## PARLIAMENT OF NEW SOUTH WALES

REPORT

OF THE

# Department of Main Roads 

FOR THE

## YEAR ENDED 30th JUNE, 1952

Presented to Parliament in accordance with the provisions of Séction 6 of the Main Roads Act, 1924-1951

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# TWENTY-SEVENTH ANNUAL REPORT 

## FOR YEAR ENDED 30th JUNE, 1952.

## TABLE OF CONTENTS.



## SECTION III.

Toll Bridges.


SECTION IV.
Miscellaneous.

| Regulation of Weight of Loads on Main Roads... Instruction on Plant Maintenance and Operation |  |  |  | ... | $\ldots$ | ... |  | 52 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ... | $\ldots$ | ... | ... |  | 2 |
| Employment and Industrial | ... | ... | ... | ... | ... |  |  | 52 |
| Railway Level Crossings ... | $\ldots$ |  |  | .. | .. |  |  | 54 |
| Exhibits |  |  |  | . |  |  |  | 54 |
| Publications |  |  | $\ldots$ | ... |  |  |  | 55 |
| Housing for Staff ... |  |  | .. | ... |  |  |  | 55 |
| Conference of State Road Authorities |  |  |  | ... |  | ... |  | 55 |
| Visitors from Overseas |  |  | $\ldots$ | $\ldots$ | ... |  |  | 55 |
| Army Supplementary Reserve Unit |  |  | .. | ... | ... | $\ldots$ |  | 56 |
| Acknowledgments .. |  |  | $\ldots$ | $\ldots$ |  |  |  |  |

## SECTION V.

Appendices.

## Appendix

No.
1 County of Cumberland Main Roads Fund-Statement of Receipts and Payments57
2 Country Main Roads Fund-Statement of Receipts and Payments ..... 58
3 Developmental Roads Fund-Statement of Receipts and Payments ..... 59
4 Sydney Harbour Bridge Account ..... 59
4a Sydney Harbour Bridge--Statement of Capital ..... 60
5 Aggregate Statement of Income and Expenditure from the inception of the Main Roads Board, 1st January, 1925, to 30th June, 1941, and of Cash Receipts and Payments from 1st July, 1941, to 30th June, 1952 ..... 61
6 Summary of Loan Liabilities-Main and Developmental Roads Funds ... ..... 65
7 County of Cumberland Main Roads Fund-Summary of Expenditure on Construction and Reconstruction Works ..... 66
8 Country Main Roads Fund--Summary of Expenditure on Construction and Reconstruction Works ..... 72
9 Developmental Roads Fund-Summary of Expenditure on Construction and Reconstruction Works ..... 81
10 County of Cumberland Main Roads Fund-Expenditure during the Year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries ..... 84
11 Country Main Roads Fund-Expenditure during the Year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries ..... 87
12 Proclamation of Main Roads, 1951-52 ..... 96
13 Declaration of Secondary Roads, 1951-52 ... ... ... ... ..14 Proclamation of Developmental Roads, 1951-52 ... ... ... ... 97
15 Proclamation of Developmental Works, 1951-52..97
16 Length of Proclaimed Roads in New South Wales ... ..... 98
17 Length and Percentage of Main and Secondary Roads Maintained by the Department and Councils in the Eastern and Central Divisions of the State as at 30th June, 1952 .. ..... 98
18 Expenditure on Main and Secondary Roads by the Department of Main Roads and Contributions by Councils from 1925-26 to 1951-52 ..... 99

# TWENTY-SEVENTH ANNUAL REPORT 

(FOR PERIOD ENDED 30TH JUNE, 1952

The Honourable the Minister for Transport, Sydney.

In accordance with the provisions of section 6 of the Main Roads Act, 1924-1951, I have the honour to submit the Twenty-seventh Annual Report for presentation to Parliament. The report covers the period from 1st July, 1951, to 30 th June, 1952, though a few matters referred to are carried beyond the latter date for convenience and completeness of record.

## MINISTER.

During the whole period under review, the Honourable W. F. Sheahan, LL.B., M.L.A., as Minister for Transport, has been in charge of the administration of the Main Roads Act.

## LEGISLATION.

The Main Roads (Amendment) Act, 1951, was passed by Parliament and assented to by His Excellency the Governor on 28th December, 1951. This Act amended the Main Roads Act, 1924-1950, in regard to three aspects as follows:-
(1.) Distribution of the proceeds of motor veliicle and petrol taxation payable to Main Roads Funds.
(a) It was the practice prior to 1st December, 1950, for the proceeds of motor vehicle taxation payable to the Main Roads Funds to be distributed between the County of Cumberland and the Country Main Roads Funds on the basis that:-
(i) The County of Cumberland Main Roads Fund received half the proceeds of the tax collected from persons resident in the County of Cumberland.
(ii) The Country Main Roads Fund received half the proceeds of the tax collected from persons resident in the County of Cumberland, together with the whole of the proceeds of the tax collected from persons resident outside the County of Cumberland.
(b) The relationship between the number of vehicles registered in the County of Cumberland and the number of vehicles registered in the Country has remained approximately the same since the Main Roads Act commenced to operate in 1925, the proportions being 47 per cent. Cumberland and 53 per cent., Country. The result is that the proceeds of motor vehicle taxation payable to the Main Roads Funds prior to 1st December, 1950, were distributed in the proportions of $231 / 2$ per cent. to the Cumberland Fund and $761 / 2$ per cent. to the Country Fund.
(c) It was provided in the Main Roads (Amendment) Act, 1950, that the whole of the revenue derived from the restoration as from 1st December, 1950, of the pre-war rates of motor vehicle taxation should be paid to the Country Main Roads Fund. The effect of this alteration in the previous basis of distribution of motor vehicle taxation was that the total taxation was apportioned between the Cumberland and Country Funds in the proportions of 18.37 per cent. and 81.63 per cent: respectively as distinct from the earlier percentages of $23 \frac{1}{2}$ and $76 \frac{1}{2}$ respectively.
(d) The rates of motor vehicle taxation were increased as from 1st February, 1952, and, coincident with this, the Main Roads (Amendment) Act of 1951 was passed which provided that the total proceeds of motor vehicle taxation payable to the Main Roads Funds should be divided between the County of Cumberland Fund and the Country Fund in the proportions of 20 per cent. and 80 per cent. respectively.
(e) The past practice of distributing the proceeds of petrol taxation in the same proportions as the proceeds of motor vehicle taxation was also provided for in the amending legislation of 1951.
(2) Receipt and distribution of moneys derived from the proceeds of petrol taxation.

The Main Roads (Amendment) Act, 1951, provided machinery for the receipt and distribution of the funds paid to the State by the Commonwealth under the Commonwealth Aid Roads Act, 1950, insofar as such funds are made available for expenditure through the County of Cumberland and the Country Main Roads Funds as well as the Developmental Roads Fund.
(3) Payment of Commission to Local Governing Councils.

Section 42 of the Main Roads Act, 1924-1950, sets out that, where any works on proclaimed Main Roads are carried out by a Council, the Department of Main Roads shall, if the work is done to the Department's satisfaction, allow to the Council as chargeable to the cost of the work, commission at the rate of $1 \frac{1}{2}$ per cent. towards the cost of Council's clerical and engineering services. The amending Act of 1951 provides that the amount allowed as commission shall be increased to $2 \frac{1}{2}$ per cent. in those cases where working plans and specifications in accordance with Departmental standards are prepared by Councils.

## SECTION 1-FINANCE.

## RECEIPTS AND PAYMENTS.

The principal revenues of the Department are derived from proceeds of taxation on motor vehicles and on petrol, levied by the State and the Commonwealth Governments respectively.

The Department's receipts from motor vehicle taxation in 1951-52 were $£ 5,046,392$, compared with $£ 3,538,374$ in the previous financial year 1950-51. The increase of $£ 1,508,018$ is attributable partly to a growth in the number of registered motor vehicles, partly to the restoration as from December, 1950, of the rates of tax which obtained prior to the war-time reduction in 1942, and partly to the application of increased rates of tax on 1st February, 1952.

Due to the consumption of a larger amount of petrol within the Commonwealth, the proceeds of petrol taxation received by the Department rose by $£ 312,119$ from $£ 2,557,447$ in $1950-51$ to $£ 2,869,566$ in 1951-52.

Contributions by Councils in 1951-52 totalled $£ 396,766$ compared with $£ 328,983$ in the preceding financial year. These amounts consist for the most part of contributions payable by the Councils in the County of Cumberland based on a rate levied under the Main Roads Act on the Unimproved Capital Value of land in the Councils' areas. The rate levied was the same in each of the years 1950-51 and 1951-52 and the increased revenue of $£ 67,783$ in the latter year was related principally to a rise in land values.

An amount of $£ 300,000$ was paid by the State Government to the Country Main Roads Fund during the latter half of 1951-52 as a special payment so as to permit of current commitments on country main road works being met in the face of steep rises in costs. Of the amount of $£ 300,000$, repayment of $£ 100,000$ will need to be met from the Country Main Roads Fund during 1952-53 while the question of repayment of the remaining $£ 200,000$ will be the subject of later review.

Loan funds to the extent of $£ 225,000$ were raised during 1951-52 to supplement the revenues of the Country Main Roads Fund.

Payments on account of maintenance and minor improvements totalled $£ 4,921,350$ in $1951-52$ compared with $£ 3,787,059$ in $1950-51$. The increase of $£ 1,134,291$ or 29.9 per cent. was attributable firstly, to rises in costs to the extent of more than 22 per cent. and secondly, to the additional work required to maintain pavements which have deteriorated under the impact of the substantial growth of traffic during the past few years, particularly of heavy commercial vehicles on the principal country State Highways.

Construction and reconstruction works absorbed $£ 3,625,037$ in 1951-52 against $£ 2,276,055$ in the previous year. Of the increase of $£ 1,348,982$, rises in costs accounted for more than 21 per cent. or approximately $£ 283,000$. The balance of the increased expenditure represented an expanded volume of work principally on roadworks in the County of Cumberland area, on the reconditioning of damaged pavements on the main country State Highways, on the construction of large bridges at Swansea and Hexham, on Developmental Road works and on special works for the Commonwealth Government.

A marked increase of payments from $£ 435,885$ in 1950-51 to £816,648 in 1951-52 occurred in respect of the purchase of assets. The increase of $£ 380,763$ included $£ 347,441$ for plant. The Department's mechanical equipment was augmented during 1951-52 while at the same time a substantial replacement was effected of plant units which were beyond the stage of economical repair.

The table hereunder provides a summary of the financial operations of the Roads Funds during the year ended 30th June, 1952. Details of receipts and payments for the year are shown in Appendices 1 to 3 .

| Heading. | County of Cumberland Main Roads Fund. | Country <br> Main <br> Roads <br> Fund. | Developmental Roads Fund. | Total. | Comparative Total for 1950-51. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Recetpts. | £ | £ | $£$ | £ | £ |
| Motor Vehicle Taxation levied by the State Government | 961,654 | 4,084,738 | $\ldots$ | 5,046,392 | $3,538,374$ |
| Motor Vehicle Registration and License Fees collected by the State Government | ... | ... | $\ldots$ | $\ldots$ | 47,886 |
| Petrol Taxation paid to the State by the Commonwealth Government | 502,372 | 2,167,194 | 200,000 | 2,869,566 | 2,557,447 |
| Contributions by Councils ..................................... | 385,878 | 10,888 | ... | 396,786 | 328,983 |
| Funds specially provided by the State Government from Consolidated Revenue | ... | 300,000 | $\ldots$ | 300,000 | 350,000 |
| Repayable Loan Moneys provided by the State Government ... | $\ldots$ | 225,000 | ... | 225,000 | 215,000 |
| State Government, Commonwealth Government and Other Authorities for Special Works | $\ldots$ | 257,523 |  | 257,523 | 156,635 |
| *Hire of Department's Plant and Motor Vehicles.................... |  | 479,048 | $\ldots$ | 479,048 | 393,224 |
| Other .................................... | 136,557 | 40,149 |  | 176,706 | 155,654 |
| Total Receipts .......................... | 1,986,461 | 7,564,540 | 200,000 | 9,751,001 | 7,743,203 |
| Payments. |  |  |  |  |  |
| Maintenance and Minor ImprovementsOrdinary Works. | 924,301 | 3,995,633 | ... | 4,919,934 | 3,785,776 |
| Special Works carried out on behalf of the State Government, Commonwealth Government and Other Authorities | ... | 1,416 | $\ldots$ | 1,416 | 1,283 |
| Total Maintenance and Minor Improvernents ...s | 924,301 | 3,997,049 | $\ldots$ | 4,921,350 | 3,787,059 |
| Construction and ReconstructionOrdinary Works.. | 1,070,174 | 2,091,127 | 166,714 | 3,328,015 | 2,068,304 |
| Special Works carried out on behalf of the State Government, Commonwealth Government and Other Authorities $\qquad$ | 1,229 | 295,793 | ... | 297,022 | 207,751 |
| Total Construction and Reconstruction ........... $£$ | 1,071,403 | 2,386,920 | 166,714 | 3,625,037 | 2,276,055 |
| Loan Charges (Repayment of Principal and Payment of Sinking Fund, Interest and Exchange on Loans) |  | 151,073 | $\ldots$ | 151,073 | 146,577 |
| Purchase of Assets, including Road Plant and Motor Vehicles ... | 39,663 | 776,985 | $\ldots$ | 816,648 | 435,885 |
| Repairs and Expenses in respect of Road Plant and Motor Vehicles $\qquad$ |  | 367,940 |  | 367,940 | 253,405 |
| Administrative Expenses | 82,083 | 264,827 | 1,742 | 348,652 | 279,622 |
| Other | 217,870 | 13,868 | 130 | 231,868 | 195,440 |
| Total Payments ........................... $£$ | 2,335,320 | 7,958,662 | 168,586 | 10,462,568 | 7,374,043 |

[^0]The receipts and payments of the County of Cumberland and Country Main Roads Funds for the financial year 1951-52 are illustrated in the following diagrams:-

> COUNTY OF CUMBERLAND MAIN ROADS FUND 1951-52


COUNTRY MAIN ROADS FUND 1951-52

## RECEIPTS



## REVIEW OF THE FINANCIAL POSITION OF THE ROADS FUNDS.

There are three separate Funds established under the Main Roads Act-the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. The moneys allocated to the County of Cumberland Main Roads Fund are required to be spent on Main and Secondary Roads within the County of Cumberland area; the moneys allocated to the Country Main Roads Fund are required to be spent on Main Roads in the country area, that is, the area outside the County of Cumberland; and the moneys allocated to the Developmental Roads Fund are required to be spent on proclaimed Developmental Roads and Works.

## County of Cumberland Main Roads Fund.

The year 1951-52 opened with a cash balance of $£ 361,400$ in the County of Cumberland Main Roads Fund after excluding $£ 1,734$ held on behalf of the Commonwealth Government for the purpose of carrying out special works. Payments during 1951-52 exceeded receipts by $£ 347,615$ and the cash balance was reduced to $£ 13,785$ at 30th June, 1952. This was a small figure having regard to the fact that the rate of outgo is approximately $£ 9,800$ each working day.

Shortages of labour and materials were factors which limited the volume of work which could be carried out on the main roads of the County of Cumberland during the past few years. A change was experienced during 1951-52 and the position now is that labour and materials are in reasonably good supply and finance is the limiting factor. The revenues of the Fund were augmented following an increase in the rates of motor vehicle taxation as from 1st February, 1952, but recent steep rises in costs following adjustments of the basic wage have made it impracticable to expand the works programme in proportion.

## Country Main Roads Fund.

Payments exceeded receipts during 1951-52 and the cash on hand at the end of the financial year and available for normal works was $£ 4,570$ which compares with an outgo of approximately $£ 31,000$ each working day.

The year 1951-52 was a difficult one from the financial aspect, on account of the uncertainty which existed in regard to the revenues which would accrue and also in regard to the effect of basic wage rises on the rate of expenditure. In illustration, basic wage adjustments effected during 1951-52 called for the provision of an additional amount of approximately $£ 900,000$ per annum from the Country Main Roads Fund.

Additional revenues have accrued to the Fund following increases in the rates of motor vehicle taxation as from 1st February, 1952. At the same time additional liabilities have been cast on the Fund during recent years principally by way of higher costs, of extra money required to maintain roads and bridges following a substantial growth of traffic and of the need to reconstruct long lengths of damaged pavements on the principal State Highways.

The normal revenues of the Country Main Roads Fund were supplemented during 1951-52 by the raising of loan funds to the extent of $£ 225,000$ and by $£ 300,000$ provided specially by the State Government as an alternative to the reduction of the Department's works programme.

After meeting inescapable charges, and paying for the minimum requirements of maintenance, the replacement of obsolete bridges and bridges which had been washed away by floods, the cost of new bridges of major importance, and the reconditioning of comparatively short lengths of worn-out bituminous pavements on the principal State Highways, the funds remaining were sufficient to permit of only limited progress being made in improving the present standard of the country Main Roads. At the same time there is a substantial and reasonable demand for such improvement.

## Developmental Roads Fund.

The revenues of the Developmental Roads Fund during 1951-52 consisted of $£ 200,000$ allocated by the State Government from moneys paid to the State by the Commonwealth Government under the Commonwealth Aid Roads Act, 1950, for expenditure on roads, other than proclaimed Main Roads, in rural areas.

The cash available in the Fund at the end of 1951-52 totalled $£ 328,393$, of which $£ 29,466$ was provided by the State and $£ 298,927$ by the Commonwealth. The whole of this amount has been absorbed by allocations made to Councils for works.

There is evidence that the lag in the carrying out of work on Developmental Roads by Councils which has been experienced during the past few years is being overcome, inasmuch as the expenditure from the Fund during the latter half of 1951-52 exceeded the receipts for that period.

## SECTION II.—OPERATIONS.

## THE MAIN ROADS SYSTEM.

## County of Cumberland Main Roads Development Plan.

The Department's Main Roads Development Plan for the County of Cumberland has been described in previous reports and is included in the County of Cumberland Planning Scheme which became a Statutory Scheme on 27th June, 1951.

Implementation of the Main Road Development Plan, which is designed to meet the County's main road traffic requirements for many years, will be carried out in stages as traffic develops and as funds and other circumstances permit. The Department is progressing with the detailed definition of the boundaries of land required for the roads and advising the Cumberland County Council, local Councils and members of the public as to the extent to which particular properties are affected by County Roads. During the year over 2,800 written advices were sent to the Cumberland County Council and others in response to letters received, and information was supplied in a very large number of cases on personal application. To enable the Cumberland County Council to proceed with acquisition of land, the Department supplied that Council with 156 certified plans showing in detail the extent of land required from groups of properties and individual properties. Maps on 4 chains scale showing in less detail the boundaries of land required for roads within thirteen local Government areas have also been supplied to the Cumberland County Council to facilitate its administration relation to County Roads.

## Planning of Newcastle and District Arterial Roads System.

The Department, in association with the Councils of the City of Newcastle and Shire of Lake Macquarie, in 1945 adopted a plan for development of an arterial roads system for an area embracing the City of Newcastle, extending north and west to the City boundary and south into the Shire of Lake Macquarie including the area to the north of the Lake and southerly to Swansea.

The plan comprised a general outline of the routing of all arterial roads including the general cross sections and widths appropriate to each road and this was adopted by the three authorities as a basis for detail survey and design.

The principal arterial roads were subsequently proclaimed Main Roads, and the three authorities agreed to a plan of procedure whereby detail survey and design for ordinary Main Roads and those not proclaimed Main Roads would be undertaken by the Councils, while that for the State Highways, Trunk Road and proposed Motorways would be undertaken by the Department. This action has been taken by all authorities concerned.

The Northumberland County Council was established in 1948 to undertake the task of general planning of the entire County area which includes, in addition to the City of Newcastle and the Shire of Lake Macquarie, the adjacent Shires of Kearsley, Lower Hunter and Port Stephens, the City of Maitland and the Municipality of Cessnock. The County Council adopted the original roads plan for Newcastle and environs with certain additions.

The County Planning Scheme has now advanced to the stage of statutory exhibition and for a period of three months commencing on 1st July, 1952, the plan was exhibited at the County Offices at Newcastle.


Various features of the County Plan in the vicinity of Newcastle City are under consideration by a Port Development Authority on which the Department is represented in association with the City and County Councils and the Government Departments of Railways and Public Works, and the Maritime Services Board.

The Department's task of detail planning and in particular the determination of road boundaries is well advanced, and it is now possible to furnish particulars of location and road limits in relation to projected land subdivision and building proposals as may be required under interim development by landowners and local, utility and housing authorities.

Land acquisition for purpose of the roads scheme is proceeding where necessary and a few sections of the roads have already been established in accordance with the plan. Further implementation of the Main Roads scheme will be undertaken in stages as warranted by traffic demand, and as circumstances and finances permit.

A general outline of the arterial roads plan for Newcastle and environs is shown on page 13.

## Planning of Wollongong-Port Kembla District Main Roads System.

The Department's plan for development of the Main Roads system in the Wollongong-Port Kembla district was described in detail in the Department's Twenty-first Annual Report.

The principal features of the plan are as follows:-

1. A north-south arterial road extending from Thirroul, north of Bulli, southerly to beyond Dapto. Practically the whole length will be in entirely new location designed to take the place of the present Prince's Highway, by-passing places where traffic congestion occurs at present and planned to permit safe and expeditious movement of north-south traffic.
2. Widening and improvement of the State Highway and Main Road at North Wollongong in the immediate approach to the City.
3. Development of Springhill Road (Main Road No. 568) to the west of the proposed Inner Harbour at Tom Thumb Lagoon as the principal route of access between Wollongong and the industrial areas of Port Kembla. The present route of Main Road No. 295 located along the coast via Tom Thumb Lagoon bridge will ultimately be severed by the Inner Harbour development.
4. Widening and improvement of Five Islands Road (Main Road No. 295) between the present Prince's Highway, the proposed North-South Arterial Road and Port Kembla including a deviation and bridge over the railway north of Unanderra.
5. A possible future Main Road between Port Kembla and Kembla Grange via Berkley.
6. Widening, improvement and local deviations of Main Roads in the vicinity of and south of Port Kembla township and from Primbee to Windang.

The Illawarra Planning Authority which has prepared a general planning scheme for the City of Greater Wollongong and the Municipality of Shellharbour has now submitted its plan to the Minister for Local Government.

Engineering surveys and preliminary designs have been completed by the Department for the entire length of the North-South Arterial Road system with the exception of a section immediately south of Kembla Grange. Designs for widening are well advanced for Main Roads Nos. 295 (Five Islands Road) and 568 (Springhill Road). Designs are complete for widening of Prince's Highway from Mount Ousley Road to Smith Street, North Wollongong. Plans of these proposals are being furnished to the Council as they are completed.

