other hand where there were a great number of separate holdings it appeared that one had to issue a voting paper in respect of each hereditament. This occasioned to his mind a serious difficulty. In the case of one of his Boards a large Company was registered in respect of hundreds of properties, all treated separately, but one owner. If, according to Rule 18, a voting paper was issued to the owners and occupiers of each hereditament it would be possible for one such large owner, in an area like his, to control the election. He thought the attention of the Ministry should be called to the matter and that supplemental Rules and Orders should be issued for guidance.

After discussion, the Conference agreed and the following Resolution was passed :—

“That the attention of the Ministry of Agriculture and Fisheries be drawn to the question whether in the allocation of the number of votes to electors at elections of drainage boards the values of the several properties owned or occupied by one individual should be aggregated for the purpose of arriving at the number of votes to be allotted to such individual or whether in accordance with Rule 18 of the Land Drainage (Election of Drainage Boards) Regulations, 1938 a voting paper should be issued in respect of each individual hereditament thus making it possible for an individual to be allotted more than the maximum number of ten votes mentioned in Part I of the Third Schedule to the Land Drainage Act, 1930.”

POWER OF INTERNAL DRAINAGE BOARDS WITH REGARD TO PRIVATE DITCHES.

Mr. A. W. Taylor, Clerk of the Dun Drainage Commissioners raised the question of the conditions to be attached by the Drainage Board to work being carried out by owners in private ditches.

There might be circumstances or conditions changing the drainage system in the locality and in such a case the Board who might previously have consented to the work being carried out might desire to modify such consent. Could they require a landowner desiring to do the work to enter into an Agreement at his own expense or should the Board give their consent and accept all responsibility.

REMOVAL OF OBSTRUCTIONS IN WATERCOURSES.

Sir R. N. Kay, Marston Moor Drainage Board, raised the question as to the kind of obstructions which could be dealt with under this Section and asked what power had

they got to call upon any person to remove a bridge. He also instanced a case where some builders had erected a water pipe from the main across a ditch, a distance of not more than twelve inches above the level of the dyke.

The Clerk of the Catchment Board stated that taking the Section as a whole the obstructions referred to were those mentioned in the first line, namely, “mill dam, weir or other like obstruction.”

The opinion of learned Counsel was that for an obstruction to come within the section it must be one “like” a mill dam etc., and extend wholly across the watercourse. He did not think it would include bridges.

The Catchment Boards’ Association had proposed to raise the general question in their suggested amendments to the Land Drainage Act.

HIGHWAY DYKES.

Sir R. N. Kay mentioned a case where a dyke probably six feet or eight feet wide extending for a mile on the side of a highway and under the control of the Highway Authority had been trampled in by the cattle using the highway. The Highway Authority would not admit any liability for cleansing or maintaining the watercourse.

The Clerk of the Catchment Board stated that a ditch on a roadside highway was not necessarily part of the highway. The duty of cleansing such a ditch at common law was on the owner of the land adjoining. Section 67 of the Highways Act, 1835 empowered the Surveyor of Highways to make, cleanse and keep open all ditches, etc., deemed necessary, in and through any land adjoining or lying near to any highway. The effect of the Section according to the opinion of Law Officers of the Crown was “to empower but not compel.”

Section 32 of the Land Drainage Act empowered a Local Authority to contribute to the expense of a Drainage Board in the maintenance of drainage works for (inter alia) the better enjoyment of the highway.

LAND DRAINAGE ACT, 1930: SECTION 35.

The Clerk of the Catchment Board reported that the Wilberfoss & Thornton Level Drainage Board, had representatives been present, would have raised the question as to the length of notice required to be given under the above section to cleanse a watercourse, namely, two months.

It was suggested that the time should be nothing like so long.

Mr. H. T. Tate expressed his opinion that it was really an unreasonable time and that the Drainage Board should be able to give such reasonable time as they thought fit, say seven or fourteen days.

Various speakers agreed with this suggestion and the following resolution was put to the meeting and declared carried :—

“That in the opinion of this meeting an amendment of Section 35 (2) of the Land Drainage Act, 1930 is desirable so as to provide that the period allowed for compliance with a notice served under the Section shall be such reasonable time, being not less than fourteen days, as is specified in the notice.”

BYELAWS—PROTECTION OF DYKES.

An interesting discussion took place on a point raised by Sir R. N. Kay to the effect that all persons using any field adjoining a watercourse for the purpose of grazing animals should comply with such reasonable directions as the Drainage Board gave from time to time for preventing the bank of the watercourse from being trodden down. His Boards had given directions that the farmers should erect a post and wire fence so as to prevent the watercourse being trodden down by cattle and this had been objected to as being unreasonable. He enquired if other Boards with Byelaws had had a similar experience.

Mr. A. H. C. Cousins of the River Rye Internal Drainage Board stated that they took the view that the Byelaws required that the banks should not be damaged and to require fencing was not reasonable.

Mr. C. E. Farran, Dun Drainage Commissioners, stated that his sympathy was with the farmer as the purpose of the watercourse was not only to drain the land but also to serve water to the cattle. He pointed out that the definition of “drainage” in Section 81 included the supply of water. In their Byelaw it was provided that the Board might assist any person in carrying out such directions.

Subsequent discussion in which representatives of the River Foss, Marston Moor, Ainsty, River Kyle, Cliffe and Ouse & Derwent Drainage Boards joined, showed that in certain circumstances the direction might be regarded as reasonable and in others as unreasonable, particularly in hunting districts.

It was felt that each case must be decided on its merits.

This concluded the business of the Conference when, on the motion of Sir R. N. Kay, a hearty vote of thanks was passed to the Chairman for his services in the chair.

COUNTIES and COUNTY BOROUGHs within the CATCHMENT AREA.

Statement of Rateable Values at 1st April, 1938 and amounts payable in respect of Precepts for the financial year beginning on that date.