Land acquisition action by the Department is confined mainly to the North-South Arterial Road system and is well advanced on the section north of Coniston Road to Thirroul. On the West Wollongong section land acquisitions are practically complete. Land acquisition in respect of widening and deviation of ordinary Main Roads in and around Port Kembla area have not yet been advanced, but land requirements for this purpose, at present protected under the Interim Development provisions of the section XIIA of the Local Government Act, will need to be dealt with in due course in association with the City Council.

Several conferences have been attended by Department's representatives with representatives of Council, Planning Authority other Government Departments and Industrial Organisations. The continued co-operation of individual property owners, Local Authorities, Government Departments and utility bodies is greatly assisting development of the plan, the implementation of which will be undertaken by stage construction as funds become available.

## Alterations and Additions to the Main Roads System.

The alterations and additions to the Main Roads system during the year under review, are set out in Appendix No. 12. In addition to the adjustments to the Main Roads System five roads were declared as Secondary Roads, five roads were proclaimed as new Developmental Roads or extensions of existing Developmental Roads, and three works were proclaimed as Developmental Works. Details of these are set out in Appendices Nos. 13 and 14.

As a result of these adjustments the total mileage of proclaimed roads (other than in the Western Division of the State) was increased by 106 miles from 20,615 miles to 20,721 miles.

## Naming of Roads.

In accordance with the provisions of section 8 of the Main Roads Act, 1924-1951, applications from City, Municipal and Shire Councils for the naming and renaming of certain roads and streets forming parts of proclaimed Main Roads, have been dealt with during the year, and the approval of His Excellency the Governor and the Executive Council obtained to the following:-

Those portions of State Highway No. 2 within the City of Goulburn known as Cowper Street between Combermere Street and St. Mary's Street and between St. Mary's Street and the south-western city boundary-named Hume Highway.

A newly constructed road forming part of Trunk Road No. 82 between Robert Street and Steel Street, Jesmond, being part of the road from Newcastle to Wallsend-named Newcastle Road.

That part of the Taree-Wingham road (Main Road No. 192) between Commerce Street and the northern boundary of Taree Munici-pality-named Wingham Road.

That part of State Highway No. 10 between Chatham Avenue and Cowper Street within the Municipality of Taree-named Chatham Avenue.

That part of Main Road No. 187 known as Urabatta Road within the Municipality of Inverell—renamed Urabatta Street.

That part of State Highway No. 12 known as White Street and Lindy Avenue within the Municipalty of Inverell-renamed Warialda Road.

That part of State Highway No. 12 known as Bent Street within the Municipality of Inverell-renamed Glen Innes Road.

That part of Trunk Road No. 73 known as Clyde Street and Radnor Street within the Municipality of Inverell-renamed Tingha Road.

That portion of Main Road No. 332 known as Park Street from the Pacific Highway (State Highway No. 10), Berowra to Crown Street, Crown Street for its entire length, High Street from Crown Street to Berowra Creek Road and Berowra Creek Road to Berowra Waters within the Shire of Hornsby-renamed Berowra Waters Road.

That portion of Main Road No. 162 known as the Broadway, between its junction with Old Ryde Road in the vicinity of de Burghs Bridge on the south, and its junction again with Old Ryde Road on the north within the Municipality of Ku-ring-gai--renamed Ryde Road.

That portion of Main Road No. 227 known as Curranulla Street, Cronulla, within the Shire of Sutherland-renamed Cronulla Street.

## Rates of Assistance to Councils.

The general rates of assistance granted by the Department to the Municipal and Shire Councils for aproved works were unchanged during the year. The rates applying were set out in the annual report for the year ending 30th June, 1950.

## Metropolitan Road Widening Schemes.

The Department's activities in connection with metropolitan main road widening have involved the acquisition of land from 247 separate properties during the year.

These include twenty properties on State Highway No. 5 (Great Western Highway) in the Municipality of Holroyd, thirteen on State Highway No. 10 (Pacific Highway) in the Municipality of Ku-ring-gai, twenty-eight on State Highway No. 13 in the Municipalities of Bankstown and Parramatta, seventeen on Main Road No. 165 (Victoria Road) in the Municipality of Parramatta, nineteen on Main Road No. 164 (Pittwater Road) and fifteen on Main Road No. 529 (French's Forest Road) in the Shire of Warringah.

Following the acquisition of the land in five cases timber frame buildings were removed bodily to new positions to effect clearance of the site for road construction. In other cases fencing and other minor improvements were adjusted to the new alignment in preparation for road widening. In seven cases the Department secured vacant possession or provided temporary accommodation for tenants occupying premises required for demolition or removal.

The prevailing shortage of new premises continues to retard progress in road widening especially where brick buildings are affected.

Road widening proposals which it has been possible to carry into effect to a limited extent include the Prince's Highway (State Highway No. 1) at Blakehurst in the Municipality of Kogarah, Pittwater Road (Main Road No. 164) at Brookvale in the Shire of Warringah, and Victoria Road (Main Road No. 165) between Bowden and Forsyth Streets in the Municipality of Ryde.

## ROAD CONSTRUCTION.

As in past years, road construction work by the Councils and the Department has been carried out partly by day labour and partly by contract.

In the County of Cumberland the total value of major contracts in progress exceeded $£ 300,000$. These contracts covered both cement concrete and bituminous pavements. In addition, it was found economical to purchase much of the concrete used in day labour construction ready mixed under contract from private suppliers. The Department maintained three major day labour organisations, mainly on concrete pavement work.

The Department's standard type of concrete road pavement is 7 inches in depth with edges thickened to 9 inches, reinforced and having expansion joints at approximately 50 feet intervals. During the year an experimental length of constant thickness slab 8 inches thick, unreinforced and with contraction joints at 10 feet intervals was laid on the Hume Highway in the Municipality of Bankstown.

In the Country, work was continued by the Department and the Snowy River Shire Council on the reconstruction of the Monaro Highway between Cooma and Adaminaby, and on the Cooma to Kosciusko Road, respectively, in connection with the Snowy Mountains Hydroelectric project. This work is referred to in more detail on page 21.

In addition, ten Departmental day labour construction organisations operated from headquarters at the following centres :-Prestons (near Liverpool), Coff's Harbour, Frederickton, Port Macquarie, Sandy Flat (near Tenterfield), Bateman's Bay, Cobargo, Gibraltar Range (east of Glen Innes), Bendemeer and Carcoar.

The organisation at Prestons substantially completed during the year the strengthening of the pavement on Main Road No. 179 between Broughton Pass and Maldon to provide a suitable detour for traffic using the Hume Highway in the event of the Highway being closed by slips at Razorback Range or by flooding of the Nepean River.
Restoration of a section of pavement which deteriorated after the 1950 fiood rains. Hume Highway (S.H.2). Shire of Gundagai.


Road before reconstruction.


A view of the strengthened roadway.

The organisations at Gibraltar Range (Main Road No. 511, Grafton-Glen Innes) and Cobargo (Prince's Highway) were engaged solely on new construction. That at Bateman's Bay was partly engaged on new construction of the Prince's Highway south of Moruya and partly on drainage improvement required for the reconstruction of damaged pavements on the Highway north of Bateman's Bay. The organisation at Coff's Harbour was engaged in completing the construction of a section of the Pacific Highway southwards to Repton

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and heavy resheeting of the gravel lengths of the Highway north and south of Woolgoolga. New construction on the New England Highway in the vicinity of Sandy Flat was suspended during the year and the organisation used to complete gravelling and minor work on the length already partly completed between 8 miles and 24 miles south of Tenterfield.

Organisations at Port Macquarie and Frederickton were engaged on reconstruction of damaged pavements on the Pacific Highway between Taree and Nambucca Heads and similar work was carried out on the Mid-western Highway in Lyndhurst Shire from Carcoar and on the New England Highway in Cockburn Shire from Bendemeer.

## County of Cumberland Works.

The principal works in hand during the year were:-
State Highway No. 2.-Hume Highway. Municipality of Burwood, Burwood Road to The Boulevarde.

Work on this section of the Highway was completed by the Department's day labour organisation. The major part of the work provides six lanes of concrete pavement, but a lesser width of pavement has been provided where resumptions for widening could not be completed. The total length of the work is approximately 4,000 feet.

## State Highway No. 2-Hume Highway. Municipality of Bankstown. Fenwick Street to Hector Street.

This work is being carried out by the Department's day labour organisation and has been in progress since the latter part of 1950 . It involves the construction of a cement concrete pavement 23 feet wide with a formed shoulder. The new pavement will form a dual carriageway with the existing 20 feet wide bituminous pavement and will be separated from it by a 5 feet median zone. The work is 5,053 feet in length and is the first step in reconstructing the Highway from the existing concrete pavement at Yagoona to Lansdowne Bridge, near State Highway No. 13 (Woodville Road).

State Highway No. 5-Great Western Highway. Municipality of Holroyd. Hawkesbury Road to Emert Street.

Work on this section of the Highway was commenced by the Department by day labour towards the end of 1951. The work involves construction of a concrete pavement 23 feet wide for a distance of approximately 3,700 feet, which with the existing bituminous pavement will form a dual carriageway. A median zone 10 feet wide will be incorporated in the work.

## State Highway No. 10 -Pacific Highway. Municipality of North Sydney. Centralising tram tracks, Crows Nest to St. Leonards.

The work necessary to complete this section was commenced in conjunction with centralisation of the tram tracks. Reports of earlier work on this section were included in the 22nd and 23rd Annual Reports.

The work is approximately 2,600 feet long and will consist of a concrete base course and premixed bituminous macadam surface course. The work is being carried out by the Department by day labour.

[^1]State Highway No. 13. Shire of Hornsby. Pennant Hills RoadThompson's Corner to Observatory Park (Beecroft Road).

Reconstruction in cement concrete on this section of Pennant Hills Road is nearing completion.

The new work provides four traffic lanes concreted kerb to kerb, for a length of 5,289 feet. It is being carried out under contract to the Department.

## Municipality of Penrith. Main Road No. 155-Reconstruction between Luddenham and Wallacia.

This construction covers a length of 3.25 miles between Luddenham and Wallacia, and consists of earthworks and new pavement which is nearing completion. The work is being carried out by the Department by day labour.

## Shire of Baulkham Hills. Main Road No. 157, Showground Road and Main Road No. 160, Old Northern Road.

Commenced in April, 1951, under contract to Council, the reconstruction in cement concrete of Main Road No. 157 from Old Northern Road to Castle Hill Showground together with Old Northern Road between Cecil Avenue and Anzac Hall is nearing completion.

The former work provides a two-lane pavement 1.3 miles in length as part of link between Windsor Road (Main Road No. 184) and the North Shore road system east of Old Northern Road. The latter work includes the Castle Hill shopping centre and provides 1,700 feet of kerb to kerb concrete pavement.

Municipality of Rockdale. Main Road No. 168-Forest Road. Reconstruction from Dunmore Street to Croydon Road.

The reconstruction of Forest Road from Dunmore Street to Croydon Road, full width in cement concrete, was put in hand early in 1952. The work, which is one mile long, is being done under contract to the Council by Messrs. John Cassidy and Sons Limited.

Municipality of Kogarah. Main Road No. 194-Ramsgate Road.
The section of Ramsgate Road between Rocky Point Road and The Causeway is to be reconstructed 42 feet wide in cement concrete. Work to date has been the widening of the southern side of the cutting near The Causeway in preparation for the first lane of concrete. The work is being carried out by the Council by day labour.

Municipality of Concord. Main Road No. 200-Concord Road.
On the section of Concord Road between Mary Street and Killoola Street (Rhodes) an extra lane on each side of the existing two-lane concrete pavement was constructed by contract under supervision of the Concord Council.

With the exception of the section between State Highway No. 5 and Wellbank Street, the full length of Concord Road from State Highway No. 5 to Ryde Bridge is now constructed in concrete four lanes wide.

## Municipality of Canterbury. Secondary Road No. 2,038-Kingsgrove Road.

This work comprises the reconstruction in concrete of the central 20 -foot pavement of Kingsgrove Road from Omnibus Road to its intersection with Main Road No. 167, Canterbury Road. A tender from Messrs. John Cassidy and Sons was accepted for the construction between Homer Street and Canterbury Road, the length between Omnibus Road and Homer Street to be carried out by Council by day labour. Early in 1952 the contract with Messrs. John Cassidy and Sons was terminated by mutual agreement and Canterbury Council will now
carry out the whole work by day labour. The section from Omnibus Road to Homer Street is practically completed, and that from Homer Street to Canterbury Road is well under way.


Municipality of Ashfield. Great Western Highway. (S.H. 5.) Central dividing strip installed between Battle Bridge and junction with Hume Highway (S.H.2).

## Country Works (excluding the Western Division).

The principal works in hand during the year were:-
State Highway No. 1-Prince's Highway. Shire of Eurobodalla. Moruya to Turlinjah. Construction.

Construction work by day labour has been continued by the Department. All formation works were completed from Moruya to Turlinjah.

During the year a deviation at Bergalia was completed and a sealed gravel pavement provided southwards for three miles from Moruya.

Formation work was commenced at Smart's Creek (one mile south of Turlinjah) on the approaches to a proposed new bridge.

State Highway No. 1—Prince's Highway. Shire of Mumbulla. CobargoBrogo. Construction.

Construction by the Department by day labour continued and by 30th June, 1952, the formation was in use by traffic for the full length from Cobargo to the vicinity of Quaama, a length of 6.5 miles.

The gravel pavement was completed and primed with tar from Cobargo to the Upper Brogo turn-off, 4.7 miles.

State Highway No. 1-Prince's Highway. Shires of Eurobodalla and Shoalhaven. Burrill Lake to Bateman's Bay. Reconstruction of damaged pavement.

Subsoil drainage works were continued and gravel supplies further investigated. Supplies of gravel for the East Lynne-Bateman's Bay section were located, tested and made ready for use by winning from creek beds and opening up pits.

## State Highway No. 2-Hume Highway. Shire of Gunning. Fish River to Gunning.

Reconstruction of 3 miles of the Hume Highway between Fish River and Gunning was started by the Department by day labour in 1949. The work was discontinued in 1950 in favour of other more urgent works. Further work on this section was undertaken in the last half of the year.

State Highway No. 2-Hume Highway. Shires of Kyeamba, Holbrook and Hume.

Sections of the bituminous pavement of the Hume Highway from its junction with the Sturt Highway, State Highway No. 14, near Tarcutta to Albury have been damaged by heavy traffic.

As a preliminary to the reconstruction of the damaged lengths of bituminous pavement, drainage of the road surface is being improved by the widening of the formation and the provision of table drains of greater capacity in cuttings and along lengths of shallow surface formation.

The work is being carried out by the Department by day labour.
State Highway No. 4-Monaro Highway. Cooma to Adaminaby and Main Road No. 286, Cooma to Spencer's Creek. Shire of Snowy River. Reconstruction for Snowy Mountains Hydro-Electric Authority.

Work on the Monaro Highway has been continued and the Department has, by day labour, completed construction of the gravel pavement for normal traffic loading to 13 miles from Cooma towards Adaminaby, excepting for Wambrook Creek Bridge. Earthworks are substantially complete to 14.5 miles, and surveys to 16 miles.

On Main Road No. 286, Snowy River Shire Council has completed construction with gravel pavement from the commencement of the work near 9 M . from Cooma to Berridale at 21M. from Cooma, and the work is now continuing west to 29 M .

On Mt. Kosciusko, the Department's day labour organisation has continued widening and improvement between Sawpit Creek, 8 miles from Jindabyne to Spencer's Creek, and on most of this length the widened formation is in use.

A crushing plant has been set up on Rock Flat Creek, 6 miles east of Cooma on the Countegany Road. This plant comprises two self-contained crushing and screening units and will crush local limestone. The crushed material in the various sizes will then be hauled to State Highway No. 4 and Main Road No. 286 as required.

The quarry site was selected after exhaustive investigation, and is the only material found satisfactory in the area for all available types of bitumen without the use of additives to prevent stripping of bitumen from stone.

State Highway No. 6-Mid-Western Highway. Shire of Lyndhurst. Reconstruction of Bituminous Pavement.

Following extensive damage to the existing bituminous pavement of this section of the Highway during 1950, a Departmental day labour organisation to carry out strengthening has been established at Carcoar. Work is in progress by day labour by the Department on the section between Blayney and Carcoar, where the formation has been widened and the drainage conditions have been improved by deepening the table drains. Arrangements are in hand for constructing a new sealed gravel pavement in this section.

## State Highway No. 9-New England Highway. Shire of Cockburn.

 Bendemeer to Uralla.The reconstruction of the damaged bituminous pavement on this length of the Highway was commenced during the year by the Department by day labour. The work is proceeding northerly from the Macdonald River Bridge at Bendemeer towards Uralla. During the year formation widening and draining and spreading of base course gravel was completed as far as Rocky Gully Creek, a distance of approximately 6.75 miles, and formation works were undertaken over a further length of approximately 6.5 miles to Carlisle Creek.

## State Highway No. 9-New England Highway. Shire of Tenterfield.

 Severn Shire boundary near Deepwater to Bluff Rock.Reconstruction work was completed from Bluff Rock about 8 miles south of Tenterfield to about 26 miles south of Tenterfield. The reconstruction of the section from there to Deepwater, a distance of about 6 miles, has been deferred for the time being. The work now in hand includes the strengthening of the pavement, some minor works such as protection fencing, etc., and bituminous surfacing progressively from the Bluff Rock end. The work is being carried out by the Department by day labour.

State Highway No. 10—Pacific Highway. Shires of Macleay and Nambucca. Frederickton to Allgomera Creek.

The reconstruction and bituminous surfacing of this length (about 20 miles) was substantially completed during the year by the Department by day labour.

State Highway No. 10-Pacific Highway. Shire of Lake Macquarie. Reconstruction of Bituminous Pavement south of Swansea.

As a first step in the strengthening of damaged sections of the Highway pavement between Belmont and the Hawkesbury River, a commencement was made with the reconstruction of a 4 mile length between Swansea and Catherine Hill Bay. This work is being done by the Department by day labour.

State Highway No. 10-Pacific Highway. Shire of Manning. Holey Flat Creek to Stewarts River (4 miles).

Work on this section was confined to construction of concrete box and pipe culverts, as it was necessary to divert plant and labour to the restoration of damaged bituminous pavements elsewhere in the Manning-Hastings area.

State Highway No. 10-Pacific Ḣighway. Shire of Hastings. Herons Creek to State Highway No. 11 at Port Macquarie.

The reconstruction and bituminous surfacing of this section (9.75 miles) was completed during the year. A continuous length of bituminous pavement has now been provided between Stewarts River and Telegraph Point, a distance of 42 miles.

## State Highway No. 10-Pacific Highway. Shire of Bellingen. Repton to Coff's Harbour.

Reconstruction of the Pacific Highway between Repton and Coff's Harbour was continued by the Department by day labour. The section being reconstructed is approximately 13.25 miles long and all earthworks were completed with the exception of the approaches to bridges over Manarm Creek on the deviation at Repton. Construction of a macadam pavement is progressing and at 30th June, 1952, approximately 4.25 miles of pavement were completed. The quarrying and crushing of aggregate for the pavement and bituminous seal are being carried out by the Department at Bonville.

State Highway No. 12-Gwydir Highway. Shire of Macintyre. 122.6M. to 128.02M. from South Grafton.

The strengthening of the pavement prior to bituminous surfacing was commenced in January by contract with Council and was completed from the Inverell end for a length of about 2.5 miles. Aggregate was supplied from the Inverell Municipal Council quarry.

State Highway No. 17. Newell Highway. Shire of Talbragar. Reconstruction and bituminous surface treatment.

This work will extend the bituminous pavement by approximately 10 miles southwards from the boundary between Gilgandra and Talbragar Shires. Earthwork and gravelling were completed and approximately half the length was primed. The work is being carried out by the Department by day labour.
State Highway No. 20. Municipality of Deniliquin-Deniliquin towards Finley.

Reconstruction and bituminous surfacing of the 4.2 miles of State Highway No. 20 in the Municipality of Deniliquin were commenced by Council in January, 1952, and substantially completed by 30th June, 1952. The reconstruction work was done mainly by Council by day labour, the supply and delivery of loam and necessary small sections of earthworks being done under contract. The bituminous surfacing work was done conjointly under contract to Council and by the Department's day labour spraying organisation.

This work completes a further stage in the progressive surfacing with bitumen between Deniliquin and the nearest Sydney railhead at Finley and, with work already done, provides a length of 24.8 miles of sealed pavement in a total distance of 37 miles between the two towns.

State Highway No. 21-Cobb Highway. Shire of Murray. Victorian border at Moama to Deniliquin.

The reconstructed section between 32 miles and 37 miles from Moama was sealed with bitumen under contract to the Council

This work was done as a further stage in the progressive reconstruction and surfacing with bitumen between Moama and Deniliquin, a distance of 46 miles, and has reduced the length of work still to be done to a length of 14.8 miles situated between 17.2 miles and 32 miles from Moama.
State Highway No. 24. Shire of Tenterfield Tenterfield-Wallangarra Reconstruction by Council by day labour has been in progress for some years and is now completed. The work extends from 3 miles 1,400 feet north of Tenterfield to Wallangarra at 12 miles 900 feet, and has eliminated four level crossings. Aggregate is now being supplied by contract with a view to early bituminous surfacing.


Slip on Brown Mountain following heavy rains in June, 1952. Monaro Highway (S.H.4). Shire of Mumbulla.

Shire of Culcairn. Trunk Road No. 57. Gravelling and bituminous surfacing.

A commencement was made with the strengthening with gravel and bituminous surfacing of the only remaining length of gravel pavement on Trunk Road No. 57 between Albury and Junee. This length, which extends for approximately 21 miles, is wholly within the Shire of Culcairn and the bituminous surfacing of a 5 mile section from Lockhart Shire boundary southwards was completed during the year.

Strengthening with gravel and preparation of the pavement were carried out by Culcairn Shire Council by day labour and the bituminous surfacing was carried out under contract to the Council.


Wagga Wagga-Albury Road (T.R. 57). New bituminous surface 38.5 miles south of Wagga Wagga. Shire of Culcairn.

## Shire of Jerilderie. Trunk Road No. 59. Jerilderie towards Urana.

Council is carrying out by day labour the construction of a deviation from 0 mile to 6.5 miles east of State Highway No. 17. This deviation will eliminate a section of the existing road which traverses a black soil plain and is subject to flooding from Billabong Creek.

## Shire of Canobolas. Trunk Road No. 61—Orange-Parkes.

The full length in the Shire, 9.5 miles, was reconstructed in 1950-51 and during the past year the bituminous surfacing of the section was completed.

Shire of Terania. Trunk Road No. 65. Reconstruction and surfacing between 7.70 M . and 8.22 M . from Lismore.

Council has completed the reconstruction and bituminous surfacing of this length of the road between Bexhill and Eltham. The existing pavement had been damaged by repeated flooding in recent years. The work completed consisted of building up the formation, realignment, the provision of a broken stone base course with a waterbound macadam surface course and the provision of a bituminous seal.

Shires of Burrangong and Demondrille. Trunk Road No. 78-Young to Wombat.

The Burrangong and Demondrille Shire Councils completed surfacing with bitumen a length of 6 miles from the Young Municipal boundary to Wombat. This section was reconstructed by the Council some years ago.

Burrangong Shire Council completed by day labour the reconstruction of 3.7 miles from the Young Municipal boundary northward.

Shire of Tumbarumba. Trunk Road No. 85. Deviation and approaches
to bridge over Mannus Creek 5M. from Tumbarumba.
Work is in progress under contract to Tumbarumba Shire Council on the construction of a deviation approximately 1.5 miles long to connect with the approaches to a new reinforced concrete bridge being constructed over Mannus Creek 5 miles from Tumbarumba towards Jingellic.

The deviation when completed will elimniate a section of existing road on poor alignment and steep grades.

Shire of Harwood. Main Road No. 152-Maclean to Yamba.
Reconstruction of Main Road No. 152 between 6.5 miles and 8.9 miles from Maclean is being carried out by Harwood Shire Council by contract. Earthworks were completed and broken stone base course is well in hand.

Shire of Wollondilly. Main Road No. 179. Reconstruction between Broughton Pass and Maldon.

This work, commenced in July, 1950, as a detour for the Hume Highway (Razorback Range section), was practically completed in June, 1952. It covers a distance of 10 miles, and comprises the widening of the pavement from 16 feet to 20 feet, construction of a base course of sandstone ballast and a surface course of bituminous penetration macadam, strengthening and major repairs to Allens Creek Bridge, and replacement or lengthening of twenty-eight culverts. It was carried out by the Department by day labour.
Shire of Rylstone. Main Road No. 215-Kandos to Trunk Road No. 55 at Ilford.
Reconstruction of sections of Main Road No. 215 is being carried out by Rylstone Shire Council. The length of road completed is 5.75 miles of which approximately 2 miles have been sealed. A further length of 2 miles is in hand at present, the work being carried out by Council under contract.

Shires of Kearsley and Lake Macquarie. Main Road No. 220.
Kearsley Shire Council continued work on the reconstruction of Main Road No. 220 with the ultimate objective of providing a bituminous surfaced road from the coalfields to Lake Macquarie. All work was completed from 5.23 miles from Cessnock (the end of the existing bituminous pavement) to 8 miles from Cessnock. Tar surfacing was completed between 10.25 miles and 16.65 miles from Cessnock, except for a short length at the approaches to Brunkerville Creek Bridge. Surfacing of the section from 5.23 miles to 8 miles from Cessnock will be completed at an early date.

Work in the Kearsley Shire is being carried out by day labour except for the spraying of tar which is being done by contract.

City of Newcastle. Main Road No. 223-Lambton Road, Broadmeadow. Reconstruction between Brown Road and Raspberry Gully.

Concurrently with the removal of the tram tracks from this road, the Newcastle City Council commenced the reconstruction of the old pavement which was only two lanes wide and in poor condition. A bituminous macadam pavement 33 feet wide is being constructed on a base course of slag, along the northern side of Lambton Road as a first stage in providing two 33 feet carriageways separated by a garden plot 10 feet wide.

Shire of Lachlan. Main Road No. 231-Girral-Lake Cargelligo.
Council has in hand the construction of two sections totalling approximately one mile between 44 miles and 46 miles from Wyalong. The work includes minor deviations and will eliminate delays to traffic now experienced during wet weather.
Shire of Wollondilly and Municipality of Camden. Main Road No. 259. Reconstruction between Camden and Burragorang Coal Mines.

Wollondilly Shire Council is undertaking this work by day labour. It consists of the reconstruction of bridges and culverts, strengthening and widening to 20 feet of the existing pavement in sandstone ballast, with a bituminous penetration surface course, over a length of 20 miles, and provision of passing places between the top of Burragorang Mountain and the Coal Mines at the foot of the mountain.

It is being financed by the Department, the Joint Coal Board, and the Wollondilly and Camden Councils.

It was commenced in December, 1950. By the end of June, 1952, approximately 4 miles of sandstone base course and bituminous surface course had been laid. In addition, 2 miles of existing pavement had been widened using sandstone ballast. Intensive maintenance has been carried out by Wollondilly Council over the whole length during the progress of the construction work.
Shire of Byron. Main Road No. 306. Reconstruction between Mullumbimby and Lismore.

This work comprises the strengthening of the pavement of Main Road No. 306 between 24.196 M . and 25.776 M . from Lismore by the addition of 3 inches of crushed gravel, widening to provide a 24 feet formation and 16 feet pavement and minor realignment. The formation and pavement work were completed, the pavement material used being a quartz gravel obtained from the roadside within the limits of the job and crushed to $11 / 2$ inch gauge.
Shire of Murrurundi. Main. Road No. 358. Construction between 17.75 M . and 18.50 M . from Willow Tree.

Council provided plant and labour from its day labour organisation to complete this deviation, thus by-passing a section of road previously unformed and which followed the bed of a creek for some distance. This work completes the forming of Main Road No. 358 for its full length in Murrurundi Shire.

## Shire of Coonabarabran. Main Road No. 396-Coonabarabran-Binna-

 way-Coolah. Extension of bitumen surfacing from Coolah Shire boundary to Coonabarabran.W ork is proceeding with the construction and surface treatment of the road from the boundary of Coolah Shire for 3.5 miles towards Coonabarabran. The construction of this length, including a length to be sealed in the township of Binnaway, is part of a progressive programme of improving and surfacing Main Road No. 396 with bitumen to provide an all-weather outlet from Coonabarabran through Coolah and Mudgee.

## Shire of Severn. Main Road No. 511—Gilen Innes to Grafton.

The construction of the abovementioned road, which is being carried out by the Department by day labour, was commenced before the war and re-commenced in 19+6. Between the end of 1947 and early in 1949 operations were again suspended so that the Department's organisation could undertake urgent work in forests in the Hastings River area. Since then the work has been continued, proceeding from west to east, and except for some final paving work it is now practically completed to 47 miles from Glen Innes. (Subsequent to 30th June, 1952, it became necessary to suspend operations on this work).

## Developmental Roads and Works.

In the reports for 1949-50 and 1950-51 reference was made to the slow progress on Developmental Road works because of adverse, weather, shortage of labour and the necessity for Councils to transfer men and equipment to the repair of flood damage after two very wet winters. The position improved somewhat during 1951-52 and better progress has been made with construction on Developmental Roads and Works.

The following are some of the works completed or in progress during the year:-

Shire of Tumut. Developmental Road No. 1038-Tumut-Micalong Road.

Council has completed by day labour the reconstruction of a length of 1.75 miles of this road commencing from Main Road No. 278 near Tumut. The reconstructed length has also been surfaced with bitumen as a scour prevention measure, portion of the length being subject to inundation by floodwaters from the Tumut River.

Shire of Patrick Plains. Developmental Road No. 1051-Belford to Rothbury.

The construction and gravelling of 4.75 miles of Developmental Road No. 1051 to provide access to the New England Highway for the farming community in the vicinity of Rothbury are being carried out by Council. A formation width of 18 ft . is being provided with a pavement width of 12 ft .

The work is now approximately half completed and is being carried out by day labour using pavement gravel supplied under contract.

Shire of Coonabarabran. Developmental Road No. 1112. Access road to Goolhi War Service Settlement Area.

A length of this Developmental Road from the Liverpool Plains Shire boundary to a point 8 miles westerly is now under construction, involving widening and gravelling by Council by day labour.

The work serves the Goolhi War Service Settlement Area. Council has completed a survey of a further six miles for the extension of this work to the southern boundary of the Settlement area to provide through access to Gunnedah and Coonabarabran.

Shire of Wakool. Developmental Road No. 1118-North Barham Road.
This road, four miles in length, connects the town of Barham with a highly developed irrigation area. The work, the first stage of which was completed by Council by day labour, comprises stabilisation of the clay subgrade with sandy loam. To obtain satisfactory mixing, the sandy loam is being added in two applications.

Shire of Bellingen. Developmental Roads Nos. 1134 and 1136-Flood Damage Restoration.

Continuation of the restoration of flood damage sustained in June, 1950, on the Bellingen-Kalang (Developmental Road No. 1136) and the Thora-Brinerville (Developmental Road No. 1134) roads is in progress. Council has repaired slips and scours and completed repairs to some bridges. These latter include on Developmental Road No. 1136 the repair and extension of two spans of Brownlee's Bridge at Lovell's Crossing and the extension of the bridge over Gillies Crossing by three spans and reconstruction of the approaches. On Developmental Road No. 1134, the reconstruction of the bridge over Joyce's Crossing is well in hand, whilst the survey has been completed for the construction of a new bridge and approaches at Lean's Crossing.

## Shire of Kyogle. Developmental Road No. 1141-Construction from

 Kyogle towards Ironpot Creek.Work is proceeding on the length from $13 \mathrm{M} .1,282 \mathrm{ft}$. to 15 M . $4,590 \mathrm{ft}$. The construction involves 17,700 cubic yards of earthworks, the provision of an 8-inch thick consolidated gravel pavement and four timber beam bridges. Earthworks are nearing completion, and all bridges are open to traffic. Construction was first commenced in August, 1949, on the length from 13M. 1,282 ft. to $14 \mathrm{M} .3,200 \mathrm{ft}$., but work was discontinued in 1950, so that Council could concentrate on flood damage restoration work. Construction was recommenced in late 1951.


Shire of Kyogle. D.R. 1141. Kyogle-Ironpot Creek Road. New timber beam bridge at 13 miles 1,600 feet from Kyogle.

Shire of Urana. Developmental Road No. 1152-Bridge over Billabong Creek at Rand.

The Council has commenced the construction under contract of a five-span reinforced concrete bridge 160 ft . long over Billabong Creek at Rand. This new high-level bridge will replace an old timber structure which is below flood level and nearing the end of its useful life.
Shire of Goobang. Developmental Road No. 1162.
Council completed the construction of a section 3.25 miles long westwards from Bulgandramine Bridge over the Bogan River at the boundary with Timbrebongie Shire. This work completed the construction of the road except for the improvement of some open crossings of watercourses.

Shire of Murray. Developmental Road No. 1172-Deniliquin-Tocumwal.
A further stage in the improvement of this road was reached by the forming, where necessary, and loaming, of a length of 3.3 miles between 18.7 miles and 22 miles from Deniliquin.

The work was done by Council by day labour with the exception of the supply and delivery of loam, which was done under contract to Council.
Shire of Ashford. Developmental Road No. 1193-Keetah Bridge to State Highway No. 16 at Camp Creek.

This Developmental Road is being constructed progressively from the western end. The first five miles have been completed and work by day labour by Council is now in progress from there for a further length of 9.6 miles. A flat country type of cross section is being adopted and an 8 -inch gravel pavement is being constructed. This Developmental Road serves a rich area of arable land along the banks of the Dumaresq River.

Shire of Colo. Developmental Road No. 1194 -Wright's Creek Road.
Further construction has been carried out under contract to Council and work has been extended to 4 miles north of Wiseman's Ferry.

Shire of Tenterfield. Developmental Road No. 1201-White Swamp Road. From Old Koreelah towards Queensland Border.

Road construction by Council by day labour on a length of 3 miles is now in hand progressively from State Highway No. 9 at Old Koreelah towards the Queensland border. The construction of this road will give access to good dairying and grazing lands and State Forests.

Shire of Eurobodalla. Developmental Road No. 1206-Batehaven to Wimbie Beach. Construction 0M. to 1.6 M .

This Developmental Road is an extension of Main Road No. 560 from the Prince's Highway at Bateman's Bay to Batehaven. It is unformed, and construction is in progress to provide a 24 feet formation with gravel pavement and the requisite drainage works.

The construction will open up new areas for settlement.

Shire of Macintyre. Developmental Road No. 1207-Access Road to King's Plains and Waterloo Soldiers' Settlements.

This road is a part of a road which leaves the Gwydir Highway about 10 miles east of Inverell, thence following the existing Woodstock Road for a distance of about 7 miles, and thence as Developmental Road No. 1207 traverses these Soldiers' Settlements, returning to the Gwydir Highway about 12 miles west of Glen Innes. Construction work has been commenced at the western end by contract with Council and is in progress for the full length in Macintyre Shire. When this section is completed there will be provided an all-weather pavement to either Glen Innes or Inverell.

Shire of Apsley. Developmental Road No. 1216-Construction of "Tops" Road for a length of 5.5 miles from the intersection with the Walcha-Nowendoc Road at 35M. from Walcha.

In April, 1952, work was commenced on construction of this road and by 30 th June, 1952, the first mile was completed except for gravelling. Clearing operations had also been started on the second mile and Council was producing plans for the remainder of the length with a view to early construction. The work is being undertaken by Council's day labour organisation and is being built generally to the Department's standard for a two-way feeder road in hilly country.

Shire of Tweed. Developmental Road No. 1217-Construction of first section of 2 miles between Pottsville and Hastings Point.

Work has been commenced by Council on the construction of the first section of Developmental Road No. 1,217 which follows the coast between Pottsville and Cudgen Creek, a total distance of approximately 7 miles. This road will give access to farms in the Round Mountain area and will also provide access to beaches between Tweed Heads and Byron Bay and will serve as an access road to sand-mining leases. The construction of the first section of 2 miles consists of the provision of a formation 24 feet wide and a pavement 16 feet wide of 8 inches consolidated thickness. Construction of Kulnura to Bucketty Road.

The road from Calga to Bucketty comprises Developmental Road No. 1,160 from Calga to Kulnura, an unclassified road from Kulnura to a point 10 miles north and a length of 2.5 miles classified as Developmental Work No. 3053. The construction of the latter section was commenced during the year by the Kearsley Shire Council by day labour.

The road construction being carried out will provide a formation width of 24 feet with a 16 feet gravel pavement.

Clearing, earthworks and drainage work are in progress, but pavement construction has not yet commenced.

## MAINTENANCE AND MINOR IMPROVEMENT WORKS.

## General.

Weather conditions during the year were generally more favourable than those experienced in recent years, although heavy flood rains occurred and caused damage in the southern and south-eastern districts. Bush fires damaged several timber structures and destroyed some miles of guide and fender posts.

The growth of traffic, particularly of heavy commercial vehicles, continues to cause heavy maintenance costs on some State Highways, because it has not yet been possible to strengthen pavements over the long lengths involved in order to carry the heavier traffic without damage. In most areas deterioration has been arrested by temporary measures, but the position will not be satisfactory until much more strengthening of pavements and improvements to drainage systems have been carried out.

Maintenance, in common with other operations, has been affected by steep increases in costs. As a result, programmes have had to be adjusted from time to time by reducing the amount of work to be undertaken.

## Bituminous Surface Treatment.

Bituminous surfacing work was carried out by both day labour and contract. Generally Councils arranged contracts for their own works, although in a number of cases the Department, at the request of Councils, carried out work on their behalf.

A total length of approximately 646 miles of road was treated with various types of bituminous surface, which is a substantial increase on the previous year's operations. This was possible because supplies of aggregate were more readily available. The arrears of earlier years have not been entirely overcome and some further improvement in aggregate supplies is required before this can be achieved. In some cases where sealed gravel pavements have had to be strengthened by gravel re-sheeting, a temporary light seal of tar or bitumen and sand has been applied until aggregate becomes available.

The Department has taken steps to encourage contractors to undertake crushing by calling tenders for bulk supplies for three to four years requirements. Two such contracts were arranged.

During the year a new system of distributing locally refined bitumen was commenced on trial, whereby hot bitumen is delivered by road to 1,000 -gallon heated roadside tanks provided by the suppliers of bitumen.

The following bituminous works were carried out during 1951-52:-

| Class of Work. | $\begin{gathered} \mathrm{By} \\ \text { Department. } \end{gathered}$ | $\underset{\text { By }}{\text { Councils. }}$ | Total. |
| :---: | :---: | :---: | :---: |
| State Highways- | Miles. | Miles. | Miles. |
| Bituminous surfacing, including seetions recon- <br> ditioned | $63 \cdot 46$ | 23.59 | 87.05 |
| Bituminous resurfacing ................................. | 190.23 | 36.88 | $227 \cdot 11$ |
| Roadmix resurfacing .................................... | $2 \cdot 72$ |  | 2.72 |
| Plant mix ............ | 18.77 | $0 \cdot 27$ | -19.04 |
| Other Main Roads- |  |  |  |
| Bituminous surfacing | 10.70 | $90 \cdot 85$ | 101.55 |
| Bituminous resurfacing | 44.73 | 141-63 | 186-36 |
| Roadinix resurfacing ... | $2-00$ | 0-46 | $2 \cdot 46$ |
| Plant mix ....... | 8.84 | 11.07 | 19.91 |
|  | Total (miles) |  | 646-20 |

## Roadside.

Little new tree planting has been carried out during the past year, emphasis being on the care and maintenance of trees previously planted. Experiments in lopping trees to eliminate pests and stimulate growth have been undertaken with encouraging results.

A considerable extension of rural and trunk telephone lines on roadsides has been occurring. In some instances undesirable destruction of roadside trees has occurred as a result, but frequent discussion with and representations to the authority concerned has resulted in roadside trees being preserved in many cases. There have been many extensions also of electricity power lines, but by co-operation with the authorities concerned, new lines have been so arranged that there has been very little disturbance of roadside trees on this account.

In some parts of the State, roadsides form the location for private telephone lines, and a number of these may exist side by side. These sometimes tend to be unsightly, and may be obstructive in the use of the roadside. The Department is therefore encouraging Councils to require co-operation between owners, in order to restrict, so far as possible, the erection of a series of parallel pole lines where one pole line could meet reasonable requirements.

Existing direction signs on the principal main roads are being carefully reviewed, and new or altered boards erected where necessary, in order to ensure that the best possible guidance is offered to road users.

## Shoulder Maintenance.

Drivers of large heavily-laden vehicles tend to keep as near as possible to the centre of the pavement. In consequence, drivers of approaching vehicles need more clearance and drive more frequently on to the shoulders. Thus the increasing use of heavy vehicles and the general growth of traffic lead to increased shoulder wear. As a result, the cost of maintaining shoulders in some cases has been high, and this will continue until pavements can be widened. Pavement widening is being done wherever practicable on heavily trafficked roads, especially where deteriorated pavements are being strengthened or reconditioned.


Pavement widening by construction of bituminous edge strips. Section on Hume Highway (S.H.2) between Cross Roads and Narellan. Municipality of Camden.

## Traffic Linemarking.

Existing traffic lines were maintained during the year and limited extensions were carried out. More use has been made by maintenance patrol gangs of hand-operated line markers, particularly at critical points such as sharp curves, crests and intersections, where the wear on lines is often greater than elsewhere.

## Snow Removal.

Snow falls in the Snowy Mountains district during the winter of 1951 were not unusual, but heavy falls occurred during May and June, 1952. The equipment engaged on this work in the Mt. KosciuskoKiandra area was augmented by the addition of a small tandem-drive grader.

During the year, an accommodation and depot building was completed by the Snowy Mountains Park Trust at Wilson's Valley, Mt. Kosciusko, for the use of the Department's employees. As a higher standard of construction was desired by the Snowy Mountains Park Trust than that usually adopted by the Department, the Trust paid the extra cost involved.

The accommodation includes garage for snow plough, store, and workmen's cooking, eating and sleeping accommodation; hot water supply and septic tank sanitation are provided.

The hut is erected at the point beyond which vehicular traffic is often unable to proceed under heavy snowfall conditions.

## Radio Communication.

A system of five mobile radio stations has been established in the South Coast Division with a base station at Cooma, primarily to facilitate control of snow removal operations. This organisation makes possible the rapid exchange of information of weather conditions between the maintenance gangs and the Divisional Office. As a result, gangs and equipment can be sent more quickly to critical points and their efficiency has been considerably increased. The worth of the system in facilitating traffic movement has been demonstrated.

## Mechanisation of Maintenance Works.

Several new small plant units have been introduced into maintenance gangs such as vibrating compactors for consolidating patches, paint sprayers, and small oil-fired bitumen heaters with pressure spray bar.


Paint spraying operations.


Vibrating tamper for compacting bituminous patches.


Manual line marker used for repairing traffic lines.


Tanks used for bitumen delivery and roadside heating. Provided by bitumen suppliers.

+ 27219— 3


Maintenance Depot building at Wilson's Valley on Mt. Kosciusko Road (M.R. 286). Shire of Snowy River.


Heavy-type protection fencing as installed at some sharp bends in Metropolitan area. View on Spit Hill (M.R. 164). Municipality of Mosman.


Special type warning sign as installed at approach to a steep grade followed by a sharp bend. Sign shown is at approach to subway at Picton. Hume Highway. (S.H.2.). Shire of Wollondilly.

## Gravel Pavements.

In many areas gravel of reasonable quality is becoming increasingly difficult to obtain. It has been necessary in some areas to reserve known sources of gravel suitable for sealing, thus increasing the difficulty of obtaining supplies for unsurfaced roads.

Where material suitable for surface treatment is not available, it is frequently necessary to blend materials from various sources.

## Depots.

Progress has been made in the establishment of maintenance depots at Yass, Bega and Glen Innes.

## WESTERN DIVISION.

During the first half of 1951-52 maintenance and construction operations in the more northerly parts of the Western Division were affected by dry conditions in contrast to the extremely wet and flood conditions which handicapped operations over much of the Western Division in the early part of the previous year. Restoration of the roads which had been damaged as a result of the floods was almost completed during the year and access to areas which had been isolated for long periods was restored. Later in the year, however, another major flood dislocated communications in the south-western areas to an even greater extent than previously. Considerable damage was done to the roads and normal maintenance activities had to be interrupted to restore access. The year closed with heavy flooding in the upper reaches of the Lachlan and Macquarie Rivers, and further heavy and serious floods have since occurred in the early part of 1952-53.

Labour turnover in the Western Division has again been considerable, particularly in the Broken Hill District, although towards the end of the year there appeared to be an easing, particularly with respect to specialist personnel. Barracks for the accommodation of field employees during week-ends have now been provided at Bourke and Wentworth in addition to those previously erected at Broken Hill, and these have contributed to the improvement that has taken place in retaining labour on work.

During the dry conditions prevailing in the north-western part of the State in the early part of the year, road surfaces in sandy country were adversely affected by wind erosion. Maintenance grading lost in efficiency because of the lack of moisture in the roads, but had to be continued to keep surfaces reasonably smooth, even though this contributed to some extent to further loss by wind erosion. Damage was done to roads in the southern part of the Division by vehicles being forced along earth formations when soft and wet after prolonged rain. The resulting ruts hold water and formations are further softened. Difficult travelling conditions thus continue over a much longer period than would otherwise be the case, and until plant is available to effect repairs. As soon as conditions permitted side tracks were prepared to provide smoother running surfaces than were available on the raised formations.

Because equipment and personnel had to be used for a considerable period in restoring flood damage, some of the improvement works programmed, such as construction of solid foundation causeways had to be deferred, but a number of such works were carried out on the main roads, and on unclassified roads to provide better access to Main roads.