County or County Borough.	Total rateable value at 1st April, 1938, of hereditaments within the Catchment Area.	Half year beginning 1st April, 1938.		Adjusted Precepts.		Half year beginning 1st October, 1938.		Total for year beginning 1st April, 1938.	
		£	s. d.	£	s. d.	£	s. d.	£	s. d.
Counties :—	£								
Chester	Nil.							3,228	14 4
Derby	776,621	1,610	15 2	1,617	19 2			31	16 0
Lancaster	7,649	15	17 3						
Lincoln (Parts of Lindsey)	Nil.								
Nottingham	1,146	2	7 6	2	7 9			4	15 3
Westmorland	Nil.								
York, East Riding	129,780	269	3 5	270	7 6			539	10 11
York, North Riding	532,083	1,103	11 5	1,108	10 2			2,212	1 7
York, West Riding	6,867,713	14,244	0 9	14,307	14 8			28,551	15 5
County Borough of									
Bradford	2,184,264	4,530	5 10	4,550	11 0			9,080	16 10
Huddersfield	946,648	1,963	8 1	1,972	3 8			3,935	11 9
Leeds	3,705,640	7,685	14 3	7,720	1 8			15,405	15 11
Sheffield	3,265,007	6,771	16 3	6,802	1 11			13,573	18 2
York	650,928	1,350	1 3	1,356	2 0			2,706	3 3
Halifax	603,651	1,252	0 2	1,257	12 2			2,509	12 4
Wakefield	373,260	774	3 3	777	12 6			1,551	15 9
Dewsbury	315,770	654	18 6	657	17 1			1,312	15 7
Doncaster	299,136	620	8 6	623	4 0			1,243	12 6
Barnsley	367,583	762	7 9	765	15 11			1,528	3 8
Rotherham	419,026	869	1 8	872	19 5			1,742	1 1
	£21,445,905	£44,480	1 0	£44,678	19 4			£89,159	0 4

INTERNAL DRAINAGE BOARDS.

STATEMENT OF AMOUNTS precepted on INTERNAL
DRAINAGE BOARDS for the financial year beginning
1st April, 1938.

Name of Board.	Amount
	£
Acaster	44
Adlingfleet and Whitgift	26
Ainsty	48
Airedale	200
Airmyn	40
Aldborough	13
Appleton Roebuck and Copmanthorpe	40
Bedale	30
Bellasize	11
Bishopsoil	54
Black Drain	65
Cliffe	44
Cod Beck	17
Cowick	34
Dearne and Dove	80
Dempster	47
Dun	400
Dunsforth	12
Earby and Salterforth	3
East Derwent	80
Fishlake	40
Goole Fields	35
Gowdall	18
Greenoak	11
Hatfield Chase Corporation	Nil
Howden	31
Knottingley to Hensall	140
Lower Aire	200
Lower Swale	Nil
Marston Moor	123
Muston and Yedingham	135
North Wharfe	24
Ouse and Derwent	530
Ouseburn	25
Rawcliffe	59
Reedless and Swinefleet	79
River Crimple	12
River Foss	164
River Kyle	14
River Tutt	10
River Wiske	30
Rye	274
Selby Dam	119
Snaith	24
South Wharfe	50
Sykehouse	24
Thornton	120
Thorntree	24
Upper Swale	Nil
Went	86
West Derwent	Nil
West Haddlesey	60
Wilberfoss and Thornton Level	60
Wistow, Cawood and Selby	100
	£3,909

INTERNAL DRAINAGE BOARDS.

STATEMENT OF CONTRIBUTIONS made to INTERNAL
DRAINAGE BOARDS during the financial year
beginning 1st April, 1938.

Name of Board.	Amount
	£
Ainsty	40
Aldborough	Nil
Appleton Roebuck and Copmanthorpe	Nil
Bedale	60
Bishopsoil	Nil
Black Drain	57
Cod Beck	97
Dun	227
Dunsforth	Nil
Marston Moor	Nil
Muston and Yedingham	231
North Wharfe	69
River Foss	273
River Kyle	30
River Tutt	48
River Wiske	75
Rye	221
Selby Dam	91
South Wharfe	Nil
Thornton	22
Upper Swale	53
Went	102
West Derwent	Nil
West Haddlesey	Nil
Wilberfoss and Thornton Level	142
	£1,838

INTERNAL DRAINAGE BOARDS.

Statement of Rates levied.

Drainage Board.	Year ending 31st March, 1938.		Year ending 31st March, 1939.		Remarks
	s.	d.	s.	d.	
Acaster	—	—	—	—	
Adlingfleet and Whitgift—	—	—	—	—	
Whitgift	—	—	—	—	
Adlingfleet	1	7	1	8	
Ainsly	—	—	—	—	
Airedale	—	—	—	—	
Airmyn	—	—	—	—	
Aldborough	—	—	—	—	
Appleton Roebuck and Copmanthorpe	—	—	—	—	
Bedale	—	—	—	—	
Bellasize	—	—	—	—	
Bishopsoil	—	—	—	—	
Black Drain	—	—	—	—	
Cliffe	—	—	—	—	
Cod Beck	—	—	—	—	
Cowick	—	—	—	—	
Dearn and Dove	—	—	—	—	
Dempster	—	—	—	—	
Dun	—	—	—	—	
Dunsforth	—	—	—	—	
Earby and Salterforth	—	—	—	—	
East Derwent	—	—	—	—	
Fishlake	—	—	—	—	
Goole Fields	—	—	—	—	
Gowdall	—	—	—	—	
Greenoak	—	—	—	—	
Häufield Chase Corporation (Part)	—	—	—	—	
Howden	—	—	—	—	
Knottingley to Hensall	—	—	—	—	

INTERNAL DRAINAGE BOARDS.

Statement of Rates levied—continued.