The following is a summary of the principal improvement works completed or in progress during the year.

## Broken Hill District.

(a) State Highway No. 22, Broken Hill to Tibooburra. This project was the one most affected by labour shortages and very little work was carried out in the early part of the year. Operations were re-commenced at the close of the year.
(b) State Highway No. 8. Broken Hill to Cockburn. The reconstruction with a gravel pavement and provision of cement grouted causeways was completed from the City boundary to Stirling Vale Creek, a length of 2.5 miles.
(c) State Highway No. 8. Broken Hill to Wilcannia. The reconstruction of a length of three miles with a gravel pavement and smooth surfaced causeways was completed from the Broken Hill City boundary to the Flying Doctor Base. Aggregate has been stockpiled in readiness for bituminous surfacing to be carried out in 1952-53.


New bitumen surfaced pavement between Broken Hill and Silverton (T.R. 81).
(d) Trunk Road No. 81, Broken Hill to Silverton. The bituminous surfacing of the entire length to Silverton, together with a spur road to Penrose Park, was completed.
(e) Streets of Menindee, Trunk Road No. 66. The streets of Menindee for a total length of 1.25 miles were cement stabilised and provided with a bituminous surface, giving all-weather access throughout the town and to the railway station.


Cement stabilisation work in progress at Menindee, prior to bitumen surfacing (T.R. 66).

## Bourke District.

(a) Main Road No. 406, Paka Tank to Louth. The construction of this road continued and by the close of the year the raised formation together with culverts, causeways, motor grids and sand stabilisation of slippery sections had been substantially completed for 50 miles.
(b) State Highway No. 7, Bourke to Barringun. The portion of the highway through the town of Bourke was resurfaced with bitumen and the bitumen pavement was extended as far as the access road to the aerodrome at North Bourke.

## Wentworth District.

(a) Trunk Road No. 68, Wentworth towards Menindee. The construction of a raised formation was extended during the year and is now substantially completed from Wentworth to Pooncarie. Clearing operations were continued north of Pooncarie.
(b) State Highways Nos. 14 and 22. Euston to Wentworth. Reconstruction was carried out during the year from Buronga and work has now reached a point east of Bonnie Cliffs. Local materials are being blended in situ for the pavement and pulverising and road mixing equipment is being used. Bituminous surfacing over a length of some four miles between Mildura Bridge and Gol Gol has been completed and delivery of the aggregate has commenced for a continuation of this work on State Highway No. 14 from Gol Gol to Bonnie Cliffs and on a section of State Highway No. 22 between Dareton and Buronga.

## Cobar District.

(a) State Highway No. 8, Cobar to Wilcannia. The reconstruction between 56 miles and 63 miles west of Cobar of causeways and formation by day labour, and gravelling by contract, was commenced during the latter end of the year.
(b) Euabalong West-Tara-Gilgunnia Road. Work on the construction of this unclassified road which was commenced during 1949-50 was continued during the year and has resulted in the completion of some 32 miles.

## Hay District.

State Highway No. 8, Wilcannia towards Cobar, and State Highway No. 21, Wilcannia towards Ivanhoe. Both these highways, which were seriously damaged in the vicinity of the Talyawalka Creek bridges and within a radius of 50 miles from Wilcannia, have been substantially restored during the year.

## Depots.

Work was continued in the development of depots at Bourke, Wentworth and Broken Hill and a new depot site has been acquired at Cobar. Broken Hill depot is almost completed.

## BRIDGES.

During the year 29 new bridges were completed on the main roads system as compared with 32 in 1950-51. The slight reduction of the number of finished works was not owing to any lessening of the Department's bridge building activities, but is attributable partly to the fact that there has been more concentration on the completion of major structures during the past year, and partly to the need to carry out during the year several special bridge works. These included the construction of a temporary low-level bridge at Lismore, the widening and addition of a footway to a concrete bridge over American Creek on the Prince's Highway, Wollongong, and the addition of two spans to a timber beam bridge on Developmental Road No. 1136 (Kalang Road), in the Shire of Bellingen.

The total number of bridges on main roads closed to traffic owing to deterioration or flood damage was 46 at the 30th June, 1952, as compared with 40 at the 30th June, 1951. Similarly, the total of bridges on which loads are restricted has risen from 97 to 114 at the 30th June, 1952. The increase is the result of the lag in the rate of bridge construction during the past ten years, coupled with the continued incidence of heavy vehicle loads which have accelerated the rate of deterioration of timber structures in some cases.

Of the new bridges completed during the year, 13 were built by the Department by day labour and eight by Councils by day labour; seven were built by contract, of which four were of timber. In addition, an overbridge was constructed by the Department of Railways.

## Principal Works Completed During the Year.

Shire of Cudgegong: Main Road No. 216.
Reinforced concrete bridge over Meroo Creek. Length 164 feet. Built by day labour by the Department.
Shire of Boorowa: Main Road No. 241.
Reinforced concrete bridge over Pudman's Creek. Length 64 feet. Built by day labour by the Department.

## Shire of Mulwaree: State Highway No. 2: Hume Highway.

Reinforced concrete bridge over Run O'Waters Creek (Barker's Bridge) at 138.2 miles from Sydney. Length 160 feet. Built by day labour by the Department.
Shire of Severn: State Highway No. 12: Gwydir Highway.
Reinforced concrete bridge over Wellingrove Creek. Length 192 feet. Built by day labour by the Department.

Shire of Orara: State Highway No. 10: Pacific Highway.
Reinforced concrete bridge over Bom Bom Creek and culvert in one approach. Total length 150 feet. Built by day labour by the Department.


New reinforced concrete bridge over Bom Bom Creek on the Pacific Highway (S.H. 10). Shire of Orara.

Shire of Guyra: Trunk Road No. 73.
Reinforced concrete bridge over Sandy Creek. Length 156 feet. Built by contract for the Department.

Shire of Muswellbrook: State Highway No. 9; New England Highway.
Steel girder and reinforced concrete overbridge at Antiene. Built by day labour by Railways Department.

## Works in Progress During the Year but Not Completed.

Shire of Lower Hunter: State Highway No. 10: Pacific Highway.
Steel and concrete bridge over the Hunter River at Hexham. Originally undertaken by contract, this work is being completed by the Department by day labour, and at the end of the financial year ten approach spans and three truss spans were in position. A large organisation has been concentrated on this work with a view to expediting completion.


Steel and reinforced concrete bridge over Hunter River at Hexham on the Pacific Highway (S.H. 10). Shire of Lower Hunter. Floating Span No. 5 into position.

Steel and concrete bridge over Clyde River at Bateman's Bay. Originally undertaken by contract, the Department is completing this work by day labour and further progress has been made on the construction of the substructure.

Shire of Lake Macquarie: State Highway No. 10: Pacific Highway.
Steel and concrete bridge over Lake Macquarie at Swansea. Fabrication of the steelwork was completed during the year by M.A.N., Augsberg, Germany, and portion has been received at the bridge site. Construction of the piers and abutments was commenced by the Department by day labour.

Municipalities of Mosman and Manly: Main Road No. 164.
New steel and concrete bridge over Middle Harbour at The Spit. Work was commenced by the Contractors, the Cleveland Bridge and Engineering Company of Great Britain.

Municipalities of Drummoyne and Leichhardt: Main Road No. 165: Victoria Road.

Steel and concrete bridge over Iron Cove. The construction of the piers and abutments was completed in 1949-50. During the year 1951-52 the balance of the steel required was received by the Contractor and fabrication has been commenced.

Municipality of Kempsey: State Highway No. 10: Pacific Highway.
Bridge over the Macleay River at Kempsey. No further progress was made during the year in connection with the provision of the four new steel truss spans owing to the continued shortage of steel, but there appears to be some prospect of steel shortly being available.

Shire of Eurobodalla: State Highway No. 1: Prince's Highway.
Steel and concrete bridge over Tuross River at Bodalla. No supplies of structural steel were made during the year and consequently the Contractor for the piers, abutments and steelwork erection, Hornibrook, McKenzie, Clark Pty. Ltd., has not commenced operations.

Shire of Shoalhaven: State Highway No. 1: Prince's Highway.
Reinforced concrete bridge over Broughton Mill Creek at Berry. Length 240 feet. Being built by day labour by the Department.

## Shire of Kyeamba: State Highway No. 2: Hume Highway.

Reinforced concrete bridge over Tarcutta Creek. Length 280 feet. Originally commenced by contract, and being completed by day labour by the Department.

## Principal New Works Commenced During the Year.

Municipality of Mudgee: Main Road No. 215.
Holyoake Bridge over Cudgegong River. Length 193 feet. Being built in reinforced concrete by Department by day labour. A temporary "Bailey" by-pass bridge has been constructed for carrying traffic.

Shire of Baulkham Hills: Main Road No. 184.
Reinforced concrete bridge over Caddie's Creek. Length 66 feet. Being built by day labour by the Department.

Shire of Patrick Plains.
Steel and concrete bridge over Cockfighter's Creek (Warkworth). Length 582 feet. Being built by day labour by the Department.

Shire of Murrurundi: State Highway No. 9: New England Highway.
Steel and concrete bridge over Page's River at Blandford. Length 160 feet. Being built by day labour by the Department.

## Shire of Mulwaree: State Highway No. 2: Hume Highway.

Reinforced concrete bridge over Run O'Waters Creek at 134.6 miles from Sydney. Length 123 feet. Being built by day labour by the Department.

## SUPPLY OF MATERIAL, PLANT AND EQUIPMENT.

There was some improvement in the supply of timber, overseas steel and spare parts for machinery during the year. The supply of cement also improved slightly.

The improvement in the supply of spare parts for equipment has resulted in more expeditious plant repair. However, it is still necessary to manufacture and rebuild some parts at the Department's Central Workshop. Grader blades and nuts and bolts have been purchased overseas, thus reducing the amount of costly manufacture of these items.

Local timber has been more readily available, although well seasoned and good quality timber is still in short supply.

Steel for road signs is still not available and the substitution of waterproof plywood for warning signs is being continued.

The improvement in supply of cement has been mainly due to imports received from England and Japan. These, together with local supplies, have enabled the continuation of essential works where concrete is used.

New plant has been received at a greater rate than in previous years. The larger plant items received include 7 heavy and 15 light crawler tractors, 5 heavy and 16 light motor graders, 20 heavy road rollers, 20 tractor mounted loaders, 3 medium excavators, a bituminous pavement finishing machine and bituminous mixing plant.

A powered trench roller, for compacting materials laid in pavement widening work, has been purchased from overseas.

The Department's workshop produced 6,800 road signs during the year, an increase of approximately 10 per cent. on the production of the previous year.

## PLANT MAINTENANCE.

The receipt of a number of new plant items during the year made possible the replacement of older equipment requiring major overhaul. This, together with the improved position regarding spare parts, greatly aided the field repair of working units. Reduced turnover of labour has also had an effect in reducing the extent of repairs necessary, because it has resulted in the average length of experience of plant operators being greater than in recent years when it was necessary to employ relatively inexperienced men in some cases.

To increase the efficiency of reconditioning plant parts such as tractor track rollers and plates, etc., a machine has been developed at the Department's Central Workshop, Granville, which is used in conjunction with a shielded are semi-automatic welding unit, for the automatic welding of such components (see illustration, page 43).


Mechanical loading of aggregate for bitumen surfacing work.


Spreading and tamping machine for bituminous pre-mixed materials.


Trench roller used for pavement widening work.


Building up worn track roller of crawler tractor by automatic welding at Department's Central Plant Workshop.

The effective tradesman man hours available for plant overhaul at the Central Workshop was reduced somewhat by the necessity to fit locking devices, safety canopies and guards, etc., to the new equipment received before being placed in service. This, together with the relatively large number of machines returned from the field for major overhaul, made it necessary to increase the quantity of work placed with private firms under contract, supervised by Departmental inspectors.

The preparation and issue of the illustrated service charts to assist operators has continued; most plant owned by the Department is now covered by an improved type of chart.

During the year, 160 major plant repairs have been carried out at Central Workshop, including 30 tractors, 12 graders, 5 excavators, 17 air compressors, 27 motor vehicles and 4 road rollers. A total of 1,350 minor repairs was also carried out.

Other work of a major nature put in hand comprised the rebuilding and refitting of three large steel vehicular ferry vessels. Two of the vessels have been completed by the Department's field forces and one being undertaken by contract is nearing completion.


Machining flywheel housing of large crawler tractor on a six-feet face plate lathe at Department's Central Plant Workshop.

## RESEARCH.

The investigation into the liability of local rocks to stripping of bitumen coating in the presence of water was continued, further aggregates from various parts of the State being tested.

A question having arisen regarding the comparative effects of single axles and tandem axles on road pavements, a model was constructed which clearly demonstrated the effects of the two types of loading on pressure intensity on the subgrade below a concrete pavement.

## TESTING OF MATERIALS.

The Testing Laboratory at Newcastle was nearing completion by the end of the year, and a Laboratory in conjunction with the new Divisional Office was under construction at Deniliquin. With the completion of these two Laboratories, seven of the Department's nine country Divisions will have their own Divisional Office Laboratories. As a result of the progress now made in decentralisation of testing, the volume of routine testing conducted in Divisional and Local Office Laboratories exceeds that conducted in Head Office Laboratory, the approximate figures for the past year being:-

Number of samples for routine control tested-
(a) In Head Office Laboratory .. .. .. .. 3,700
(b) In other Laboratories .. .. .. .. 8,500

The growth in volume of testing work, necessitated by the demonstrated need to exercise more rigorous control over materials used on main roads, has resulted in some expansion in the staff engaged on materials work. This expansion could only be very limited until the field laboratories were established, because of the insufficient size of the Head Office Laboratory to accommodate the required staff and equipment. The additional facilities now available in the country have made it possible for the Department to engage a number of graduates in geology or soil science, who have been, or will be, attached, after some special training in Head Office Laboratory, to the various Divisions. These officers will be responsible for the materials, survey and sampling of exisiting roads and road subgrades, for the location and sampling of materials for pavement construction, and for local testing operations. The results being obtained from the expanded materials
organisation have been most encouraging. Arrears of work are being rapidly overtaken, extra assistance is being given to Councils, and a closer control of materials used is being exercised.

Tenders were called for the construction of a new Head Office Laboratory building to be constructed under the northern approach to the Sydney Harbour Bridge, Ennis Road, North Sydney, the existing Laboratory in the basement of Head Office building being now inadequate. The new premises will have more extensive accommodation, better lighting and ventilation and have been specially designed for the Department's testing work.

During the year the following additional equipment was installed in the Head Office Laboratory :-

A Hveem stabilometer, for testing the stability of bituminous mixes.
A Laboratory centrifuge.
Apparatus for the mechanical analysis of soils by the pipette method.
Vibratory screens for preparation of large aggregate samples to the grading desired; and
Mechanical apparatus for Proctor compaction test.

## TEST OF RUBBER IN BITUMEN.

On the 5th November, 1951, the Department laid lengths of asphaltic concrete and of bituminous resurfacing using bitumen in which crumb rubber ("Mealorub'") had been incorporated, at a site on the Prince's Highway between Barwon Park Road and Canal Road, St. Peters. The rubber was incorporated into the bitumen in a partly dissolved state in quantity equivalent to 5 per cent. of the bitumen content for asphaltic concrete, and 2 per cent. for the bituminous resurfacing. Control lengths of similar surface were also laid without rubber. Representatives of the British Rubber Development Board acted as technical advisers on the use of the rubber admixture.

Insufficient time has elapsed to draw conclusions regarding wearing qualities.

## SECTION III-TOLL BRIDGES.

## SYDNEY HARBOUR BRIDGE.

## Financial Position.

The complete accounts relating to the Bridge for the year 1951-52 are set out in Appendix No. 4, but the result of the year's operations may be summarised as follows:-

Income from 1st July, 1951, to 30th June, 1952 .. £751,551
Expenditure from 1st July, 1951, to 30th June, 1952460,211
Excess of income over expenditure for the year
1951-52 .. .. .. .. .. .. £291,340
The above result may be compared with that of the previous four years from the following table:-

| Item. | 1947-48. | 1948-49. | 1949-50. | 1950-51. | 1951-52. | Total since Bridge was opened on 19th March, 1932. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Iveon | £ | £ | £ | £ | £ | £ |
| Road Tolls on Passengers and Vehicles | 352,488 | 380,795 | 438,898 | 526,309 | 582,764 | 5,490,685 |
| Railway Passengers' Tolls | 130,460 | 132,662 | 130,729 | 129,678 | 127,952 | 2,212,749 |
| Tramway and Omnibus Passengers' Tolls | 26,380 | 26,996 | 27,394 | 27,273 | 27,318 | 688,497 |
| Rents | 9,453 | 11,247 | 12,768 | 13,509 | 13,429 | 176,165 |
| Councils' Contributions | 14 | 9 | ... | 9 | 2 | 734,404 |
| Other Income | 334 | 93 | 147 | 244 | 86 | 1,790 |
| Total Income ........................... $£$ | 519,129 | 551,802 | 609,936 | 697,022 | 751,551 | 9,304,290 |
| Expenditure. |  |  |  |  |  |  |
| Loan Charges- |  |  |  |  |  |  |
| Interest | 256,512 | 245,974 | 241,957 | 232,085 | 221,400 | 5,772,586 |
| Exchange. | 30,701 | 26,752 | 26,172 | 24,964 | 21,755 | 782,565 |
| Sinking Fund | 66,272 | 67,887 | 68,949 | 67,372 | 66,477 | 1,029,092 |
| Management Expenses | 1,144 | 1,331 | 1,932 | 1,562 | 1,520 | 43,368 |
| Total Loan Charges | 354,629 | 341,944 | 339,010 | 325,983 | 311,152 | 7,627,611 |
| Maintenance and Improvement of Structure and Surroundings, including Lighting and Cleaning | 43,005 | 56,392 | 70,691 | 60,086 | 81,349 | 745,761 |
| Alterations to Approach Archways for Occupation by Tenants $\qquad$ | 13,134 | 10,083 | 3,243 | 351 | 231 | 73,461 |
| Cost of Collecting Road Tolls | 20,778 | 24,535 | 30,430 | 43,562 | 55,109 | 322,403 |
| Construction of Toll Barriers and Toll Office | ... |  | 22,097 | 4,260 | 214 | 26,571 |
| Provision of Traffic Facilities |  | 126 | 162 | 1,315 | 8,552 | 10,155 |
| Other Expenditure | 2,286 | 1,954 | 2,676 | 5,186 | 3,604 | 102,157 |
| Total Expenditure ........................... $£$ | 433,832 | 435,034 | 468,309 | 440,743 | 460,211 | 8,908,119 |
| Surplus for the year ........................................ | 85,297 | 116,768 | 141,627 | 256,279 | 291,340 | ... |

The proportions of the several items of income and expenditure for the year 1951-52 are shown by the following diagram:-


Receipts and payments connected with the operation of the Bridge are dealt with in the Sydney Harbour Bridge Account as provided for in Section 7 of the Sydney Harbour Bridge (Administration) Act, 1932. The surplus of $£ 291,340$ on operations during 1951-52 was added to an accumulated net surplus of $£ 104,831$ in the Sydney Harbour Bridge Account in respect of operations during previous years, making a total of $£ 396,171$. Of this amount, $£ 375,000$ was transferred on 30 th June, 1952, from the Sydney Harbour Bridge Account to a Sydney Harbour Bridge Reserve Account established at the State Treasury in pursuance of Section 9 of the Sydney Harbour Bridge (Administration) Act, 1932, leaving a balance of £21,171 in the Sydney Harbour Bridge Account at the end of the financial year 1951-52. The Colonial Treasurer has approved of amounts held in the Sydney Harbour Bridge Reserve Account being credited with interest at the Treasury "average rate'".

## Capital Cost.

The capital cost of the Sydney Harbour Bridge to 30th June, 1952, and the sources of finance were as follows :-


Resumed properties still on hand are valued at $£ 260,000$, and upon their disposal the proceeds will be credited to the capital expenditure shown above. The loan funds amounting to $£ 8,049,374$ used for the construction of the Bridge are being repaid by the sinking fund method, and the net liability outstanding at 30th June, 1952, was £6,912,772.

## Traffic.

15,993000
Road vehicles totalling 16,082,000, including approximately 434,000 omnibuses, crossed the Bridge during 1951-52, while the number of the various classes of travellers and the proportion of revenue provided by each class were as follows:-



## Maintenance.

Painting.-Approximately 76.2 per cent. of the total area of the metal work has now been repainted since the war. The total superficial area of the portions painted during the present cycle is 475,260 square yards ( 99 acres). The repaint involves the thorough cleansing of the whole of the surface treated and patch-painting with a rust inhibitorred lead primer those areas where the protective coats have deteriorated. Two coats are then applied to the whole surface representing a total coverage of 198 acres.

The abovementioned area does not include the interior surface of the upper and lower chords ( 39,580 square yards per coat) or the stringer girders $(64,080$ square yards per coat) carrying train and tram traffic. The paint work on interior surfaces applied during the first repaint in 1935-40 is still in excellent condition, mainly as a result of effective caulking applied in 1938 to exclude moisture.

During the year approximately 5 per cent. of the painting strength has been employed on the painting of traffic signs, road markers, lamp posts, etc. Approximately 80 per cent. of the painting staff was engaged for a period of two months on the application of white paint to the roadway parapets over a total length of $1-2 / 3$ miles in anticipation of the Royal visit, subsequently postponed. Concurrently with the general repainting, approximately 20 per cent. of the painting strength has been employed throughout the year on patch-painting those areas where it is necessary to arrest corrosion before the general painting gangs reach such locations.

An electrically driven air compressor plant has been installed on the main span travelling gantry for the purpose of spray painting a considerable area of heavily riveted surfaces located in confined spaces between the extremities of the hangers supporting the deck and end boxes of the main cross girders. These locations are inaccessible to ordinary methods of painting.

Investigations and tests of paint materials were continued during the year with a view to improving the effectiveness of paints used as priming and covering coats.

All paint required during the year for steel bridges maintained by the Department throughout the State, including the Sydney Harbour Bridge, was prepared in the mixing plant located in the south pylon.

Steelwork.-Caulking of lower chords on approach spans with metallic lead was continued at locations where the caulking compound initially used had allowed moisture to penetrate crevices and pockets.

Approximately 400 feet of the steel roadway parapets were realigned on the southern approaches where vibration from rail traffic had caused settlement of the concrete footings.

16,960 feet of the 3-inch diameter pipe railing on the roadway and footway parapets were removed and replaced for the purpose of arresting internal corrosion of the pipes. The pipe railing was secured by spot welding where loosening had occurred as the result of vibration. Approximately 25 per cent. of this work remains to be done.

The 14 -inch diameter pins and pin-holes in the cross girder/ hanger connections on the main span were cleaned and reconditioned.

The bulkhead plates at the extremeties of footway spans were removed in certain locations to arrest corrosion under the pavement.

Other work completed during the year included: Securing of the wire mesh screens loosened by vibration. These screens prevent detached brake shoes from trains and other objects falling through the deck of the Bridge into the harbour and park areas. The fabrication and erection of five steel frames for holding signs which are raised and lowered during peak traffic periods. The inspection of riveted connections subject to loosening by vibration.

Miscellaneous Maintenance Work.-Work was continued on repairs to the concrete footway slabs on the northern and southern approaches to the western footway, where vibration from rail traffic had caused the underlying filling to subside.

Repairs were also carried out to the concrete rendering on retaining walls of the approaches and the grouting of shrinkage cracks.

Sixteen chain hoists supporting the travelling gantries beneath the approach spans were overhauled, together with all mechanical parts from the four cranes on the arch, eleven travelling gantries beneath deck level, and all plant and mechanical equipment in the workshop, paint-mixing room and elsewhere on the structure.

The lubrication of sliding surfaces and the measurement of the movement of the expansion bearings on the main and approach spans were continued during the year.

A lathe of modern design and a rod and pipe screwing machine were installed in the workshop, to facilitate the production of the many parts required for repair jobs connected with various phases of the maintenance work.

Traffic Aids.-In order to increase the traffic capacity of the carriageway of the bridge at peak periods, adjustments were made so that four of the six lanes on the bridge are used by city-bound traffic at the morning peak, and four lanes by outward traffic at the evening peak.


New traffic islands at southern approach to Sydney Harbour Bridge.
†27219-4

Traffic aids installed for this purpose, and generally to facilitate traffic movement, include the following: The original central double yellow continuous stripe has been replaced by a continuous red stripe 9 inches wide over the bridge structure and immediate approaches. Eight large notice boards have been erected, four on the main span portals and two at each end of the northern and southern approaches. These signs have been erected for the guidance of drivers in conformity with the Police Traffic Regulations. Reflecting studs have been inserted in the red centre and the two adjacent yellow traffic lines at intervals of 24 feet. Numerous flexible markers constructed of rubber conveyor belting have been provided for placing along the line dividing the two directions of traffic movement.

Traffic islands have been constructed at the extremity of the southern approach at the intersection of York and Clarence Streets with the roadway over the bridge, for the guidance of traffic and for greater safety.

Road Pavement.-The work carried out during the year mainly comprised the smoothing out of undulations in the asphalt road surface between the former site of the toll barriers and the southern abutment, which was put in hand during the previous year and has now been completed. A new surface of fine asphaltic concrete was also laid on this section of roadway. A new asphaltic concrete surface was applied to a large area at the northern extremity of Bradfield Highway, including the turnouts into Lavender Street, Alfred Street, McDougall Street and Ennis Road.

Footways.-Repairs to the western footway were undertaken following the removal of the large gas-main installed on the footway during the war.

The gas-main was removed during June, 1951, and the footway re-opened to the public on 20th September, 1951.

## PEAT'S FERRY BRIDGE.

## Financial Position.

The total cost of the Peat’s Ferry Bridge was $£ 491,506$, of which $£ 101,717$ was met from the revenues of the County of Cumberland and Country Main Roads Funds, and the balance of $£ 389,789$ was met from Loan Funds advances by the State Government. These loan moneys are required to be repaid, together with interest, from the proceeds of toll charges.

The Bridge was opened to traffic during the first half of 1945. The following statement shows the financial position during each of the past five years and as at 30th June, 1952 :-

| Item. | 1947-48. | 1948-49. | 1949-50. | 1950-51. | 1951-52. | Total since Bridge was opened on 5th May, 1945. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receipts from Tolls | $\stackrel{£}{41,104}$ | $\stackrel{£}{46,259}$ | $\stackrel{£}{62,361}$ | $\stackrel{£}{78,528}$ | $\stackrel{£}{96,774}$ | $\stackrel{\underset{389,751}{£}}{\substack{\text { n }}}$ |
| Payments- | 4,388 | 4,409 | *11,590 | *9,711 | *8,593 | 47,341 |
| Interest on Loan ....... | 12,536 | 12,016 | 10,751 | 8,684 | 6,286 | 78,966 |
| Management Expenses of Loan | ... | 60 | 85 | 69 | 57 | 271 |
| Total .............................. $£$ | 16,924 | 16,485 | 22,426 | 18,464 | 14,936 | 126,578 |
| Revenue Surplus | 24,180 | 29,774 | 39,935 | 60,064 | 81,838 | 263,173 |
| Accumulated Revenue Surplus | 23,597 | 38,643 | 63,330 | 60,545 60,500 | 81,883 81,000 |  |
| Repayment of Loan ... | 14,728 | 15,248 | 62,849 | 60,500 | 81,000 | 262,290 |
| Net Surplus ............................................... | 8,869 347,097 | 23,395 331,849 | 481 269,000 | 45 208,500 | 883 127,500 | 883 |
| Outstanding Loan Liability at end of year................. | 347,097 | 331,849 | 269,000 | 208,500 | 127,500 | ... |

* Includes $£ 5,807, £ 2,916$ and $£ 121$ for the provision of additional toll lanes during 1949-50, 1950-51 and 1951-52 respectively.

Due to the growth of traffic using the Bridge, toll revenue during 1951-52 showed an increase of 23 per cent. over that of the previous year. The surplus funds available after meeting the cost of toll collection and of interest and loan expenses were used to the extent of $£ 81,000$ in reduction of the loan liability which stood at $£ 127,500$ at 30th June, 1952.

Traffic.-The following statement shows the number of tollpaying vehicles which crossed the Bridge in various years since 1st June, 1945 :

| Type of Vehicle. | 1945-46. | 1946-47. | $1949-50$ | 1950-51. | 1951-52. | Percentage Increases, |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{gathered} 1951-52 \\ \text { over } \\ 1950-51 . \end{gathered}$ | $\begin{gathered} 1951-52 \\ \text { over } \\ 1945-46 . \end{gathered}$ |
| Light Vehicles (Motor Cycles, Cars and Utilities) | 262,447 | 421,615 | 639,677 | 814,776 | 987,648 | per cent. $21$ | per cent. $276$ |
| Lorries up to 3-tons tare ......................... | 21,062 | 47,233 | 73,125 | 85,163 | 85,061 |  | 304 |
| Vehicles exceeding 3-tons tare | 5,902 | 23,746 | 48,294 | 72,613 | 95,391 | 31 | 1,516 |
| Total All Vehicles ................ $£$ | 289,411 | 492,594 | 761,096 | 972,552 | 1,168,100 | 20 | 304 |

The above figures disclose a considerable increase of traffic. Total traffic grew by 20 per cent. in 1951-52 compared with the previous year, while it was more than four times greater in 1951-52 than in 1945-46. The outstanding feature, however, is the rapid rise in the use of heavy vehicles exceeding 3 tons tare weight; these showed an increase of 31 per cent. during 1951-52 compared with 1950-51, and the number of vehicles of this type using the Bridge in 1951-52 was more than sixteen times greater than in 1945-46.

## SECTION IV.-MISCELLANEOUS. <br> REGULATION OF WEIGHT OF LOADS ON MAIN ROADS.

The Department's activities in connection with the regulation of weight of loads carried by vehicles using main roads was referred to in the last annual report.

The administration of Ordinance 30 c under the Local Government Act, 1919, which prescribes maximum axle loads and loaded weights respectively, was continued during the year.

In order to assist hauliers to conform to the load limitations prescribed, the Department issues vehicle loading assessments on application, 2,992 of such assessments being issued during the year.

Special permits numbering 779 were issued for carrying loads in excess of the Ordinance limitations covering the transport of indivisible loads, such as large plant items. The need to provide for movement of such loads is resulting in the development of suitable multiple axled vehicles and equipment.

During the year, 795 prosecutions for breaches of Ordinance 30 c were instituted, and a total of $£ 13,181$ awarded in fines and costs.

## INSTRUCTION ON PLANT MAINTENANCE AND OPERATION.

During the year, two instructors were engaged full time conducting courses of field instruction on the care, maintenance and operation of plant. A third instructor was trained during the year to specialise on instruction to operators of mobile loaders, the Department's fleet of these items having been considerably augmented during the past two years.

Ahe As in previous years, instructors travel from job to job giving instruction to new operators or operators of new types of plant, and following up the instruction previously given to the more experienced plant operators. Operators were instructed on all types of plant items used by the Department.

Instruction was given to a total of 352 Departmental employees engaged at the following centres :-

Brookvale, Narrabeen, Prestons, Kiama, Bowenfels, Windsor, Gosford, Port Macquarie, Moorland, Singleton, Coff's Harbour, Grafton, Glen Innes, Sandy Flat, Gibraltar Range, Murrurundi, Bendemeer, Carcoar, Cobar, Yass, Tumblong, Bateman's Bay, Cobargo, Bega, Wagga Wagga, Wentworth, Pooncarie, Euston, Milparinka, Wilcannia, Tocumwal, Broken Hill, and Menindee.

The main groups of trainees were tractor operators (66), grader operators (62), mobile loader operators (42), compressor drivers (31), and lorry drivers (23).

Two employees of Severn Shire Council and one from Wentworth Municipal Council were included in courses of instruction given to Departmental operators.

## EMPLOYMENT AND INDUSTRIAL.

The number of wages employees engaged on maintenance and construction of Main and Developmental Roads at 30th June, 1952, was 6,140 . Of this number, 3,236 were employed on day labour works by the Department, 82 on contracts, while 2,822 were employed by Municipal and Shire Councils on works wholly or partially financed by the Department.


Prefabricated home unit being transported over the Blue Mountains on the Great Western Highway. (S.H.5.),


Heavy haulage crossing the Moonbi Range on the New England Highway. (S.H.9).


Entrance to Department of Main Roads Exhibit at Construction Industries Fair, 1952.

During the first half of the year there was a shortage of labour in the skilled trades such as fitters and painters. The availability of funds influenced the position during the second half of the year, as a result of which there were no vacancies for labour at 30th June.

Eight new Awards have been made during the year, which related to employees of the Department, while in addition 33 Awards or Agreements affecting employees of the Department were varied, and in six other cases negotiations are proceeding for new Awards or Agreements. The new Awards are:-

Metal Trades (Federal) Award.
Painters (State) Award.
Plasterers (State) Award.
Stonemasons (State) Award.
Surveyors, Field Hands Award.
Carpenters and Joiners and Bricklayers (Construction) Award.
Carters and Motor Waggon Drivers' (State) Award.
Professional Engineers (State Instrumentalities) Award.
The Department's works have been free of industrial stoppages during the year.

## RAILWAY LEVEL CROSSINGS.

During the year, further joint inspections were made of level crossings on main roads by representatives of the Department of Main Roads and the Department of Railways, including the Newcastle-Maitland coalfield area and the Broken Hill area. In these two cases, inspections covered all road-rail level crossings irrespective of whether the railways were Government or privately owned.

## EXHIBITS.

The Department displayed an exhibit at a Construction Industries Fair which was held in Sydney from the 8th to the 15th April, 1952. A marquee housed examples of plant parts manufactured at the Department's Central Workshop; manual and charts relating to field service and repair of plant; a model of road centre-line marking; a model illustrating traffic arrangements at the southern approach to the Sydney Harbour Bridge; coloured illuminated photographs showing the development of roads and bridges, changes in vehicles and road-building equipment, developmental roads serving country areas and safety furnishings and works on main roads; and a road map and a display of the Journal, Main Roads. Outside the marquee special road equipment consisting of a travelling workshop, a caravan and a line-marking machine were on display.

As a measure of assistance to the Road Safety Council of New South Wales in its safety campaign, the Department made a window in its Head Office building available for a period of four months to display literature and photographs.

A display board illustrating road warning signs, prepared by the Department, was included in exhibitions conducted in country centres by the Road Safety Council of New South Wales.

An exhibit prepared by the Department was included in an exhibition which formed part of a Local Government Week conducted by the Council of the City of Maitland in association with the Local Government and Shires Associations of New South Wales, in June, 1952. The Department's exhibit comprised a board on which were displayed a series of photographs illustrating the development of vehicles and road-building equipment during the past 30 years.

## PUBLICATIONS.

The publication of the Department's quarterly journal, Main Roads, was continued throughout the year. In addition to its value as a means of circulating information regarding Councils' and Department's activities, the development of road-making practices and general technical and financial information relating to roads and bridges, the Journal has become a means to record the history of road development in New South Wales.

The demand by the public for information of a general nature concerning roads was met during the year by the publication of brochures entitled Main Roads of New South Wales and How a Road is Built. A similar demand for information regarding the Sydney Harbour Bridge was met by the production of a brochure describing the construction of the Bridge, its maintenance and the toll-collecting operations and financial arrangements.

Two manuals were issued for the instruction and guidance of the Department's staff and for use by the officers of the Municipal and Shire Councils. One deals with the carrying out of surveys and designs for Main Road works, and the other with inspection, sampling and testing of materials used for road construction.

## HOUSING FOR STAFF.

There. is still a need to provide homes for married officers stationed in country towns, and to meet this the Department acquired six cottages during the year, viz., two at Wagga Wagga and one each at Glen Innes, Woodburn, Port Macquarie and Newcastle. All are occupied.

## CONFERENCE OF STATE ROAD AUTHORITIES.

The State Road Authorities of Australia hold a conference each year to consider matters of common interest, to supply each other with information as to road developments within their respective States and to secure, as far as is practicable, uniform procedure throughout the Commonwealth in many features of road and bridge construction technique and administration.

This conference is supported by meetings of technical officers as required.

The Fourteenth Conference of State Road Authorities was held in Melbourne, Victoria, in November, 1951, when, among other matters, decisions were reached or actions were advanced covering signposting of roads and preparation or amendment of standard specifications for road and bridge works. Action to implement the decisions reached will be taken by the various States in co-operation.

## VISITORS FROM OVERSEAS.

By arrangement with the Commonwealth authorities five road engineers from overseas were attached to the Department for periods during the year. Mr. B. C. Naik, Public Works Department, State of Indore, India; Mr. Y. K. Lall, Public Works Department, State of Bikar, India; Mr. V. V. Ayyar, Public Works Department, Travancore-Cochin State, India; and Mr. P. K. Vibhakar, Saurastra, India, studied road construction and maintenance methods. Mr. A. Ferrer, Bureau of Public Works, Manila, Philippines, studied engineering and administrative technique both in office and field.

## ARMY SUPPLEMENTARY RESERVE UNIT.

Reference was made in the last Annual Report to the formation of a supplementary Army Engineer Unit, on an active reserve basis, known as the 21st Construction Regiment, and to the holding of the first camp at Middle Head, Sydney, in April, 1951.

The second camp of the Regiment was held at North Head, Sydney; in April-May, 1952.

The Department of Main Roads was responsible for the raising of the Headquarters, one complete construction squadron and a platoon squadron less two troops. The Department of Public Works, and the Metropolitan Water, Sewerage and Drainage Board, were each responsible for the raising of a construction squadron and a troop of the plant squadron.

Municipal and Shire employees are also enlisted in the Regiment and are attached to the squadrons formed by the Department of Main Roads.

The Snowy Mountains Hydro-Electric Authority organised a construction squadron which was placed under the command of the 21st Construction Regiment during the camp held in 1952.

## ACKNOWLEDGMENTS.

In concluding this review of the activities of the Department for the financial year ended 30 th June, 1952, I desire to express appreciation of the continued loyal and able assistance given by officers and employees of the Department.

To the Minister for Transport, Main Roads Organisations in other States of the Commonwealth, other State and Commonwealth Departments and Corporate Bodies and their staffs, Executive Committees of the Local Government and Shires Associations, and Municipal and Shire Councils and their officers, the Department extends thanks for uniform courtesy, co-operation and assistance.

> (Sgd.) H. M. SHERRARD, Deputy-Commissioner for Main Roads.

3rd November, 1952.

## SECTION V—APPENDICES.

## Appendix No. 1.

## COUNTY OF CUMBERLAND MAIN ROADS FUND.

Statement of Receipts and Payments for the Yrar ended 30th June, 1952.
A.--Maintenance and Miscellaneous.


* For details see Appendix No. 10.


## B.-Construction



- For details see Appendix No 7.


## H. M. SHERRARD,

Deputy Commissioner for Main Roads.
J. A. FARLEY,

Accountant.

The books and accounts of the Department of Main Roads have been examined and audited for the year ended 30th June, 1952, in accordance with the provlsions of the Audit Act, 1902-45.

The above statement, in my opinion, is a correct record of the receipts and payments of the Conaty of cumberland Main Roads Fund during the year ended 30 th June, 1952 .
W. J. CAMPBELL,

Sydney, 27th October, 1952.

## Appendix No. 2.

COUNTRY MAIN ROADS FUND.
Statement of Receipts and Payments for the Year ended 30th June, 1952.
A.-Maintenance and Miscellaneous.


- For detalls gee Appendix No. 11.

* For details see Appendix No. 8.


## H. M. SHERRARD,

Deputy Commissioner for Main Roads.
The books and accounts of the Department of Main Roads have been examined and audited for the year ended 30th June, 1952, in accordance with the provisions of the Audit Act, 1902-45.

The above statement, in my opinion, is a correct record of the receiprs and payments of the Country Main hoads fund during the year ended 30th June, 1952.
W. J. CAMPBELL,

Sydney, 27th October, 1952.
Auditor General of New South Wales.

Appendix No. 3.
DEVELOPMENTAL ROADS FUND.
Statement of Receipts and Payments for the Year ended 30th June, 1952.


## H. M. SHERRARD,

Deputy Commissioner for Main Roads.

## J. A. FARLEY,

Accountant

The books and accounts of the Department of Main Roads have been examined and audited for the year ended 30th June, 1952, in accordance with the provisions of the Audit Act, 1902-45.
The above statement, in my opinion, is a correct record of the receipts and payments of the Developmental Roads Fund during the year ended
30th June, 1952 . 30th June, 1952
Sydney, 27th October, 1952.
W. J. CAMPBELL,
Auditor General of New South Wales.

Appendix No. 4.
SYDNEY HARBOUR BRIDGE ACCOUNT.
(Section 7 (1) of the Sydney Harbour Bridge' (Administration) Act, No. 32, 1932.)
Income and Expenditure Account for the Year ended 30th June, 1952.


Appendix No. 4-continued.
SYDNEY HARBOUR BRIDGE ACCOUNT.
Balance Sheet as at 30th June, 1952.


## STYDNEY HARBOUR BRIDGE RESERVE ACCOUNT.

(Section 9 of the Sydney Harbour Bridge Account (Administration) Act, No. 32, 1932).
Income and Expenditure Account for the Year ended 30th June, 1952.

H. M. SHERRARD

Deputy Commissioner for Main Roads.
J. A. FARLEY Accountant.

The books and accounts of the Department of Main Roads in relation to the Sydney Harbour Bridge have been examined and audlted for the year ended 30 th June, 1951, in accordance with the provisions of the Audit Act, 1902-45.

This balance sheet, in my opinion, correctly sets out the financial position of the Sydney Harbour Bridge as at 30th June, 1952, according to the best of my information and the explanations given to me, and as shown by such books and accounts.
Sydney, 27th October, 1952.
W. J. CAMPBELL,
Auditor General of New South Wales.

Appendix No. 4A. SYDNEY HARBOUR BRIDGE.

Statement of Capital.

*Includes the cost of properties resumed in connection with the construction of the Bridge. Resumed propertles still on hand are valued at $£ 260,350$ and upon their disposal the proceeds will be credited to the Capital Expenditure.

## Appendix No. 5.

Aggregate Statement of Income and Expenditure from the Inception of the Main Roads Board, ist January, 1925, to 30th June, 1941, and of Cash Receipts and Paỳments from 1st July, 1941 , to 30 th June, 1952.

County of Cumberland Main Roads Fund.


- Includes interest and principal repald to the Treasury on account of loan money advanced towards the cost of construction of the Peat's Ferry Bridge.


## Appendix No. 5-continued.

Aggregate Statement of Income and Expenditure from the inception of the Main Roads Board, 1st January, 1925, to 30th June, 1941, and of Cash Receipts and Payments from 1st July, 1941, to 30th June, 1952-continued.

Country Main Roads Fund.


## Appendix No. 5-continued.

Aggregate Statement of Income and Expenditure from the inception of the Main Roads Board, 1st January, 1925, to 30th June, 1941, and of Cash Receipts and Payments from 1st July, 1941, to 30th June, 1952-continued.

Developmental Roads Fund.


## Appendix No. 5-continued.

Aggregate Statement of Income and Expenditure from the inception of the Main Roads Board, 1st January, 1925, to 30th June, 1941, and of Cash Receipts and Payments from 1st July, 1941, to 30th June, 1952-continued.