Drainage Board.	Year ending 31st March, 1938.		Year ending 31st March, 1939.		Remarks
	s.	d.	s.	d.	
Lower Aire	—	—	—	—	
Lower Swale	—	—	—	—	
Marston Moor	—	—	—	—	
Muston and Yettingham	—	—	—	—	
North Wharfe	—	—	—	—	
Ouseburn	—	—	—	—	
Ouse and Derwent	—	—	—	—	
Rawcliffe	—	—	—	—	
Reedness and Swinefleet	—	—	—	—	
River Crimple	—	—	—	—	
River Foss	—	—	—	—	
River Kyle	—	—	—	—	
River Tutt	—	—	—	—	
River Wiske	—	—	—	—	
Rye	—	—	—	—	
Selby Dam	—	—	—	—	
Snaith	—	—	—	—	
South Wharfe	—	—	—	—	
Sykehouse	—	—	—	—	
Thornton	—	—	—	—	
Thorniree	—	—	—	—	
Upper Swale	—	—	—	—	
Went	—	—	—	—	
West Derwent	—	—	—	—	
West Haddlesey	—	—	—	—	
Wilberfoss and Thornton Level	—	—	—	—	
Wistow, Cawood and Selby	—	—	—	—	

LAND DRAINAGE ACT, 1930.

River Ouse (Yorks.) Catchment Board.

COPY

of the Accounts of the Receipts and Expenditure of the
Catchment Board and its Officers for the year ending
31st March, 1938.

Central Bank Chambers,
Infirmary Street, Leeds, 1.

F. M. FARMER,
Clerk of the Board.

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO ADMINISTRATION ACCOUNT.						
Salaries and National Insurance (proportion)	5,402	18	2			
Superannuation	569	9	0			
	5,972	7	2			
Compensation for loss of Office				191	13	4
Travelling Expenses (proportion)				1,060	15	11
Inspection Expenses				93	8	0
Offices : Leeds—						
Rent and Rates	410	0	0			
Heating, Lighting and Cleaning	154	9	3			
Offices : Doncaster—						
Rent and Rates (proportion)	67	1	3			
Heating, Lighting and Cleaning	34	15	0			
				666	5	6
Setting up and Supervising Internal Drainage Boards—						
Salaries and Travelling Expenses (proportion)	1,095	7	3			
Wages of Workmen, Materials etc.	73	0	8			
Haulage	3	18	9			
Maps, Prints, &c.	40	19	2			
Legal Charges, Expenses, &c.	196	15	6			
Advertising	21	12	1			
				1,431	13	5
Drawing Office—Maps, Stationery, Equipment, &c.				243	16	10
Printing, Stationery and Advertising				1,010	0	11
Office Equipment				46	1	0
Fidelity Bonds and Sundry Insurances				43	6	1
Workmen's Compensation				1	11	7
Legal Charges, Cheques, Stamp Duties, &c				369	7	5
Search Fees				84	2	6
Catchment Boards Association				85	0	0
Income Tax, &c				65	14	4
River Derwent Navigation Revocation Order—						
Property Repairs	14	19	2			
Income Tax, Tithe Annuity, &c.	6	4	9			
				21	3	11
Wayleaves				0	12	6
Postages and Telephones				471	2	1
Office Premises—Park Square, Leeds—						
Payments on account of Contracts, Fees, &c.	5,605	11	6			
Tenders—Deposits refunded	115	10	0			
Clerk of Works—						
Wages and National Insurance &c.	42	12	4			
Sundries	5	8	7			
				5,769	2	5
Total to Summary Account	£	17,627	4	11		

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.
BY ADMINISTRATION ACCOUNT.			
Workmen's Compensation Refunded	1	11	7
Interest on Loans to Internal Drainage Boards	29	14	0
Bank Interest	98	19	11
Rents and Wayleaves	5	2	4
River Derwent Navigation Revocation Order—			
Rents of Properties	34	12	6
Income Tax deducted from Interest on Land Purchase Monies	50	18	11
Sundries	8	10	0
Office Premises—Park Square, Leeds—			
Tenders—Deposits received	115	10	0
Total to Summary Account	£	344	19

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.
TO WORKS OF MAINTENANCE ACCOUNT.			
River Ouse—Ousefleet to Goole—Banks.			
Wages and National Insurance, &c.	455	9	0
Haulage	0	13	0
Stone	64	10	0
Sundry Materials	0	16	5
Tools and Equipment	4	10	5
	525	18	10
River Ouse—Airmyn District—Banks.			
Wages and National Insurance, &c.	461	4	10
Haulage	2	1	3
Sundry Materials	0	14	6
Plant Repairs	1	4	6
Tools and Equipment	1	2	2
	466	7	3
River Aire—Airmyn District—Banks.			
Wages and National Insurance, &c.	29	3	11
Sundry Materials	2	7	4
Tools and Equipment	0	17	0
	92	8	3
River Aire—Rawcliffe to Hensall—Banks.			
Wages and National Insurance, &c.	341	14	6
Haulage	10	16	0
Stone	362	13	10
Sundry Materials	7	3	0
Tools and Equipment	3	0	9
	725	8	1
River Ouse—Lower Aire District—Banks.			
Wages and National Insurance, &c.	287	4	0
Sundry Materials	0	1	2
Tools and Equipment	0	6	0
	287	11	2
River Aire—Lower Aire District—Banks.			
Wages and National Insurance, &c.	250	12	6
Haulage	4	10	4
Sundry Materials	3	16	8
Tools and Equipment	1	6	11
	260	6	5
River Aire—Hensall to Knottingley—Banks.			
Wages and National Insurance, &c.	263	17	8
Haulage	1	5	0
Sundry Materials	0	4	4
Tools and Equipment	1	8	5
	266	15	5
River Ouse—Blacktoft to Derwent Mouth—Banks.			
Wages and National Insurance, &c.	671	10	6
Haulage	25	8	0
Sundry Materials	17	4	6
Tools and Equipment	10	12	2
	724	15	2
River Derwent—Derwent Mouth to Bubwith—Banks.			
Wages and National Insurance, &c.	221	6	2
Haulage	0	5	0
Sundry Materials	1	11	10
Tools and Equipment	0	10	0
	223	13	0
Carried forward	3,513	3	7