Total all Road Funds.

| Heading. | Income and: Cash Receipts, | Cash Receipts. |  |  |  |  |  |  | 'Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ( ${ }_{\text {1st Jan., 1925, }}^{\text {to }}$, | 1945-46, | 1946-47. | 1947-48. | 1949, ${ }_{\text {\% }}$ | 1940-50. | 1950-51. | 1951-52. |  |
| (a) Revenue- <br> Motor Taxation and Fees (State) | $\stackrel{£}{31,990,764}$ | $\underset{2,024,847}{\frac{1}{4}}$ | $\begin{gathered} £ \\ 2,081,870 \\ \mid 1,310,459 \end{gathered}$ | $\underset{\substack{\mathfrak{f} \\ 2,266,351 \\ 1,851,324 \\ 2000}}{ }$ | $\underset{\substack{£ \\ 1,518,423,815 \\ 907500}}{ }$ | $\left\|\begin{array}{c} £ \\ 2,74,617 \\ 1,747,469 \end{array}\right\|$ | $\underset{\substack{3,586,260}}{2,5597,447}$ | $\begin{gathered} f \\ 5,046,392 \\ 2,869,566 \end{gathered}$ | $\underset{52,257,624}{£}$ |
| Commonwealth Government (Petrol Tax) | 13,232,692 | $\begin{array}{r} 2,024,947 \\ 873,425 \end{array}$ |  |  |  |  |  |  | 25,909,197 |
| Councils' contributions ...................... | 5,680,208 | $\begin{aligned} & 873,425 \\ & 222,097 \end{aligned}$ | 244,043 | $\begin{aligned} & 1,851,324 \\ & 249,674 \end{aligned}$ | $1,438,815$ | $\begin{array}{r} 1,777,469 \\ 285,478 \end{array}$ | 325,983350,000 | $\begin{aligned} & 396,766 \\ & 300,000 \end{aligned}$ | $\begin{aligned} & 7,644,847 \\ & 1,279,915 \\ & 1,284,650 \end{aligned}$ |
| Consolidated Revenue (State) | 819,915 | ...... |  | ..... | 10,000 | ….. |  |  |  |
| Unemployed Relief Grants (State) | 1,284,650 | 13,398 | 5 | ..... |  | ...... | ...... | ...... |  |
| Grants by State Government and Instrumentalities for Sundry Works | 26,270 |  |  | 53,095 | 63,177 |  | 1,937. | ...... | 159,472 |
| Contributions by other Departments and Bodies | 169,914 | 3,833 | 5,882 | ...... | - 118 | 12,540 | 24,533 | 58,545 | 275,374 |
| Hite of Department's Plant and Motor Vehicles | 740,651 | $\begin{gathered} 131,389 \\ 124,858 \\ \ldots \ldots . \end{gathered}$ |  |  |  |  | $\begin{aligned} & 393,224 \chi \\ & 149,679 \end{aligned}$ | $\begin{aligned} & 479,048 \\ & 171,562 \end{aligned}$ | $\begin{array}{r} 2,858,752 \\ 2,357,640 \\ 178,588 \end{array}$ |
| Miscellaneous | 1,410,309 |  | $\begin{array}{r} 191,400 X \\ 132,528 \\ 2,694 \end{array}$ | $\begin{array}{r} 269,018 \\ 107,570 \\ 3,574 \end{array}$ | $\begin{array}{r} 314,006 x \\ 111,719 \\ 0.7 \end{array}$ | - $\begin{gathered}340,016 \times \\ 149,415 \\ 1,080 \times\end{gathered}$ |  |  |  |
| Suspense Accounts | 108,414 |  |  |  | 62,826 |  | ...... | ..... |  |
| Transfer on Joan from County of Cumberland Main Roads Fund under provisions of Section 2, Main Roads (Finances Adjustment) Act, 1949 | $\ldots$ |  | $\ldots$ | $\ldots$ |  |  |  | ...... | 500,000 |
|  | 55,263,787 |  |  |  | $\ldots$ | 500,000) | ...... |  | 94,706,059 |
| ent (Fu | 200,000 |  | ...... |  | ...... | ...... |  |  | 200,000 |
| Total ............................... i | 55,063,787 | 3,393,947 | 3,973,111 | 4,800,606 | 4,752,682 | 5,807,884 | 7,392,063 | 0,321,879 | 04,508,059 |
| (b) Loans- <br> State Government for- |  |  | $400,000-1$$\therefore \cdots \cdots$ | $300,000-1$ |  |  | 215,000 | 225,000$\ldots .$. | $\begin{array}{r} 7,141,078 \\ 2,565,322 \\ 1,46,388 \\ 693,613 \end{array}$ |
| Ordinary Loan Works | 5,701,078 |  |  |  |  |  |  |  |  |
| Unemployed Kelief Works :................ | 2,565,322 |  |  |  |  |  |  |  |  |
| Strategic Road Works | 1,416,238 |  |  |  |  |  |  |  |  |
| Loans by Councils ... | 693,613 |  |  |  |  |  |  |  |  |
| Total ................................. $\mathfrak{x}$ | 10,376,251 | 300,000 | 400,000 | 300,000 | $\ldots$ | $\ldots$ | 215,000 | 225,000 | 11,816,251 |
| (c) Moneys provided by Commonwealth Government for the purpose of carrying out【special works. | 8,119,405 | 77,337 | 26,127 | 38,633 | 55,365 | 142,031 | 138,140 | 204,122 | 8,700,160 |
| Grand Total ..................... £ | 73,559,443 | 3,771,284 | 4,399,238 | 5,139,239 | 4,808,047 | 5,950,015 | 7,743,203 | 9,751,001 | -115,121,470 |
| Heading. | $\left\|\begin{array}{c}\text { Expenditure } \\ \text { and } \\ \text { Cash } \\ \text { Payments. } \\ \text { 1st Jan., 1925, } \\ \text { to } \\ \text { 30th June, 1945. }\end{array}\right\|$ | Cash Payments. |  |  |  |  |  |  | Tota ${ }^{\text {a }}$ |
|  |  | 1945-46. | 1946-47. | 1047-48. | 1948-49. | 1949-50. | 1950-51. | 1951-52. |  |
| Maintenance and Minor Improvement- |  |  |  |  | $\begin{array}{r} £ \\ 2,371,632 \\ 19 \end{array}$ | $\stackrel{£}{2,856,508}$ | $\stackrel{{ }_{3}, 787,059}{£}$ | $\underset{4,921,350}{£}$ | $\begin{array}{r} £ \\ 44,417,305 \\ 665,078 \end{array}$ |
| (a) Roads and Bridges within N.S.W. | 23,963,253 | 1,811,500 | $2,222,637$ | $2,483,366$ |  |  |  |  |  |
| (b) Roads and Bridges outside N.S.W. | 694,729. | (Dr.) 29,638 | (Dr.)2,189 | 2,157 |  |  | , |  |  |
| (c) Works other than roads and bridges within N.S.W. | 80,143 | 22,935. | 2,725 | 2,284 | 7,139 | 5,641 | $\ldots$ | $\ldots$ | 120,867 |
| (d) Works other than roads and bridges outside N.S.W. | 6,388 |  |  |  |  |  |  |  |  |
| Construction and Reconstruction- <br> (f) Roads and Bridges within N.S.W. <br> (b) Roads and Bridges outside N.S.W. <br> (c) Works other than roads and bridges within N.S.W. <br> (d) Works other than roads and bridges outside N.S.W. | 24,744,513 | 1,804,797 | 2,223,173 | 2,487,807 | 2,378,790 | 2,862,149 | 3,787,059 | 4,921,350 | 45,209,638 |
|  |  | $\begin{array}{r} 561,185 \\ (D r .) 4,449 \end{array}$ | 1,082,087 | 1,402,546 ${ }^{75}$ | $\begin{aligned} & 1,851,985 \\ & (D r .) \end{aligned}$ | 2,303,637 | 2,276,055 | 3,625,036$\ldots \ldots$. |  |
|  | $30,574,360$ $2,666,021$ |  |  |  |  |  |  |  | $\begin{array}{r} 43,676,891 \\ 2,662,209 \end{array}$ |
|  | 2,885,347 | 151,282 | 4,158 | 11,008 | 4,448 | 1,993 |  |  | 3,058,236 |
|  | 1,027,203 | 46,197 | 75,939 | $\left(D_{r}\right) \quad 84$ |  |  |  |  | 1,149,255 |
| Total ................................ £ | 37,152,931 | 754,215 | 1,162,822 | 1,413,545 | 1,856,357 | 2,305,630 | 2,276,055 | 3,625,036 | 50,546,591 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest Ixchange and Management Expenses | $2,900,669$ 327,673 | $\begin{array}{r} 48,637 \\ \mathbf{1 3 3 , 3 5 1} \\ 18,778 \\ 48,858 \end{array}$ | 49,657143,147 18,64750,310 | $\begin{array}{r} 726,935 \\ 122,166 \\ 15958 \\ 4,9509 \end{array}$ | $\begin{array}{r} 31,717 \\ 114,510 \\ 12,454 \\ 6,980 \end{array}$ |  |  |  |  |
| Sinking Fund .............................. | 456,709 |  |  |  |  |  |  |  |  |
| Total ................................. £ | 6,378,424 | 249,624 | 261,761 | 914,568 | 222,661 | 162,756 | 146,577 | 151,073 | 8,487,444 |
| Repairs and Expenses in respect of Plant and Motor Vehicles | 422,967 | $\begin{array}{r} 124,819 \\ 29,078 \\ 138,079 \\ \mathbf{4} 5,1989 \end{array}$ | 138,538 268,581 ${ }^{*}+37,177$ | 122,077148,059185,179$\mathbf{* 4 0 , 1 7 0}$ | $$ | 220,007292,0842469226$\mathbf{* 9 9 , 1 0 0}$ | $\begin{aligned} & 253,405 \\ & 435,885 \\ & 27,820 \\ & =99,62,181 \end{aligned}$ | 367,940 816,649 348,652$* 139,341$ | $\begin{array}{r} 1,839,757 \\ 2,738,615 \\ 3,308,116 \\ 744,866 \end{array}$ |
| Purchase of Assets | 406,741 |  |  |  |  |  |  |  |  |
| Administrative Expenses | 1,718,309 |  |  |  |  |  |  |  |  |
| Miscelaneous .......... | 247,095 |  |  |  |  |  |  |  |  |
| Transfer on loan to Country Main Roads Fund under provisions of Clause 2 of Main Roads (Finances Adjustment) Act, 1949 Suspense Accounts | 181,119 |  | ..... | 108,359 | $\cdots{ }^{\cdots}$ | $\begin{array}{r} 500,000 \\ 19,538 \end{array}$ | 98,259 | 92,528 | $\begin{aligned} & 500,000 \\ & 567,627 \end{aligned}$ |
| Graud Total .................... £ | 71,252,090 | 3,477,243 | 4,263,042 | 5,419,764 | 4,999,404 | 6,707,490 | 7,374,043 | 10,462,569 | 113,955,654 |

* Includes interest and principal repaid to the Treasury on account of loan money advanced towards the cost of construction of the Peat's Ferry Bridge.

Appendix No. 6.
Summary of Loan Liabilities-Main and Developmental Roads Fund.

|  | County of Cumberland Main Roads Fund. | Country Main Roads Fund. |  |  | Developmental Roads Fund. | Total, All Funds. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| l'articulars. | Section 13 (4A, 4 B and 4 c ) of the Main Roads Act, 1924-1951Treasury. | Section 21 (3, <br> 3A and 3B) of Main Roads Act, <br> 1924-1951Treasury. | Transfer as <br> Temporary Loan from County of Cumberland Main Roads Fund under the provisions of Clause 2 of Main Roads (Finances Adjustment) Act, 1949. | Total. | Section 29 (4) of Main Roads Act, 1924-1051Treasury. |  |
| Gross Liability Assumed- <br> Prior to 1st July, 1951 <br> During 1951-1952 | $£$ $1,805,116$ | $£$ $5,087,652$ 225,000 | £ 500,000 | $£ 5$ $5,587,652$ 225,000 | $\begin{gathered} £ \\ 1,724,519 \\ \ldots \ldots \end{gathered}$ | $\begin{gathered} £ \\ 9,117,287 \\ 225,000 \end{gathered}$ |
| Total to 30th June, 1952 .................... | 1,805,116 | 5,312,652 | 500,000 | ¢, 812,652 | 1,724,519 | 9,342,287 |
| Repayment of Pringipal and Sinking Fund <br> Contributions- <br> Prior to 1st July, 1951- <br> By Department <br> " Commonwealth Government under Financial Agreement and Federal Aid Roads and Works Agreement | $\begin{array}{r} 1,597,487 \\ 118,103 \end{array}$ | $\begin{aligned} & 996,459 \\ & 470,325 \end{aligned}$ | $\ldots$ | 996,459 <br> .470,325 | $\begin{aligned} & 23,501 \\ & 92,522 \end{aligned}$ | $2,617,447$ 680,950 |
| Total prior to 1st July, 1951 .............. | 1,715,590 | 1,466,784 | ...... | 1,466,784 | 116,023 | 3,298,397 |
|  | 34,781 | $\begin{array}{r} 73,637 \\ 8,609 \end{array}$ | $\ldots$ | $\begin{array}{r} 73,637 \\ 8,609 \end{array}$ | $4,225$ | $\begin{array}{r} 108,418 \\ 12,834 \end{array}$ |
| Total during 1951-1952 ................... | 34,781 | 82,246 | $\ldots$ | 82,246 | 4,225 | 121,252 |
| Total to 30th June, 1952- <br> By Department Commonwealth Government und.............................. <br> "Commonwealth Government under Roads and Works Agreement | $\begin{array}{r} 1,632,268 \\ 118,103 \end{array}$ | $1,070,096$ 478,934 | ... | $\begin{gathered} 1,070,096 \\ 478,934 \end{gathered}$ | $\begin{aligned} & 23,501 \\ & 96,747 \end{aligned}$ | $\begin{gathered} 2,725,865 \\ 693,784 \end{gathered}$ |
| Total to 30th June, 1952 .................... | 1,750,371 | 1,549,030 | ...... | 1.549,030 | 120,248 | 3.419.649 |
| Net Liablity at 30th June, 1952 ................... | 54,745 | 3,763,622 | - 500,000 | 4,263,622 | 1,604,271 | 5,922.633 |

Appendix No. 7.
COUNTY OF CUMBERLAND MAIN ROADS FUND.
Summary of Expenditure on Construction and Reconstruction Works.


Appendix No. 7-continued.
County of Cumberland Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.


Appendix No. 7-continued
County of Cumberland Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued


Appendix No. 7-continued.
County of Cumberland Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.


Appendix No. 7-continued
County of Cumberland Main Roads Fund-continued
Summary of Expenditure on Construction and Reconstruction Works-continued.


Appendix No. 7-continued.
County of Cumberland Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.

Sumary.


## Appendix No. 8.

## COUNTRY MAIN ROADS FUND.

! Summary of Expenditure on Construction and Reconstruction Works.
(A) Central and Eastern Divisions of the State.

(A) Central and Eastern Divisions of the State-continued.


Country Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.
(A) Central and Eastern Divisions of the State-continued.


## Appendix No. 8-continued.

Country Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.
(A) Central and Eastern Divisions of the State-continued.


## Appendix No. 8-continued.

Country Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.
(A) Central and Eastern Divisions of the State-continued.


## Appendix No. 8-continued.

Country Main Roads Fund-continued
Summary of Expenditure on Construction and Reconstruction Works-continued.
(A) Central and Eastern Divisions of the State-continued

| Cily, Municipal or Shire Ares. | $\xrightarrow{\text { Road }}$ No. | Location of Work. | Class of Construction. | Constructing Authority. | Expenditure from Department's Funds. |  |  | Works Completed. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | To 30-6-51. | 1951-52. | $\text { to } \begin{aligned} & \text { Total } \\ & 30-6-52 . \end{aligned}$ | Length. | Total Cost (including any contributions y Councils). |
|  |  |  |  |  | \& s.d. | £ s.d. 1 | \& s.d. | M. ft. | £ s. d. |
|  | trunk and ordinary main roads. |  |  |  |  |  |  |  |  |
| Bellingen |  |  | Widening and restoration of mountain slips Earthworks and gravelling | Council.............. do don | ......... |  |  | $\ldots$ | …....... |
| Blaxland |  |  | Concrete culvert |  | 11,60017,35811 |  | $5,0000^{0} 0$ | 04230 | 11,669 212 |
| Do | 55 55 | Cox's River at Lididaje | Approaches to bridge |  |  |  |  |  |  |
| Do | ${ }_{55}$ | Lidsdale to Ben Bullen ... | - ${ }^{\text {concengthenting for coal traffe }}$ | Department Council | $\cdots 982{ }^{-1}$ | $\begin{array}{r} 921 \\ 1,711 \\ 1,700 \\ \hline 271 \\ \hline 0 \end{array}$ | $\begin{array}{r}18,279 \\ 18 \\ 1 \\ 1 \\ \hline\end{array}$ |  | 1,880.16 |
| Bogan | ${ }_{3}{ }^{46}$ | Culvert 5 m . from Nyngan | Concrete culvert and approaches | $\begin{gathered} \text { do } \\ \text { department .................................... } \end{gathered}$ |  |  | 1,263 17 20 | 01496 |  |
| $\begin{array}{cc} \text { Boorrowa } \\ \text { Do }_{0} & \ldots \end{array}$ | $\begin{array}{r}56 \\ \hline 241\end{array}$ | $\underset{\text { Brorowa River }}{\text { Pudman Creek }}$.......... | Concrete bridge <br> do |  |  |  | 20,037 13,382 13 13 |  |  |
| $\xrightarrow{\text { Do }}$ | ${ }_{241}$ | ${ }_{\text {do }}$ | Approaches to briage. | Council ............ |  |  | 1,936 13 | 01201 | $2,582{ }^{2} 4$ |
| co | ${ }^{237}$ | $20 \mathrm{mb} 3,377 \mathrm{ft}$ to to $200 \mathrm{~m} .4,512 \mathrm{ft}$. from Orange | Concrete calvert and approaches | do |  | (Cr.) 56186 | $\begin{array}{rrr} 819 & 5 & 9 \\ 886 & 9 \\ 850 & 8 \end{array}$ | ( | 1,22818 |
| Burrangoug | ${ }^{238}$ |  | Earthworks, gravelling and culverts | do |  |  |  |  | 1,26940 |
| Do | 78 | Young Municipal Boundary to Demondrille Shire | do do do do |  | 8,71500 | $\left\|\begin{array}{rrr} 5,500 & 0 & 0 \\ 133 & 12 & 2 \\ 3,500 & 0 & 0 \end{array}\right\|$ |  | $31340$ | $11,871181$ |
| Do | 78 241 | 2.6 m. to 5.9 m. south of Young <br> Willawong Creek at Murringo | Bituminous surfacing ............................. |  |  | (12,659 ${ }^{16} 180$ | $\begin{array}{rrrr}3,500 \\ 12.659 & \mathbf{0} & \mathbf{0} \\ 10\end{array}$ |  |  |
| Byron | ${ }_{306}^{241}$ | ${ }_{24} \cdot 196 \mathrm{~m}$. to 25.776 m . from Lismore | Reconditioning and bituminous surfacing | Department ...... |  |  | 12,659 1610 |  | ........... <br> *.......... |
| Canobolas Do | ${ }_{61}^{61}$ |  | Strengthening and bituminous surfacing., Reconstruction of timber bridge | do ${ }_{\text {do }}$ |  | 9,000 ${ }_{500}^{0} 0$ | $\begin{array}{cccc}11,600 & 11 & 5 \\ 1,100 & 0 & 0\end{array}$ | ......... | $\ldots$ |
| coolamon | 387 | $5 \mathrm{~m} .3,700 \mathrm{ft}$. $\mathrm{to} 8 \mathrm{~m} .1,833 \mathrm{ft}$. east of Beckom. | Reconstruction of timber bridge ...... |  |  |  |  | 23513 | $2,225{ }^{2} 8$ |
| $\underset{\substack{\text { Coonabarabran } \\ \text { Do }}}{\text { co }}$ | ${ }_{3}^{334}$ |  | Timber bridge and spproaches.. | do ........... |  | ( | 652 0 0 <br> 3,562 0 0 <br> 1,200 0 0 |  |  |
| Do ${ }_{\text {Do }}$ | ${ }_{398}^{398}$ | 21 m. $2,112 \mathrm{ft.to} 22 \mathrm{~m} .528 \mathrm{ft}$. from Coonabarabran | Bituminous surfacing do ${ }^{-}$do | do $\begin{aligned} & \text { do } \\ & \text { do } \\ & \text { co............ }\end{aligned}$ |  |  |  | …...... |  |
| Copmanhurst | 150 and | Grafton to Copmanhurst and Grafton to Lawrence... | Reconstruction and bituminous suffacing |  |  |  |  |  |  |
| n | 131 | 12.6 m . to 25.65 m . and 20.2 m . to 28.25 m . from | Strengthening and gravelling | do .............. | 1,440 004 | 58215148 | 2,002157 | ......... | ... |
| Crookwell | 201 | viilage of Binda | Reconstruction and bituminous surfac |  |  |  |  |  |  |
| Cudgegong | ${ }_{216}^{216}$ | Meroo Creel do | Concrete bridge |  |  | (1,000 |  | ........... | …....... |
| Culcairn | 57 | From Lockhart Shire Boundary southerly for 5 milies | Approaches to brige | councrdododo |  |  |  | .......... | ........ |
| Demondrile | 57 78 | Major's Creek -................... | Concrete culvert and approaches Strengthening and bituminous suffacing. |  |  | ( ${ }^{8,203} 15$ | 6,949 <br> 8,874 <br> 12 18 | ........ | ....... |
| Do | 387 387 387 |  | Earthworks and gravelling .a......... |  |  | - $\begin{array}{r}1,782 \\ \hline 1150\end{array}$ | 1,7820 0 |  |  |
| Denillquin | ${ }_{388}^{388}$ |  | Gravelling and bituminous surfac Timber bridge and approaches... | Council do |  |  |  |  | …....... |
| Dorrigo | $\underset{\substack{\text { National } \\ \text { Work. }}}{\substack{\text { EXA }}}$ 76 | Orara River Bridge......... | Restoration of flood damage | Department |  |  |  |  |  |
| Dorrigo and Nymboida |  | Bellingen Shire Boundary to Dorrigo and Dorrigo to $10 \mathrm{~mm} .1,957 \mathrm{ft}$. towards Ebor. <br> Currowan Creek | Reconstruction and bituminous surfacing ......... | docouncil ............. | 96,949 $\quad 510$ | $\begin{array}{llll}31 & 5 & 1\end{array}$ | 96,880 1011 | ........ | ....... |
| Eurobodall | $\begin{aligned} & 51 \\ & 77 \\ & 77 \\ & 61 \\ & 61 \\ & 61 \end{aligned}$ |  | Construction of deviation Control of stormwater Graveling and bituminous surfacing do Concrete causeway |  | $\begin{array}{lll} 1,000 & 0 & 0 \\ 2,000 & 0 & 0 \\ 8,500 & 0 & 0 \end{array}$........... |  | $\begin{array}{lll} 6,608 & 7 & 3 \\ 2,000 & 0 & 0 \\ 1,350 & 0 & 0 \end{array}$ | 62640 <br> …........ |  |
| $\begin{aligned} & \text { Gilgandara } \\ & \text { Do } \end{aligned}$ |  | 19 m . from Gilgandra <br> 2 m . to $5 \mathrm{~m} .1,100 \mathrm{ft}$. from Gilgandra <br> $16 \mathrm{~m} .1,188 \mathrm{ft}$. to $22 \mathrm{~m} .3,828 \mathrm{ft}$. from Manildra $28 \mathrm{~m} .3,600 \mathrm{ft}$. to $31 \mathrm{~m} .3,600 \mathrm{ft}$. from Manildra Gunningbland Creek at Carlachy |  | Council. ............dodododododo......................... |  |  |  |  |  |
| Goobang |  |  |  |  |  |  |  |  |  |
| Do |  |  |  |  |  |  |  |  |  |

Appendix No. 8-continued.
Country Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued
(A) Central and Eastern Divisions of the State-continued.