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.
BY WORKS OF MAINTENANCE ACCOUNT.			
River Ouse—Ousefleet to Goole—Banks.			
Wages Recharged	13	13	2
River Aire—Rawcliffe to Hensall—Banks.			
Wages Recharged	5	18	8
River Ouse—Lower Aire District—Banks.			
Wages Recharged	0	4	10
River Aire—Lower Aire District—Banks.			
Wages Recharged	0	5	8
River Ouse—Blacktoft to Derwent Mouth—Banks.			
Wages Recharged	1	18	4
Carried forward	22	0	8

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO WORKS OF MAINTENANCE ACCOUNT—cont.						
Brought forward				3,513	3	7
River Derwent—Bubwith to Sutton—Banks.						
Wages and National Insurance, &c.	132	7	5			
Sundry Materials	2	9	5			
Tools and Equipment	0	18	7			
Repairs to Wheldrake Bridge—						
Wages and National Insurance, &c.	74	19	3			
Materials, Chains, &c.	45	10	3			
				256	4	11
River Derwent—Sutton to Stamford Bridge.						
—Channel.						
Wages and National Insurance, &c.	28	13	10			
Haulage	3	2	3			
Sundry Materials	2	1	10			
Tools and Equipment	0	2	6			
				34	0	5
River Derwent—Stamford Bridge to Howsham.						
Wages and National Insurance, &c.—						
Banks	3	18	1			
Channel	2	4	8			
Haulage	2	13	7			
				8	16	4
River Derwent—Howsham to Malton.						
Wages and National Insurance, &c.—						
Banks	35	18	8			
Channel	14	19	8			
Haulage	2	16	8			
Sundry Materials	7	12	7			
Tools and Equipment	0	11	11			
Repairs to Menethorpe Footbridge	24	8	1			
				86	7	7
River Derwent—Malton to Yedingham Bridge.						
Wages and National Insurance, &c.—						
Banks	185	1	10			
Channel	32	0	4			
Tools and Equipment	0	9	6			
				217	11	8
River Ouse—Selby to Cawood—Banks.						
Wages and National Insurance, &c.	881	3	6			
Haulage	46	10	9			
Sundry Materials	65	1	10			
Motor Scythe, Tools and Equipment	91	8	7			
				1,084	4	8
River Aire—Knottingley to Castleford—Survey.						
Wages and National Insurance, &c.				1	11	4
River Calder—Castleford to Horbury—Survey.						
Sundry Materials				4	18	5
River Aire—Keighley to Calverley.						
Wages and National Insurance, &c.—						
Banks	2	9	2			
Channel	33	10	9			
Haulage	22	8	6			
Tools and Equipment	3	15	3			
				62	3	8
Carried forward				5,269	2	7

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.
BY WORKS OF MAINTENANCE ACCOUNT—cont.			
Brought forward	22	0	8
River Derwent—Howsham to Malton.			
Contributions towards cost of repairing Menethorpe Footbridge	15	0	0
River Ouse—Selby to Cawood—Banks.			
Wages &c. Recharged	2	13	4
Carried forward	39	14	0

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO WORKS OF MAINTENANCE ACCOUNT—cont.						
Brought forward	5.269	2	7			
River Aire—Airdale District—Banks.						
Wages and National Insurance, &c.	7	15	3			
Sundry Materials	0	8	6	8	3	9
River Ouse—Wharfe Mouth to York—Banks.						
Wages and National Insurance, &c.	228	7	5			
Tools and Equipment	7	9	11	235	17	4
River Wharfe—Wharfe Mouth to Ulleskelf Ferry.—Banks.						
Wages and National Insurance, &c.				17	0	6
River Wharfe—Ulleskelf Ferry to Thorpe Arch—Banks.						
Wages and National Insurance, &c.	121	3	2			
Sundry Materials	7	2	0	128	5	2
River Wharfe—Thorp Arch to Pool Mill—Banks.						
Wages and National Insurance, &c.	3	17	3			
Sundry Materials	7	19	6	11	16	9
River Wharfe—Pool Mill to Bolton Bridge.						
Steel Piling—Part Cost	134	10	0			
Haulage	3	4	6	137	14	6
River Ouse—York to Kirby Hall						
Wages and National Insurance, &c.—						
Banks	0	18	5			
Channel	2	7	1			
Sundry Materials	0	14	8			
Tools and Equipment	0	2	0	4	2	2
River Ure—Kirby Hall to Boroughbridge.						
Wages and National Insurance, &c.—						
Banks	1	7	10			
Channel	2	15	4	4	3	2
River Ure—Boroughbridge to Ripon—Channel.						
Wages and National Insurance, &c.				2	12	4
River Ure—Ripon to Masham.						
Wages and National Insurance, &c.—						
Banks	14	8	10			
Channel	2	13	7			
Haulage	2	5	0			
Sundry Materials	4	19	10			
Tools and Equipment	1	12	0	25	19	3
River Ure—Masham to Wensley—Banks.						
Wages and National Insurance, &c.	606	9	2			
Haulage	47	16	3			
Plant	57	0	0			
Excavator Spares and Repairs	35	0	2			
Fuel, &c.	28	10	3			
Sundry Materials	119	12	8			
Plant Repairs	14	9	11			
Tools and Equipment	18	12	4			
				927	10	9
Carried forward	6,772	8	3			

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.
BY WORKS OF MAINTENANCE ACCOUNT—cont.			
Brought forward	39	14	0
River Wharfe—Thorp Arch to Pool Mill—Banks.			
Wages Recouped	12	15	2
River Ure—Masham to Wensley—Banks.			
Materials Recharged	4	5	6
Carried forward	56	14	8

REVENUE AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
MAINTENANCE ACCOUNT—cont.						
Brought forward	6.772	8	3			
Work done at Knaresborough.						
—Banks.						
Life Insurance, &c.	2	1	11			
Rent of Land	0	10	0	2	11	11
Work done at Skipton-on-Swale						
—Banks.						
Life Insurance, &c.	592	10	10			
.....	7	3	3			
.....	95	6	6			
.....	48	1	5			
.....	19	17	5	762	19	5
Work done at Skipton-on-Swale to Morton Bridge						
Life Insurance, &c.	761	14	2			
.....	5	0	0			
.....	80	13	9			
.....	3	1	0	850	8	11
Work done at Skipton-on-Swale to Gatterick Bridge						
—Banks.						
Life Insurance, &c.	132	16	3			
.....	0	14	0			
.....	99	14	9			
.....	3	0	0	236	5	0
Life Insurance, &c.	66	1	4			
.....	68	19	9			
Purchase Price	1,126	2	6			
.....	82	14	4			
Repairs	71	13	4			
.....	28	13	2			
.....	1	5	7			
.....	81	19	5	1,527	9	5
Work done at Little Habton.						
Life Insurance, &c.						
.....	231	10	5			
.....	9	16	8			
.....	2	5	7	243	12	8
Work done at Little Habton to Scalby.						
Life Insurance, &c.						

for the Year ending 31st March, 1938.

INCOME		£	s.	d.	£	s.	d.
BY WORKS OF MAINTENANCE ACCOUNT—cont.							
Brought forward				56	14	8	
River Nidd—Nidd Mouth to Knaresborough—Banks.							
Hire of Boat				2	8	5	
Cub Excavators.							
Expenses Recharged				265	19	11	
Fuel Drums returned				8	0	0	
				273	19	11	
Sea Cut—Weir Head to Scalby.							
Rents of Properties				49	7	6	

AND EXPENDITURE ACCOUNT

E.	£	s.	d.	£	s.	d.
E ACCOUNT—cont.						
Forward	10,942	10	8			
Thorne—Banks.						
Insurance, &c.	775	0	5			
.....	4	14	0			
.....	16	16	6			
.....	26	2	7			
.....	9	10	1			
—Banks.				832	3	7
Insurance, &c.	115	9	8			
.....	5	8	4			
.....	4	14	3			
.....	20	0	0			
				145	12	3
th to Darton.						
Insurance, &c.						
Deerne						
Age Board—	21	15	9			
Insurance, &c.	412	17	11			
.....	0	18	9			
.....	1	0	3			
.....	0	12	5			
				437	5	1
Insurance, &c.—						
.....	57	19	7			
.....	24	15	1			
.....	4	6	0			
.....	3	1	10			
.....	26	8	6			
	116	11	0			
.....	16	5	2			
Materials, &c.	2	4	3			
.....	10	0	0			
				145	0	5
Insurance, &c.—						
.....	59	9	2			
Materials, &c.	2	6	10			
.....	0	18	10			
				62	14	10
Deerne.						
.....	9	19	3			
.....	7	9	9			
.....	0	7	11			
				17	16	11
General Expenses						
.....	477	5	4			
&c.	287	1	8			
.....	125	0	0			
.....	7	10	0			
.....	16	13	4			
.....	98	14	11			
c.	10	0	0			
and Tollbridge						
.....	41	12	3			
.....	55	2	9			
				1,119	0	3
Summary Account	£	13,702	4		0	0

for the Year ending 31st March, 1938.

INCOME		£	s.	d.
BY WORKS OF MAINTENANCE ACCOUNT—cont.				
Brought forward	.....	382	10	6
River Don—Thorne to Goole—Banks.				
Wages Recharged	.....	21	2	6
River Dearne—Dearne Mouth to Darton.				
Dearne and Dove Internal Drainage Board—				
Works Recharged	.....	415	9	4
General Expenses.				
Motor Van—Licence Refunded	.....	6	13	4
Sundries	.....	0	5	2
		6	18	6
Total to Summary Account	£	826	0	10

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO IMPROVEMENT OF EXISTING WORKS ACCOUNT. (GRANT EARNING).						
River Ouse—Airmyn District—Banks.						
Wages and National Insurance, &c.	103	13	4			
Sundry Materials	1	12	5			
				105	5	9
River Aire—Airmyn District—Banks.						
Wages and National Insurance, &c.	123	0	4			
Stone	175	16	9			
Fuel, &c.	1	13	1			
Sundry Materials	13	0	10			
Plant Repairs	3	12	0			
Tools and Equipment	1	15	5			
				318	18	5
River Aire—Rawcliffe to Hensall—Banks.						
Wages and National Insurance, &c.—	37	11	3			
Stone	29	1	1			
Sundry Materials	1	18	3			
				68	10	7
River Ouse—Lower Aire District—Banks.						
Wages and National Insurance, &c.—						
Summercroft Bank	1,654	12	10			
Long Drax Bank	1	0	1			
Ross Carr Bank	4	1	10			
Rusholme Bank	84	1	2			
Haulage	47	14	5			
Excavator Spares and Repairs	57	7	3			
Fuel, &c.	79	12	9			
Insurance and Licence	6	0	7			
Plant Repairs	47	13	9			
Stone	1,353	10	0			
Sundry Materials	69	16	9			
Tools and Equipment	11	4	5			
				3,416	15	10
River Aire—Lower Aire District—Banks.						
Wages and National Insurance, &c.	523	11	8			
Haulage	3	0	0			
Stone	896	13	7			
Fuel, &c.	4	14	0			
Sundry Materials	14	18	6			
Tools and Equipment	1	7	11			
Plant Repairs	6	7	7			
Insurance	5	7	1			
				1,456	0	4
Carried forward				5,365	10	11

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT. (GRANT EARNING).			
River Ouse—Lower Aire District—Banks.			
Sundries	2	0	0
Carried forward			
	2	0	0