(A) Central and Eastern Divisions of the State-continued.

| City, Municipal or Shire Area. | $\begin{array}{\|c\|} \text { Road } \\ \text {-or Work } \\ \text { N-Namen } \end{array}$ |  | Class of Construction. | Constructing | Expenditure from Department's Funds. |  |  | Works Completed. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Location of Work. |  |  | To 30-6-51 | 1951-52. | $\begin{aligned} & \text { Total } \\ & \text { to } 30-6-52 . \end{aligned}$ | Length. | Total Cost (including any contributions by Councils). |
|  |  |  | trink and ordinary main roads-continued. |  | \& s. | \& s. d. | £ s. d. ${ }^{\text {l }}$ | M. ft. | £ s. d. |
| Patrick Plains <br> Do | ${ }^{181}$ Ex | Whittingham to Broke <br> Cockfighter Creek | Gravelling and culverts <br> Temporary low level bridge | $\begin{aligned} & \text { Council ............. } \\ & \text { Department ..... } \end{aligned}$ | $\begin{array}{lll} 1,237 & 2 & 10 \\ 6,346 & 15 & 5 \end{array}\left\|\begin{array}{llll} (C r) & 1,237 \\ 1,683 & 2 & 2 & 7 \\ \hline \end{array}\right\|$ |  | 8,029 is 0 | ......... | ........... |
| Do |  | Cunningham's Creek ${ }^{\text {do }}$................................................. | Concrete and steel bridge <br> Concrete bridge | do $\begin{aligned} & \text { do } \\ & \text { do } \\ & \text { do }\end{aligned}$ | (1) | $\begin{array}{ccc} 17,181 & 8 & 5 \\ 7,855 & 4 & 9 \\ 16,134 & 10 & 9 \end{array}$ | $\left.\begin{array}{lll} 17,101 & 8 & 5 \\ 14,534 & 1 & 7 \\ 17,228 & 11 & 7 \end{array} \right\rvert\,$ | $\ldots . . . . .$. | $\stackrel{\text { …...... }}{ }$ |
| Rylistone ${ }_{\text {Do }}$ |  |  |  |  |  |  |  |  |  |
|  |  | Shire Boundary. | Reconditioning and bituminous surfacing .......... |  |  |  |  |  |  |
| Do |  | $10 \mathrm{mm} 2,$. , $600 \mathrm{ft}$. to $12 \mathrm{~m} .2,400 \mathrm{ft}$. from Rylst | Earthworks, gravelling and culverts |  | ......... | $3,654 \quad 7 \quad 2$ | 3,654 7 2 | ........ |  |
| Do |  | Kandos to Mford: Section 4 m .750 ft . to 4 m. 2,586 ft. from Kandos. | Earthworks and gravelling ........................ | Council ........... | $\begin{array}{rrr} 1,000 & 0 & 0 \\ 528 & 0 & 0 \end{array}$ | (Cr.) $\begin{array}{rrrr}632 & 0 & 0 \\ 815 & 10\end{array}$ | 1,832 000 | ......... | ....... |
| Do |  | Kandos to Ifford: Section $4 \mathrm{~m} .2,586 \mathrm{ft}$. to 5 m . l,700 ft. from Kandos. | do do do | do ........... |  |  | $\begin{array}{llll}519 & 4 & 2\end{array}$ | 04398 | 6490 |
| Do |  | Kandos to Ifford: Section $6 \mathrm{~m} .5,148 \mathrm{ft}$. to 8 m . | do do do | do | 1,128 000 | 207143 | 1,335 143 | 15262 | 1,669 1210 |
| Do |  |  | do do do | do .. | 4,000 0 | 3648 | 4,364 6 1 | 12550 | 5,455 7 |
| Do |  | Kandos to Ifford: Section 12 m. to 14 m .230 ft . from Kandos. | do do do |  |  | 10,008 1510 | 10,008 1510 | ......... | ......... |
| $\underset{\text { Rylstone }}{\text { Do }}$ | ${ }_{215}^{215}$ |  | Earthworks, gravelling and culverts ................ |  |  |  |  | 01200 |  |
| Devern | ${ }_{211}^{225}$ | Cudgegong River at Rylstone | Timber bridge ................................................ | Department ....... |  |  |  |  | $3,763 \times 9$ |
| $\underset{\text { Severn }}{\text { Do }}$ | ${ }_{511}^{511}$ | ${ }^{\text {Dandahra }}$ Creek m from Glen Innes extending towards Grafton |  |  |  |  |  | ........... | ........... |
| Shellharbour | 522 | 8 m .92 ft t to 11 m .65 ft . from Port Kembla ..... | Earthworks and gravelling |  | $2,00000$ |  | $\begin{array}{r}4,000 \\ 7 \\ 7 \\ \hline 1,50\end{array}$ | :.......... | ..... |
| ${ }_{\text {Sol }}$ | 110 506 |  | Bituminous surfacing ........................ |  |  |  | $\begin{array}{ccc}7,200 \\ 3,510 & 0 \\ 0 & 0 \\ 0\end{array}$ |  |  |
| ${ }_{\text {Tallaganda }}^{\text {Do }}$ | 79 | Reedy dreek ................................. | Concrete bridge |  |  | (Cr.)3,309 <br> 1,522 | - | 0180 | 19,317 11 |
| Terania | 65 | 4.75 m . to 6.33 m . from Lismore | Reconstruction and bitumiaous surfacing | Council .......... |  |  |  | 13062 | ${ }_{\text {10,201 }} \ldots$ |
| Tomki | 85 83 | (7.70 m. to 8.21 m . from Lismore |  | do ...... | $\begin{array}{llll}1,200 & 0 & 0 \\ 9,100 & 0 & 0 \\ 1,500 & 0 & 0\end{array}$ |  |  | ........... |  |
| Tumbarumba | 85 | Mannus Creek ................. | Reconstruction and bituminous surfacing Concrete bridge |  |  | 2,000 4000 2000 | 11,100 <br> 6,900 <br> 100 <br> 0 |  | …....... |
| ${ }^{\text {D }}$ o | -85 | 2 m east of Jngelic | Constrection of pipe culvert and realignment...... | do | 9,500 <br> $\mathbf{6 , 5 0}$ <br> 0 | 472 11 4 <br> 19 5  <br> 599 18 10 <br> 9 10  | 1,072 <br> 919 <br> 9 <br> 919 <br> 18 |  | 1,608 <br> 1,378 <br> 17 |
| Do Do | 284 | Logan's Creek 14:3m. from Tumbarumb |  |  | 600 0 0 <br> 990 0 0 <br> 349 5 9 <br> 1,000 0 0 |  |  |  |  |
| Uralla ${ }^{\text {do }}$ |  | Murray River at Biggara | Timber bridge ............................................ | $\underset{\text { Department } \ldots \text {..... }}{\text { do }}$ |  |  | ${ }^{948} 197$ | ......... | .......... |
| Wakool | ${ }^{67}$ | 2.25 m . to 6.75 m . from Swan Hiii | Bituminous surfacing | Council ...... | 1,000 1 | 1,850 000 | 1,850 |  |  |
| co |  |  |  |  |  | $\begin{array}{r}1,109 \\ \hline 1\end{array}$ | $\begin{array}{r}429 \\ \hline 1,100 \\ \hline 1\end{array}$ | 02640 | 64312 |
| Wallarobba |  |  |  |  |  | ${ }_{5}^{1,102} 11$ | 5,085 | 02000 | 5,085 7 |
| Weddin |  |  |  |  |  |  | 1,000 0 0 <br> 3,000 0 0 <br> 148931 17 3 <br> 165,31 17 1 <br> 7,000 0 0 <br> 2,905 11 6 |  |  |
| $\underset{\text { Wellington }}{\text { Woliondill }}$ | 233 179 | Gundy Creek ${ }^{\text {Broughton Pass to }}$ | Timber bridge and approaches ....... |  | $\begin{array}{cccc} 1,500 & 0 & 0 \\ 45,97 & 0 & 0 \\ 40,00 & 0 & 3 \\ 1,300 & 0 & 0 \\ 1,800 & 0 & 0 \\ 1, \end{array}$ | $\left\|\begin{array}{rrr\|} 1,000 & 0 & 0 \\ 1,550 & 0 & 0 \\ 1029060 & 18 & 0 \\ 125,39 & 0 \\ 12,760 & 17 & 1 \\ 5,700 & 0 & 0 \end{array}\right\|$ |  |  |  |
| Wollondilly and Ca | 179 259 | Camden to Burragorang an ........... | Bituminous surfacing Reconstruction and bituminous surfacing ............ |  |  |  |  |  |  |
| Woodburn | 145 | 1.23 m. to 2 m . and 7.22 m . to 8.72 m . from Pacific Highway. | do do do ............... |  |  |  |  |  |  |
| Do | 149 | 18.3 m . from Sydney | Timber bridge $\qquad$ <br> Total-Trunk and Ordinary Main Roads. $\qquad$ <br> Total-Central and Eastern Divisions of the State |  |  | 1,105 118 |  | ........ | ........ |
|  |  |  |  |  |  | £566,635 2 |  |  |  |
|  |  |  |  |  |  | ¢1,834,297 2 |  |  |  |

## Appendix No. 8-continued

Country Main Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued
(B) Western Division of the State.

(A) Central and Eastern Divisions of the Stat
(B) Western Division of the State ............
stmiary.

## Trunk and Ordinary Main Roads- (A) Central and Eastern Dlyis <br> (A) Central and Eaistern Dlvisions of the State

Miscellaneous Small Works

mall Works .........................................................................
Commission paid in terms of Section 42 Main Roads Act, 1924-1951.
Survey, Design and Supervislon, including design for Council's works Acquistion of Land for Widening ...................


Total as per Receipts and Payments Statement, Appendix No. 2-Part " B."

Appendix No. :
DEVELOPMENTAL ROADS FUND.
Summary of Expenditure on Construction and Reconstruction Works.


## Appendix No. 9-continued.

Developmental Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.

| Cilty, Municipal or Shire Area. | $\begin{aligned} & \text { Road } \\ & \text { or Work } \\ & \text { No. } \end{aligned}$ | Location of Work. | Class of Construction. | Constructing Authority. | Expenditure from Department's Funds. |  |  | Works Completed. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | To 30-6-51. | 1951-52. | $\begin{aligned} & \text { Total } \\ & \text { to }{ }_{30-6-52 .} \end{aligned}$ | Length. | Total Cost (including an by Counclils by Councilis) |  |
|  |  |  |  | Council <br> Department <br> Council <br> do | ¢ s. d. | $\varepsilon$ s. d. <br> 3,000 0 0 <br> 178 19 0 <br> 200 0 0 <br> 198 8 9 <br> 19 9 $\|$ | \& s. d. | M. ft. | £ s. d. |  |
| Hastlogs | 1094 | Hastings River at Double Crossing | Timber bridge |  | $\begin{array}{rrr} 500 & 0 & 0 \\ 500 & 0 & 0 \end{array}$ |  | $\begin{array}{r} 3,000 \\ 178 \\ 700 \\ 700 \\ 700 \\ 698 \\ 680 \end{array}$ | ........ |  |  |
| ${ }_{\text {Imlay }}^{\text {Do }}$ | ${ }_{1045}^{1094}$ | Hastings River at Kindee | Widening and provision of passing places ....... |  |  |  |  |  |  |  |
| Jerualong | 1104 | Eugowra to Mare's Water Hole. Section 10 m. |  |  |  |  |  | 22961 | $1,542 \times 3$ |  |
| Do | 110 | Eugowra to Mare's Water Hole. Section 10 m . | do | do |  | 2,000 0 0 | 2,00000 |  |  |  |
| Do | 306 | ${ }_{1} 17$ m. from Developmental Work No. 3026 towards | Gravelling. | do | 1,000 00 | 352180 | 16 | 13696 | 352160 |  |
| Jerilderie | 211 | South Coree-road 7.35 m . to 8.1 m . and 9.2 m . to 10.95 m . from Jerilderie. | Forming and loaming | do |  | 47158 <br> 008 | 1,047 15 8 | ......... | ......... |  |
|  | 1211 |  |  |  | $\begin{array}{llll}2,000 \\ 2,000 & 0 & 0 \\ 0\end{array}$ | 1,000 ${ }^{1} 000$ |  | $\ldots$ | ...... |  |
| Kyeamba ${ }_{\text {Do }}$ | 1117 1117 117 | $47 \mathrm{~m} .4,800 \mathrm{ft}$. to 49 m .200 ft . from Wagga Wagga. 45.5 m . to 49 m . from Wagga Wagga | Earthworks, gravelling and culverts do do..... | do ${ }_{\text {do }}^{\text {do }}$...... |  | ( |  | .......... |  |  |
| Kyo | 1141 |  |  |  | $3,810.311$ |  |  | $\ldots$ | .......... |  |
| Do | 3065 | Upper Duck Creek-road. Section 10 m .150 ft . to $10 \mathrm{~m} .2,800 \mathrm{ft}$. |  |  | 2,495 00 |  |  |  | $\cdots$ |  |
| Macintyre | 1198 | 6 m . from Gwydir Highway to Yallarot Shire Boundary. | Earthworks, gravelling and causeway over Reedy Creek. <br> Earthworks, gravelling and culverts $\qquad$ | do | $2,000 \quad 0 \quad 0$ | 22125 | 8,10000 | 03800 | -...... |  |
| Do | 1207 | Access-road to King's Plains and Waterloo Soldiers Settlements. Section 0 m . to 5.25 m . from Wood-stock-road |  |  |  | 4,100 000 | $8,100 \quad 00$ |  |  |  |
| Do | 1207 | Access-road to King's Plains and Waterloo Soldiers Settlements. Section 5.25 m . to 12.50 m . from Woodstock-road. | do do | do | 2,000 0 0 | $\begin{array}{llll}3,060 & 0 & 0\end{array} 5 \quad 5,060 \quad 0 \quad 0$ |  | ...... | ......... |  |
| Manning | 1209 | Cooplacurripa to Nowendoc. Sections 0 m . to 2 m . and $5 \mathrm{~m} .4,045 \mathrm{ft}$, to 12 m . |  |  | $\ldots$ | 2,000 $000045 \begin{array}{rll}2,000 & 0 & 0 \\ 10,000 & 0 & 0\end{array}$ |  | ............ | ............ |  |
| Do | 1209 | Cooplacurripa to Nowendoc. Section 2 m . to 5 m . $4,045 \mathrm{ft}$. from Cooplacurripa. | do |  |  | 2,0000000 |  |  |  |  |
| Mitchell.i.. | 3067 <br> 1214 <br> 1 |  | Culverts ${ }_{\text {Clearing, earthworks and enverts }}$................................ | dododododo | $\begin{array}{lll} 1,830 & 0 & 0 \\ 2,150 & 0 & 0 \end{array}$ | 2,000 219011 1,50 11 | 2,000 <br> 2,049 <br> 2,00 <br> 12 | ........ | 2,049 in 2 |  |
| Murray . | ${ }^{1172}$ |  | Forming and loaming and culverts. |  |  | 1,500 165 160 10 10 0 | 1,500 2,315 |  | 231511 |  |
| Do | ${ }_{1172}^{1172}$ |  | Earthworks, graveling and culverts ............................... |  |  | $\begin{array}{r}165 \\ 765 \\ \hline 11\end{array}$ | 1,315 <br> 765 <br> 10 |  | 2,315 11 |  |
| Nambucca | 1075 and | Restoration of bridges and roads following flood | Flood damage repairs | do | 3,000 000 | $\begin{array}{llll} 4,500 & 0 & 0 \\ 1,000 & 0 & 0 \\ 5,00 & 0 & 0 \\ 3,000 & 0 & 0 \end{array}\left\|\begin{array}{lll} 7,500 & 0 & 0 \\ 1,000 & 0 & 0 \\ 5,000 & 0 & 0 \\ 3, \end{array}\right\|$ |  | ......... | ......... |  |
|  | 1078 1078 |  | Earthworks, gravelling and culverts |  | $\begin{aligned} & \ldots . . . . . . . \\ & \ldots . . . . . . . . ~ \end{aligned}$ |  |  |  |  |  |  |
| Namoi .i. | 1167 1180 |  | Concrete causeway ........i.............................. Clearing, forming and graveling...... | $\begin{aligned} & \text { do } \\ & \text { do } \\ & \text { do } \end{aligned}$ |  |  |  | .......... | ........... |  |
| Narrabuica | 1180 | $45 \mathrm{~m} .3,564 \mathrm{ft}$. northwards from Coolamon Shire Boundary. | Clearing, forming and gravelling.................. |  |  |  |  |  |  |  |  |
| Patrick Plalus | 1053 | $6 \underset{\substack{\text { Highway. } \\ \mathrm{m} .4,220 \\ \mathrm{ft}}}{ }$ to $7 \mathrm{~m} .3,692 \mathrm{ft}$. from New England | Earthworks, gravelling and culverts |  | 4,748 |  |  | …....200 | 5 |  |
| Severn | 1207 | Access-road to King's Plains and Waterloo Soldiers' Settlements Section 2 m . in length east of Mac intyre Shire Boundary. | do do do |  |  |  |  | 4,88354 |  |  |
| Oor | ${ }_{3}^{3039}$ |  | Clearing, forming and gravelling ..... |  | l, 2,051  <br> 2,681 0 | 37812309 | 4,427 <br> 2,711 <br> 15 |  | $\begin{array}{ll}1 & 1900 \\ 1 & 2000\end{array}$ | 4,427 <br> 2,711 <br> 15 |  |
| Shoalh | 1196 | Sussex Inlet-road. Section $5 \mathrm{~m} .2,700 \mathrm{ft}$. to 6 m . $4,700 \mathrm{ft}$. |  |  |  |  |  |  |  |  |  |  |
| Talbragar | 1174 | Little River to approximately 1 m . from Obiey | Timber bridge and approaches |  |  | 2,000 2,0 2,00 | $\begin{array}{lll} 2,000 \\ 2,000 & 0 & 0 \\ 0 & 0 \end{array}$ | ........... | .......... |  |

Developmental Roads Fund-continued.
Summary of Expenditure on Construction and Reconstruction Works-continued.

| City, Munslipal or Shire Area. | $\begin{gathered} \text { Road } \\ \text { or } \\ \text { Work } \\ \text { No. } \end{gathered}$ | Location of Work. | Class of Construction. | Constructing Authority. |  | Expenditure from Department's Funds. |  |  | Works Completed. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | \% 30-6-51. | 1951-52. | $\text { to }{ }_{30-6-52 \text {. }}^{\text {Total }}$ | Length. |  | Total cost cluding any y Councils). |
| $\begin{gathered} \text { Tenterfleld } \\ \text { Do } \\ \text { Do } \\ \text { Do } \end{gathered}$ | 1164 1164 1184 1201 1201 | 0 m . to 3 m . from Urbenville 0.8 m . to 3.0 m . from Urbenvilie Koreelah Creek Woodenbong Creek | Earthworks, graveling and culverts <br> Two timber bridges ....................... <br> Timber bridge and approaches | $\begin{gathered} \text { Council } \\ \text { do } \\ \text { do } \\ \text { do } \end{gathered}$ | …. | $\begin{array}{lll} \varepsilon & 8 . & d_{0} \\ 1,420 & 0 & 0 \\ 2,600 & 0 & 0 \\ 1,850 & 0 & 0 \end{array}$ |  |  | $\left\|\begin{array}{ccc}\mathbf{M}_{3} & \text { ft. } \\ 3 & 00 \\ \cdots \cdots \cdots & \\ \ldots & & \\ \text { Bridge } & 0 & 55\end{array}\right\|$ |  |  |
| $\begin{gathered} \text { Do } \\ \operatorname{Tomki}_{\text {Do }} \\ \ldots \end{gathered} . .$ | ${ }_{\substack{1201 \\ 1125 \\ 1125 \\ 10 \text { and }}}$ | 0 m . to 3 m . towards Queensland Border McLennon's Bridge <br> Restoration of roads and bridges following flood | Earthworks, gravelling and culverts .............. Timber bride Flood damage repairs ........................... |  |  | $\begin{array}{ll} 500 & 0 \\ \cdots \cdots \cdots \end{array}$ | $\begin{array}{ccc} 2,000 & 0 & \frac{a}{7} \\ 509 & 7 \\ 222 & 10 & 0 \end{array}$ | $\begin{array}{rrr} 2,000 & 0 & 0 \\ 1,009 & 7 & 7 \\ 222 & 10 & 0 \end{array}$ |  |  |  |
| Tumbarumba | ${ }^{1132}$ | Ournie Creek | Concrete culvert and npproaches |  |  | 77400 | $\begin{array}{lll} 222 & 10 & 0 \\ 399 & 5 & 0 \end{array}$ | 1,173 50 |  |  |  |
| Tumut | 1215 1215 | 0 0 . to 5 m. from Monaro Highway..... | Earthworks, gravelling and culverts ..... do do |  |  |  | $\begin{array}{llll}524 & 0 & 0 \\ { }_{266} & 0 & 0 \\ 0\end{array}$ | 524.0 <br> 268 <br> 0 | $\ldots$ | $\qquad$$\qquad$$\qquad$$\qquad$$\begin{array}{cc} \ldots \ldots \ldots . \\ \ldots, 245 \text { i1 } & 2 \\ \infty \end{array}$ |  |
| Tweed | 1217 | Pottsville to Hastings Point. Section 0 m . to 2 m . | do do do |  |  |  | 3,000 000 | 3,000 000 |  |  |  |
| Wrana and Lockhart | 1014 | 11.5 m. to 12.5 m. and 13.0 m . to 14.3 m . from Urana | $\underset{\text { Forming and loaming }}{\text { do }}$ do |  |  |  | 1,481 1,800 100 0 | 1,481 <br> 1,800 |  |  |  |
| Wallarobba | ${ }^{1128}$ |  | Culverts nd deraviling .................... |  |  |  | ${ }^{1} 900000000$ |  |  |  |  |
| ${ }_{\text {Do }}^{\text {Do }}$ | 3062 <br> 3066 | Gresford-Lostock-Carrabolla-Upper Paterson $\ldots$ do do | Four concrete crossings and approaches Concrete crossing and deviation |  |  | $\begin{array}{lll}5,000 \\ 2,000 \\ 20 & 0 & 0 \\ 0\end{array}$ |  | 6,000 <br> 2,457 <br> 13 <br> 18 |  |  |  |
| $\begin{aligned} & \text { Waugoola } \\ & \text { Do } \end{aligned}$ | 1156 1156 |  | Earthworks, gravelling and culverts do do |  |  | 1,243 120 |  | 1,245 <br> 1,000 <br> 2,000 <br> 11 | 100 |  |  |
| Wellington | 35 |  | do do | $\begin{aligned} & \text { do } \\ & \text { do } \end{aligned}$ |  | $\ldots$ | 3,000 00000 | 3,000 0000 |  |  |  |
| Woodburn | 1203 | From Pacific Highway at 19 m . south of Woodburn via Jackybulbin to Developmental Road No. 1049. Section 0 m . to $0 \mathrm{~m} .2,700 \mathrm{ft}$. | do do do |  |  |  |  |  |  |  |  |  |
| $\xrightarrow{\text { Wyong }}$ Yallaroi. |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & 4,051 \\ & 7,634 \\ & 8,010 \end{aligned}$ |  |
| - |  |  |  | 72640 |  |  |  |  |  |  |  |  |  |  |
| Do |  |  |  | 22515 |  | 1,931 10 |  |  |  |  |  |  |  |  |  |
| Do |  |  |  | ........ |  |  |  |  |  |  |  |  |  |  |  |
| Do |  |  |  | ......... |  | ......... |  |  |  |  |  |  |  |  |  |
|  |  |  |  | …...... ….... -. |  | …...... …... ..... |  |  |  |  |  |  |  |  |  |
| l'otal as per Receipts and Payments Statement, Appendix No. 3 ............................................ |  |  |  | ........ |  | ......... |  |  |  |  |  |  |  |  |  |

## Appendix No. 10.

COUNTY OF CUMBERLAND MAIN ROADS. FUND.
Expenditure during the year 1951-52 on the Mantenance and Minor Improvement of Main Roads, Bridgés and Ferries.