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward				5,365	10	11
River Derwent—Derwent Mouth to Bubwith—Banks						
Wages and National Insurance, &c.	308	0	2			
Haulage	4	0	6			
Fuel, &c.	8	1	3			
Sundry Materials	4	14	10			
Plant Repairs	1	11	6			
Tools and Equipment	2	1	1	328	9	4
River Derwent—Derwent Mouth to Bubwith—Banks						
Wages and National Insurance, &c.	490	6	11			
Haulage	14	16	6			
Land Purchase	910	12	6			
Excavator Spares and Repairs	50	6	6			
Fuel, &c.	11	7	1			
Sundry Materials	49	13	0			
Plant Repairs	1	7	2			
Tools and Equipment	9	7	6	1,537	17	2
River Derwent—Bubwith to Sutton.						
Wages and National Insurance, &c.—						
Banks	429	14	9			
Channel	1,729	3	7			
Haulage	39	13	9			
Excavator Spares and Repairs	437	12	1			
Plant Repairs	5	12	9			
Fuel, &c.	273	12	0			
Insurances, &c.	42	15	9			
Land Purchase	960	1	4			
Sundry Materials	175	0	6			
Tools and Equipment	31	3	2	4,124	9	8
River Derwent—Elvington Sluices.						
Wages and National Insurance, &c.	3,097	11	6			
Haulage	45	1	5			
Excavator Spares and Repairs	20	7	8			
Fuel, &c.	58	6	4			
Insurances	29	12	9			
Sluice Gates, &c.—Instalments of						
Contract Price	1,884	0	0			
Piling, Materials, &c.	1,789	7	2			
Plant	183	0	0			
Tools and Equipment	244	9	4			
Compensation for loss of water power	71	0	0	7,422	16	2
Carried forward				18,779	3	3

for the Year ending 31st March, 1938.

INCOME	£	s.	d.	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward				2	0	0
River Derwent—Derwent Mouth to Bubwith.—Banks.						
Rent of Land				0	10	3
River Derwent—Elvington Sluices.						
Repairs to, and use of Crane	7	0	9			
Sundries	0	4	0	7	4	9
Carried forward				9	15	0

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward				18,779	3	3
River Derwent—Stamford Bridge Sluices.						
Steelwork, &c. (part cost)	274	10	0			
Sundry Materials	1	16	0	276	6	0
River Ouse—Selby to Cawood—Banks.						
General—						
Wages and National Insurance, &c.	1	10	9			
Rent of Storeshed	18	0	0			
Sundry Materials	3	15	9			
Tools and Equipment	3	6	1	26	12	7
Cleek Hall Bank—						
Wages and National Insurance, &c.	618	18	4			
Haulage	141	7	6			
Fuel	12	0	6			
Sundry Materials	130	16	11			
Plant Repairs	28	15	2			
Tools and Equipment	33	19	6	965	17	11
Kelfield Bank—						
Wages and National Insurance, &c.	111	14	4			
Haulage	3	6	0			
Fuel, &c.	1	1	0			
Sundry Materials	21	3	10			
Plant Repairs	7	15	1			
Tools and Equipment	3	13	0			
Tithe Annuity	0	16	0	149	9	3
Ravendells Bank—						
Wages and National Insurance, &c.	942	16	2			
Haulage	17	18	9			
Excavator Spares and Repairs	48	17	9			
Fuel, &c.	70	9	3			
Sundry Materials	75	11	4			
Plant Repairs	17	9	5			
Tools and Equipment	12	3	0	1,185	5	8
Riccall Ings Bank—						
Wages and National Insurance, &c.	2,083	19	2			
Haulage	106	5	1			
Land Purchase	1,691	18	3			
Excavator Spares and Repairs	67	13	1			
Fuel, &c.	179	3	8			
Insurances and Licence	30	7	4			
Sundry Materials	249	6	2			
Plant Repairs	79	9	3			
Tools and Equipment	43	10	0	4,531	12	0
Carried forward				25,914	6	8

for the Year ending 31st March, 1938.

INCOME	£	s.	d.	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward				9	15	0
River Ouse—Selby to Cawood—Banks.						
Ravendells Bank—						
Materials Recharged				1	15	0
Riccall Ings Bank—						
Rent of Fishing	10	0	0			
Fuel Drums returned	8	0	0			
				18	0	0
Carried forward				29	10	0

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward	....	....		25,914	6	8
River Ouse—Selby to Cawood—Banks—continued.						
Wheel Hall Bank—						
Wages and National Insurance, &c.	430	14	0			
Haulage	37	8	3			
Stone	72	15	0			
Fuel, &c.	7	8	4			
Sundry Materials	18	2	8			
Plant Repairs	20	15	5			
Tools and Equipment	11	11	0			
				598	14	8
Wistow Bank—						
Wages and National Insurance, &c.	66	2	6			
Haulage	14	15	0			
Land Purchase	249	6	8			
Sundry Materials	79	16	10			
Tools and Equipment	9	11	0			
Income Tax	0	5	3			
				419	17	3
Turnham Hall Bank—						
Wages and National Insurance, &c				0	13	3
River Dearne—Dearne Mouth to Darton—Banks.						
Wages and National Insurance, &c.	260	4	7			
Haulage	7	19	7			
Excavator Spares and Repairs	2	12	11			
Sundry Materials	107	13	8			
Land Purchase	130	7	4			
Drainage Rate	0	7	10			
Contribution re alterations to Old Mill Lane Bridge	488	0	0			
				997	5	11
River Don Survey.						
Wages and National Insurance, &c.	176	9	11			
Haulage	1	0	0			
Rent of Store	6	10	0			
Maps, &c.	55	2	9			
Recorders	163	16	0			
Equipment and Sundry Materials...	33	14	1			
				436	12	9
River Don—Dearne Mouth to Rotherham—Channel.						
Wages and National Insurance, &c.	62	8	4			
Haulage	2	14	0			
Sundry Materials	1	19	6			
Tools and Equipment	0	15	3			
Rotherham Piling Works—						
Sundry Materials	1	4	0			
				69	1	1
Carried forward	....			28,436	11	7

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.			
Brought forward	29	10	0
River Dearne—Dearne Mouth to Darton.			
Acknowledgement re fishing	0	5	0
Carried forward	29	15	0

EXPENDITURE ACCOUNT

£	s.	d.	£	s.	d.
WORKS					
Cont.					
28,436	11	7			
2	14	0			
Field—Channel.					
&c. 73	3	10			
6	0	6			
1	18	7			
4	12	9	85	15	8
Bridge—Banks.					
&c. 1,095	9	11			
10	10	6			
84	0	10			
1,184	6	6			
29	6	6			
37	12	4			
2,186	12	4			
21	9	0			
212	6	9	4,861	14	8
Rawcliffe Bridge.					
	0	9	11		
New Bridge—					
&c. 24	3	2			
10	2	6			
0	9	5			
206	7	7			
Spoil					
28	15	0			
0	2	4	270	0	0
se Bridge—					
&c. 3,814	13	0			
9	16	3			
3,513	11	11			
597	17	3			
235	14	6			
416	13	4			
904	11	0			
44	17	6			
82	7	4			
126	0	7			
422	0	0			
9	5	9			
10,177	8	5	33,657	5	10

for the Year ending 31st March, 1938.

INCOME	£	s.	d.	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward	29	15	0			
Dutch River—Mouth to Railway Bridge—Banks.						
Alterations and Repairs to Crane, Recharged	14	7	6			
River Don—New Bridge to Jubilee Bridge—						
Rent of Cottages	19	6	7			
Use of Land	23	13	0			
Use of Plant	77	7	1			
Excavator Repairs Recharged	7	2	7			
Sundries	0	8	0	127	17	3
Carried forward	171	19	9			

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward	10,177	8	5	33,657	5	10
River Don—New Bridge to Jubilee Bridge—						
Excavators—continued.						
Motor Van—						
Insurance and Licence	17	4	6			
Fuel, &c.	15	0	4			
Cleaning, Repairs, &c.	3	18	0			
Properties—						
Repairs	46	12	6			
Rates	6	1	3			
Insurance	0	3	7			
Tithe Annuity	0	7	6	10,266	16	1
River Don—Aqueduct to Doncaster.						
Sundry Materials				5	0	0
Tug "Aid" and Barges.						
Barges Nos. 3 and 4—Balance of						
Purchase Price	154	13	0			
Wages and National Insurance, &c.						
River Ouse	78	12	0			
„ Aire	54	10	3			
„ Derwent	11	3	3			
„ Don	19	7	3			
Dutch River	9	8	9			
General	52	5	8			
Repairs	89	8	8			
Fuel, &c.	66	4	6			
Tools and Equipment	57	8	0			
Sundry Materials, &c.	20	4	11			
Insurance	110	15	9	724	2	0
Dredger No. 1.						
Wages and National Insurance, &c.—						
Dutch River	310	16	2			
River Don	82	16	0			
Insurances	171	17	4			
Fuel, &c.	12	2	11			
Repairs, Sundry Materials, etc.	31	17	7			
Tools and Equipment	6	0	11	615	10	11
Carried forward				45,268	14	10

for the Year ending 31st March, 1938.

INCOME	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.			
Brought forward	171	19	9
Dredger No. 1.			
Repairs Recharged	11	14	3
Carried forward	183	14	0

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE	£	s.	d.	£	s.	d.
TO IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward				45,268	14	10
Workshop and Store—Thorne.						
Reconstruction—						
Wages and National Insurance, &c.	682	14	10			
Haulage		14	2	6		
Equipment and Sundry Materials	2,046	0	1			
Working Expenses—						
Wages and National Insurance, &c.	964	1	9			
Rent, Rates, &c. (proportion)	160	11	9			
General Overhead Expenses	103	17	4			
Stock—Materials, &c.	351	4	5			
				4,322	12	8
Offices.						
Rent, Rates, &c., (proportion)				125	1	3
Workmen's Compensation						
				81	19	6
Special Staff.						
Wages and National Insurance, &c.	1,291	5	5			
Travelling Expenses	294	14	9			
				1,586	0	2
				51,384	8	5
General Expenses.						
Salaries and Travelling Expenses (proportion)				2,028	8	0
Income Tax.						
Deductions from Interest on Land Purchase monies—						
River Derwent	8	13	4			
„ Ouse	6	15	7			
„ Don	24	11	9			
				40	0	8
Total to Summary Account	£			53,452	17	1

for the Year ending 31st March, 1938.

INCOME	£	s.	d.	£	s.	d.
BY IMPROVEMENT OF EXISTING WORKS ACCOUNT (GRANT EARNING).—Cont.						
Brought forward				183	14	0
Workshop and Store—Thorne.						
Sale of Scrap	9	0	0			
Sundries	2	9	3			
				11	9	3
Workmen's Compensation Refunded						
				81	19	6
				277	2	9
Ministry of Agriculture and Fisheries.						
Net Expenditure Recharged	51,107	5	8			
Grant- $\frac{1}{2}$ rd thereof				17,035	15	3
Total to Summary Account	£			17,312	18	0

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.	£	s.	d.
TO EXECUTION OF NEW WORKS ACCOUNT (GRANT EARNING).						
River Derwent—South Duffield Cut.						
Wages and National Insurance, &c.	10	11	8			
Sundry Materials	2	5	6			
Ploughing	10	10	0	23	7	2
River Derwent—Bubwith Cut.						
Land Purchase	19	10	0			
Haulage	1	14	0			
Income Tax	2	14	5			
Acknowledgements	0	2	0	24	0	5
River Dearne—Bolton Ings Cut.						
Wages and National Insurance, &c.	873	15	8			
Haulage	9	19	9			
Land Purchase	167	7	6			
Excavator Spares and Repairs	183	12	2			
Insurance and Licence	10	10	3			
Fuel, &c.	136	8	9			
Sundry Materials	122	5	6			
Tools and Equipment	20	3	11	1,524	3	6
River Don—Jubilee Bridge to Aqueduct— Banks.						
Wages and National Insurance, &c.	77	12	8			
Land Purchase	398	3	5			
Fuel, &c.	5	6	1			
Sundry Materials	43	12	7			
Tools and Equipment	0	13	5			
Tithe Annuity	0	6	8	525	14	10
River Don—Fishlake Cut.						
Wages and National Insurance, &c.	1,731	12	1			
Haulage	20	18	6			
Land Purchase	2,611	5	3			
Plant	2,575	13	5			
Excavator Spares and Repairs	477	0	0			
Insurance and Licences	46	4	0			
Fuel, &c.	366	3	4			
Sundry Materials	168	17	2			
Plant Repairs	168	7	8			
Tools and Equipment	63	7	3			
Drainage Rate	3	16	1	8,283	4	9
Carried forward				10,330	10	8

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.	£	s.	d.
BY EXECUTION OF NEW WORKS ACCOUNT (GRANT EARNING).						
River Derwent—Bubwith Cut.						
Use of Land	2	0	0			
River Dearne—Bolton Ings Cut.						
Use of Excavator	53	19	0			
River Don—Jubilee Bridge to Aqueduct— Banks.						
Sale of Fruit Trees, &c.	10	0	6			
River Don—Fishlake Cut.						
Use of Tractor	30	15	0			
Sundries	0	2	3	30	17	3
Carried forward	96	16	9			

INCOME AND EXPENDITURE ACCOUNT

EXPENDITURE.	£	s.	d.
TO EXECUTION OF NEW WORKS ACCOUNT (GRANT EARNING)—Continued.			
Brought forward	10,830	10	8
Thorpe Marsh Barrier Bank.			
Consideration for Perpetual Easement, Costs, &c.	548	14	8
	10,879	5	4
Income Tax.			
Deductions from Interest on Land Purchase monies—			
River Dearne	0	12	6
River Don	10	5	9
	10	18	3
General Expenses.			
Salaries and Travelling Expenses (proportion)	676	2	7
Total to Summary Account	£ 11,566	6	2
 TO CONTRIBUTIONS TO INTERNAL DRAINAGE BOARDS ACCOUNT.			
Contributions	1,844	10	0
Total to Summary Account	£ 1,844	10	0

for the Year ending 31st March, 1938.

INCOME	£	s.	d.
BY EXECUTION OF NEW WORKS ACCOUNT (GRANT EARNING)—Continued.			
Brought forward	96	16	9
 Ministry of Agriculture and Fisheries.			
Net Expenditure Recharged	10,782	8	7
Grant- $\frac{1}{2}$ rd thereof	3,594	2	10
Total to Summary Account	£ 3,690	19	7

SUMMARY INCOME and EXPENDITURE ACCOUNT

EXPENDITURE	£	s.	d.	£	s.	d.
To Balance overspent brought forward—						
Works of Maintenance	937	3	6			
Improvement of Existing Works	2,724	8	8	3,661	12	2
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Expenditure in Year—						
Administration	17,627	4	11			
Works of Maintenance	13,702	4	0			
Improvement in Existing Works—						
General	2,068	8	8			
Main River Improvement Scheme	51,384	8	5			
Execution of New Works—						
General	687	0	10			
Main River Improvement Scheme	10,879	5	4			
Contributions to Internal Drainage Boards	1,844	10	0	98,193	2	2
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Balance in hand carried forward—						
Administration	17,336	8	6			
Execution of New Works	3,131	5	5			
Contributions to Internal Drainage Boards	370	7	5	20,838	1	4
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	£	122,692	15	8		

for the Year ending 31st March, 1938.

INCOME.	£	s.	d.	£	s.	d.
By Balance in Hand brought forward—						
Administration	11,641	14	2			
Execution of New Works	2,295	18	8			
Contributions to Internal Drainage Boards	514	17	5	14,452	10	3
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Income in Year—						
Government Grants and Miscellaneous—						
Administration	344	19	3			
Works of Maintenance	826	0	10			
Improvement of Existing Works—						
Main River Improvement Scheme	17,312	18	0			
Execution of New Works—						
Main River Improvement Scheme	3,690	19	7	22,174	17	8
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Precepts—						
Administration	22,977	0	0			
Works of Maintenance	11,696	4	1			
Improvement of Existing Works	34,992	0	0			
Execution of New Works	8,710	13	4			
Contributions to Internal Drainage Boards	1,700	0	0	80,075	17	5
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Balance overspent carried forward—						
Works of Maintenance	2,117	2	7			
Improvement of Existing Works	3,872	7	9	5,989	10	4
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	£	122,692	15	8		

BALANCE SHEET at

LIABILITIES.	£	s.	d.
CAPITAL ACCOUNT.			
Revenue Contributions for Capital Assets	84,964	16	11
REVENUE ACCOUNT.			
Sundry Creditors	909	12	0
Cub Excavator No. 14—Reserve towards purchase price	627	0	0
Income and Expenditure Account— Net Balance at 31st March, 1938	14,848	11	0
	£ 101,349	19	11

31st MARCH, 1938.

ASSETS.	£	s.	d.
CAPITAL ACCOUNT.			
Capital Assets (at cost)	84,964	16	11
REVENUE ACCOUNT.			
Sundry Debtors—			
General	237	10	11
Precepts	33	0	0
Loan to Internal Drainage Board	629	0	0
Telephone Deposits	5	0	0
Under Doncaster District Drainage Board (Dissolution) Order	16	16	0
Ministry of Agriculture and Fisheries	232	14	3
	1,154	1	2
Balances at Bank and in hand	15,231	1	10
	£ 101,349	19	11

I hereby certify that I have examined and allowed the several accounts of which the foregoing is the Balance Sheet.

Dated this 7th day of December, 1938.

(Signed) W. G. A. BELL,
Assistant District Auditor.