* Refund of Grant.

Appendix No. 10-continued.
County of Cumberland Main Roads Fund-continued.
Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

Work carried out by $\quad \begin{gathered}\text { Amount paid to Councils or } \\ \text { expended by Department. }\end{gathered}$



* Refund of Grant.
$+27219-7$

Appendix No. 10-continued.
County of Cumberland Main Roads Fund-continued.
Expenditure during the ycar 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

| City, Municipal or Shire Area. | Work carried out by | Amount paid to Councils or <br> expended by Department. |
| :--- | :--- | :--- |



| Total-Secondary Roads | 23,892 $13 \quad 7$ |
| :---: | :---: |
| Total-All Roads | £794,243 24 |

Miscellaneous.

\begin{tabular}{|c|c|c|c|c|}
\hline \& \& f s. d. \& $\mathfrak{X}$ \& s. d. <br>
\hline Bridges and Ferries not on classified roads .......................... \& . \& 33,967 143 \& \& <br>
\hline Maintenance of Depot Buildings, Fences, etc. \& \& $4,273 \quad 0 \quad 0$ \& \& <br>
\hline Restoration of Road Openings ....................................... \& ........................... \& 3,678`12 5 \& \& <br>
\hline Traffic Striping \& \& 13,564 $19 \quad 9$ \& \& <br>
\hline Signposting by Department \& .. ......................... \& 2,143 113 \& \& <br>
\hline Supervision ................. \& :......................... \& 8,814 3 3 6 \& \& <br>
\hline Testing Laboratory Working Expenses \& ........................... \& 1,322 76 \& \& <br>
\hline Proportion of School of Plant Instruction Expenses ............... \& \& 398143 \& \& <br>
\hline Undistributed Plant Charges ........................................... \& \& (Cr.) $268 \quad 45$ \& \& <br>

\hline | Commission paid in terms of Section 42, Main Roads Act, 1924 |
| :--- |
| 51 | \& \& 1,055 1711 \& \& <br>

\hline Payments to Councils for Long Service Leave \& \& $4710 \quad 2$ \& \& <br>

\hline Signposting by Councils ................................................ \& \& $$
431 \quad 8 \quad 5
$$ \& \& - <br>

\hline Miscellaneous ............................................................. \& \& 60,628 411 \& \& <br>
\hline \& \& \& 130,057 \& 1911 <br>
\hline \multicolumn{3}{|l|}{Total as per Receipts and Payments Statement-Appendix No. 1, Part " A "} \& £924,301 \& 23 <br>
\hline
\end{tabular}



Appendix No. 11.

## COUNTRY MAIN ROADS FUND.

Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries.

| City, Municipal or Shire Area. | Work carried out by- | Amount paid to Councils or <br> expended by Department. |
| :--- | :--- | :--- |

State Highways.


## Appendix ITo. 11-continued.

## Country Main Roads Fund-continued.

Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

| City, Municipal or Shire Area. | Work carried out by- | Amount paid by Councils or <br> expended by Department. |
| :--- | :--- | :--- |

State Highways-continued.


Appendix No. 11-continued.
19,1 Country Main Roads Fund-continued.
Expenditure during the year $1950-51$ ) on the Maintenance and Minor Improveinent of Main Roads, Bridges and Ferries-continued.

| City, Municipal or Shire Area. | Work carried out by | Amount paid to Councils or <br> expended by Department. |
| :--- | :--- | :--- |

State Highways-continued.


* Refund of Grant.

Appendix No. 11-continued.
Country Main Roads Fund-continued.
Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.


* Refund of Grant.

Appendix No. 11-continued.
Country Main Roads Fund-continued.
Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

| City, Municipal or Shire Area. | Work carried out by- | Amount paid to Councils or <br> expended by Department. |
| :--- | :--- | :--- |

TRUNK AND ORDINARY MAIN ROADS.


## Appendix No. 11-continued.

## Country Main Roads Fund-continued.

Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

| City, Municipal or Shire Area. | Work carried out by- | Amount paid to Councils or <br> expended by Department. |
| :--- | :--- | :--- |

Trunk and Ordinary Main Roads-continued.


## Appendix No. 11-continued.

## Country Main Roads Fund-continued.

Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads Bridges and Ferries-continued.


## * Refund of Grant.

BRIDGES.


Appendix No. 11-continued.

## Country Main Roads Fund-continued.

Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

## Bridges-continued.



## IERRIES.



Wes", ern Division.


## Appendix No. 11—continued.

Country Marn Roads Fund-continued.
Expenditure during the year 1951-52 on the Maintenance and Minor Improvement of Main Roads, Bridges and Ferries-continued.

## MISCELLANEOUS.



## Appendix No. 12.

## PROCLAMATION OF MAIN ROADS, 1951-52.

during the year the following new Main Roads were proclaimed.

| Shire or Municipality. | Date of Proclamation. | $\begin{gathered} \text { Road } \\ \text { No. } \end{gathered}$ | Description. | Mileage. | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | m , ch. |  |
| City of Parramatta and Baulkham Hills Shire. | 26-10-51 | 574 | From the junction of Kissing Point Road and Victoria Road (Main Road No. 165) Parramstta via Kissing Point Road to Spurway Street. | 2 35 | New Maln Road. Spurway Street was previously Main Road No. 532A and has now been renumbered |
| Shoalhaven Shire ........... | 21-12-51 | 293 | From Bomaderry to Coolangatta | $8 \quad 04$ | Ex part of Main Road No. 574.293 |
| Hastings Shire .............. | 6-6-52 | 575 | From the Oxtey Highway (State Hlghway No. 11) near Wauchope via Bain's Bridge over the Hastings River and Pembroke to the Pacific | $13 \quad 00$ | from the railway at Bomaderry. New Main Road. |
| Cowra Municipality, Boorowa and Waugoola Shires. | 13-6-52 | 576 | Highway (State Highway No. 10) near Telegraph Polnt. <br> From the Mid Western Highway (State Highway No. 6) at Cowra, via Darby's Falls to the north bank of the Lachlan River immediately downstream of Wyangala Dam. | $45 \quad 00$ | New Main Road. |

By Government Gazette of 6th Jnly, 1951, the route of the Oxley Highway (State Highway No. 11) between Collie and Trangie was altered to from Collie via Warren to Nevertire. This section of road from Collie to Nevertire via Warren was previously Main Road No. 203 and part of Main Road No. 202. The road from Collie to Trangie is now part of Main Road No. 347. Trunk Road No. 57 between Alhert and Trangie also became part of Main Road No. 347 and Main Road No. 346 between Albert and Nyngan is now reclassifled as part of Trunk Road No. 57. Main Road No. 342 between Narromine and Tomingley

By Government Gazette of 18th January, 1952, following the adoption of a permanent route for the Newell Highway (State Highway No. 17) between Wyalong and Narrandera, Main Road No. 342 now terminates at Grong Grong instead of Narrandera and that part of Main Road No. 387 between Mirrool and Ardlethan now forms part of the Newell Highway.

By Government Gazette of 30th May, 1952, George's River Bridge from Tom Ugly's Point to Sylvania became part of the Princes Higheay (State Highway No. 1).

Appendix No. 13.
DECLARATION OF SECONDARY ROADS, 1951-52.
During the year the following new Secondary Roads were declared.

| Shire or Municipality. | Date of Declaration. | $\begin{gathered} \text { Road } \\ \text { No. } \end{gathered}$ | Description. | Mileage. | Remarks. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ashfleld and Canterbury Municipallites. | 24-8-51 | 2040 | From the junction of Milton Street and Georges River Road (Main Road No. 549) Ashfleld via Milton Street, King Street and Jeffrey Street, to Canterbury Road (Main Road No. 167) Canterbury. | m.  <br> 1 ch. | New Secondary Road. |  |
| Hurstville and Rockdale Municipalities. | 17-8-51 | 2041 | From the junction of Stoney Creek Road and Forest Road (Main Road No. 168) Bexley via Stoney Creek Road to Forest Road (Main Road No. 108) Peakhurst. | $3 \quad 29$ | New Secondary Road. |  |
| Leichhardt Municipality... | 14-9-51 | 2042 | Johnston Street, Annandale from Parramatta Road (Great Western Highway, State Highway No. 5) to The Crescent. | 110 | New Secondary Road. |  |
| Ku-ring-gai Municipality, Hornsby Shire. | 30-11-51 | 2043 | From the junction of Archbold Road and Boundary Street (Maln Road No. 328) Roseville via Archbold Road and Arterial Road through Lindfeld Park to Birdwood Avenue; thence via Birdwood Avenue and Arterial Road to Horace Street, thence via Horace Street to Stanley Street, St. Ives, thence via an unconstructed road to Killeaton Street, thence via Killeaton Street and an unconstructed road to The Chase Road, Turramurra; thence via The Chase road, Burns Road and an unconstructed road to Junction Road; thence via Junction Road and Edgeworth David Avenue to Paciftc Highway (State Highway No. 10) Hornsby. | $9 \quad 38$ | New Secondary Road. |  |
| City of Blue Mountains ... | 2-5-52 | 2044 | From the Great Western Highway (State Highway No. 5) north of the railway level crossing, via Bent Street and the railway overbridge to the Great Western Highway at Katoomba. | 042 | New Secondary Road. |  |

## Appendix No. 14.

PROCLAMATION OF DEVELOPMENTAL ROADS, 1951-52.
During the year the following new Developmental Roads were proclaimed.

| Shire or Municipality. | Date of Proclama. tion. | $\begin{gathered} \text { Road } \\ \text { No. } \end{gathered}$ | Description. | Mileage. | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | m. ch. |  |
| Yanko Shire .... | 18-1-52 | 1220 | From the northern boundary of Yanko Shire southerly for about $7 \frac{1}{2}$ miles to Garoolgan, thence southeriy, easterly and again southerly about $6 \frac{1}{2}$ miles to the northern bank of Mirrool Creek. | $\begin{array}{ll}14 & 40 \\ & \end{array}$ | To provide all weather access to Garoolgan Rallway Station and wheat silos. |
| Narraburra Shire ............ | 18-1-52 | 1091 | From the north-western corner of Portion 62 Parish of Quandary, County of Bourke generally westerly, via Walker's Lane to the Ariah Park-Barmedman Road (Main Road No. 398). | 6 60 | Extension of Developmental Road No. 1091. To provide all weather access and to assist in further development of wheat and grazing properties in this area. |
| Mumbulla Shire ........... | 11-1-52 | 1221 | From the eastern abutment of the bridge over the Brogo River at Greendale, generally north-westerly for about 3 miles to the surveyed road separating portions 26 and 187 Parish of Mumbulla, County of Auckland. | $3 \quad 60$ | To further the development of properties on the eastern side of the Brogo River and to provide all weather access to Greendale Bridge and thence to the Princes Highway. |
| Carrathool Shire | 23-5-52 | 1222 | From the north-western corner of Portion 31 Parish of Warburn, County of Sturt, thence southerly for approximately mile, thence westerly for approximately $5 \frac{1}{2}$ miles and thence northerly for approximately 73 miles to the north-eastern corner of Portion 64 Parish of Hervey, County of Sturt, belng part of the road from Griffith to Tabbita via Warrawidgee Soldiers' Settlement. | $13 \quad 16$ | To provide access from Warrawidgee Soldiers' Settlement to the railway at Tabbita and Griffith. |
| Holbrook Shire ............ | 23-5-52 | 1223 | Downfall Road, from Main Road No. 284 at approximately 3 miles west of Rosewood, generally northerly and westerly for approximately $8 \frac{1}{8}$ miles to Ky yeamba Shire boundary. | $8 \quad 28$ | To provide all weather access to Humula and Rosewood. |

Appendix No. 15.
PROCLAMATION OF DEVELOPMENTAL WORKS, 1951-52.
During the year the following new Developmental Works were proclaimed.

| Shire or Municipality. | Date of Proclama. tion. | $\begin{aligned} & \text { Road } \\ & \text { No. } \end{aligned}$ | Description. | Mileage. | Remarks. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | m. ch. |  |
| Murray Shira................. | 12-10-51 | 3077 | The construction of a bridge over Bullatale Creek on the MathouraMoroco Road. | ..... | To provide access to the DeniliquinTocumwal Road from grazing |
| Lockhart Shire ............... | 13-6-52 | 3078 | The construction of a cuivert and causeway at Mittagong Crossing over Bullenbung Creek on the Tootool-Xerong Creek Road at approximately $7 \frac{1}{2}$ miles west of Yerong Creek Village. | $\ldots$ | To assist in the development of the district and provide access to the railway at Yerong Creek. |
| Ashford and Yallaroi Shires | 13-6-52 | 3079 | The construction of a timber bridge over Ottley's Creek on the road from Trunk Rosd No. 63 at Rocky Dam to North Star Railway Station at the boundary between the Shires of Ashford and Yallaroi. | ...... | To provide access to North Star Railway Station. |

Appendix No. 16.
Length of Proclaimed Roads in N.S.W.


* Classification of Main Roads into State Highways, Trunk Roads and Ordinary Main Roads was not made until the 1st July, 1928.
$\dagger$ In addition to classified roads, the Department is responsible for the full cost of works on unclassified roads in the unincorporated area of the Western
on; the length of these reads totalled 2,977 miles as at the 30 th June, 1952 . Division; the length of these reads totalled 2,977 miles as at the 30th June, 1952.


## Appendix No. 17.

Length and Percentage of Main and Secondary Roads Maintained by the Department and Councils in the Eastern and Central Divisions of the State as at 30th June, 1952.

| Division. | State Highways: |  |  |  | Trunk Roads. |  |  |  | Ordinary Main Roads. |  |  |  | Secondary Roads. |  |  |  | Totals. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Maintained <br> by Department. |  | $\begin{aligned} & \text { Maintained } \\ & \text { by } \\ & \text { Councils. } \end{aligned}$ |  | Maintained <br> by Depart ment. |  | Maintained Councils. |  | $\begin{array}{\|c\|c\|} \hline \text { Maintained } \\ \text { by Depart- } \\ \text { Ment. } \end{array} \begin{gathered} \text { maintained } \\ \text { buncils. } \end{gathered}$ |  |  |  | Maintained <br> by Department. |  | $\begin{gathered} \text { Maintained } \\ \text { by } \\ \text { Councils. } \end{gathered}$ |  | Maintained by Department. |  | $\begin{gathered} \text { Maintained } \\ \text { by } \\ \text { Councils. } \end{gathered}$ |  |
|  | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% | Miles. | \% |
| County of Cumberland- <br> Metropolitan Outer Metropolitan No. I.............................................. Outer Metropolitan No. 2. |  | 982 98 88 | 11. |  | \% ... | … | .... | … | 1012 | 419, | 145 127 127 | 596 38 49 | ,... | … $\cdots$ $\ldots$ | 56 7 11 | $\left\lvert\, \begin{aligned} & 100! \\ & 100 \\ & 100 \end{aligned}\right.$ | 156 143 205 | 44 <br> 70 <br> 58 | $202 *$ 149 14. | 56 <br> 30 <br> 42 |
| Sub-total | 180 | 93 | 13 | 7 | .. | $\cdots$ | ... | $\cdots$ | 324 | 50 | 324 | 50 | $\ldots$ | ... | 74 | 100 | 504 | 55 | 411 | 45 |
| Country- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Outer Metropolitan No. 1 <br> Outer Metropolitan No. 2 | 148 | ${ }_{67}^{87}$ | 238 | ${ }_{33}^{13}$ | 5 44 | 33 17 | ${ }_{210}^{10}$ | 67 83 8 | 46 95 | $\begin{aligned} & 16 \\ & 14 \end{aligned}$ | 241 596 | 84 <br> 86 | $\ldots$ | $\ldots$ | $\ldots$ | $\ldots$ | 199 196 | ${ }_{19}^{42}$ | ${ }_{236}^{274}$ | 58 81 |
| Southern | 192 | 72 | 75 | 28 |  |  | 429 | 100 |  |  | 797 | 100 | $\ldots$ |  | $\cdots$ | $\ldots$ | 192 | 13 | 1,301 | ${ }^{87}$ |
| Lower Northern | 318 | 66 | 163 | ${ }^{34}$ | ... | $\cdots$ | 51 | 100 | 37 17 | ${ }_{2}^{3}$ | 1,037 | ${ }_{98}^{97}$ | $\ldots$ | $\ldots$ | $\cdots$ | $\ldots$ | ${ }_{81}^{355}$ | 22 | 1,251 | ${ }_{95}^{78}$ |
| Upper Northern | 654 | ${ }^{9} 7$ | 682 432 | ${ }_{63}^{91}$ | $\ldots$ | $\ldots$ | ${ }_{507}^{132}$ | 100 |  |  | 1,327 | 100 | $\ldots$ | $\cdots$ | … |  | 254 | 10 | 2,266 | 90 |
| Central Western | 225 | 28 | 584 | 72 | ... | $\ldots$ | 513 | 100 | ... | ... | 1,640 | 100 | ... | $\ldots$ | $\ldots$ | $\ldots$ | 225 | 8 | 2,737 | ${ }_{98}^{92}$ |
| North Western ${ }_{\text {North }}$ | ${ }_{92}^{47}$ | ${ }_{25}^{8}$ | 507 282 282 | ${ }_{75}^{92}$ | $\ldots$ | $\ldots$ | ${ }_{217}^{517}$ | 100 | $\cdots$ | ... | ${ }_{612}^{1,019}$ | 100 | $\ldots$ | $\cdots$ | $\ldots$ |  | 92. | 7 | 1,165 | ${ }_{93}$ |
| North Eastern | 304 | 73 | 114 | 27 | $\ldots$ | $\cdots$ | 23 | 100 | 62 | 10 | 319 | 84 | $\ldots$ | $\cdots$ | $\ldots$ |  | 366 | 45 | 456 | 55 |
| Central Murray | 170 | 40 | 256 | 60 | $\ldots$ | ... | 65 | 100 | .. | ... | 631 | 100 |  | ... | ... |  | 170 | 15 | 952 |  |
| Sub-total. | 1,871 | 37 | 3,146 | 63 | 49 | 2 | 2,730 | 98 | 257 | 3 | 8,885 | 97 | $\ldots$ | $\cdots$ | $\ldots$ |  | 2,177 | 13 | 14,761 | 87 |
| Grand Total | 2,051 | 39 | 3,159 | 61 | 49 | 2 | 2,730 | 98 | 581 | 6 | 9,209 | 94 |  |  | 74 | 00 | 2,681 | 15 | 15,172 | 85 |

## Appendix No. 18.

Expenditura on main and secondary Roads by tee Department of Main Roads and Contributions by Councles from 1925-26 то 1951-52.
A.-County of Cumberland.

| Year. | Expenditure from Main Roads Funds, excluding Councils' contributions. |  | Councils' contributions to works. |  | Total Expenditure. | Rate per $£$ on U.C.V. of Councils' contributions. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount. | Percentage of total expenditure. | Amount. | Percentage of total expenditure. |  |  |
|  | ${ }^{\text {£ }}$ | per cent. | £ | per cent. | $\pm$ | pence. |
| 1925-26 | 222,765 | 38 | 368,166 | 62 | 590,931 | $\cdot 42$ |
| 1926-27 | 652,601 | 71 | 262,058 | 29 | 914,659 | . 44 |
| 1927-28 | 804,078 | 71 | 324,212 | 29 | 1,128,290 | . 46 |
| 1928-29 | 700,187 | 64 | 390,589 | 36 | 1,090,776 | . 52 |
| 1929-30 | 905,088 | 70 | 388,623 | 30 | 1,293,717 | . 49 |
| 1930-31 | 370,111 | 49 | 382,432 | 51 | 752,543 | -46 |
| 1931-32 | 150,921 | 31 | 337,196 | 69 | 488,117 | -41 |
| .1933-34 | 248,6814 | 47 57 | $\stackrel{276,826}{ }$ | 53 | 525,507 | $\cdot 40$ |
| 1934-35 | 523,890 | 67 | 256,377 | 43 33 | 580,193 780,267 | . 38 |
| 1935-36 | 395,283 | 62 | 246,924 | 38 | 642,207 | -39 |
| 1936-37 | 395,666 | 62 | 244,678 | 38 | 640,344 | $\cdot 39$ |
| 1937-38 | 595,923 | 72 | 236,119 | 28 | 832,042 | . 42 |
| 1938-39 | 644,801 | 73 | 235,904 | 27 | 880,705 | . 50 |
| 1939-40 | 985,054 | 81 | 231,463 | 19 | 1,216,517 | . 48 |
| 1940-41 | 982,534 | 80 | 242,109 | 20 | 1,224,643 | . 49 |
| 1941-42 | 714,729 | 76 | 228,923 | 24 | 1,943,652 | -46 |
| 1942-43 | 179,265 | 42 | 247,998 | 58 | 427,263 | . 49 |
| 1943-44 | 222,684 | 48 | 245,138 | 52 | 467,822 | . 48 |
| 1944-45 | 210,212 | 46 | 247,117 | 54 | 457,329 | . 48 |
| 1945-46 | 348,984 | 60 | 229,348 | 40 | 578,332 | . 44 |
| 1946-47 | 584,914 | 69 | 257,346 | 31 | 842,260 | -49 |
| 1947-48 | 693,018 | 72 | 269,069 | 28 | 962,087 | . 50 |
| 1948-49 | 918,081 | 78 | 264,156 | 22 | 1,182,237 | . 47 |
| 1949-50 | 1,088,961 | 78 | 306,914 | 22 | 1,395,875 | . 51 |
| +1950-51 | $1,354,413$ $1,871,348$ | 79 81 | 368,575 441,142 | 21 19 | $1,722,988$ $\mathbf{2 , 3 1 2 , 4 9 0}$ | -55 |
|  | 17,096,736 | 68 | 7,777,057 | 31 | 24,873,793 | $\cdot 46$ |

Appendix No. 18-continued.
B.-Country.

| Year. |  | Expenditure from Main Roads Funds, excluding Councils' contributions. |  | Councils' contributions to works. |  |  |  | Total Expenditure. | Rate per $£$ on U.C.V. of Councils' contributions. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount. | Percentage of total expenditure. | Maintenance Amount. | Construction Amount. | Total. | Percentage of total expenditure. |  | Maintenance. | Constructlon. | Total. |
|  |  | £ | per cent. | £ | £ | £ | per cent. | £ | pence. | pence. | pence. |
| 1925-26 |  | 776,084 | 76 | 201,308 | 43,450 | 244,750 |  | 1,020,840 | . 30 | . 06 | . 36 |
| 1927-28 |  | 1,875,410 | 80 | 213,537 | 92,273 | 305,810 | 17 | 1,828,628 | . 30 | -13 | -43 |
| 1928-29 |  | 2,260,492 | 87 | 220,864 | 119,199 | 480,063 | 13 | $\xrightarrow[2,600,555]{\mathbf{2 , 3 8 , 3 1 9}}$ | - 50 | . 16 | $\cdot 66$ |
| 1929-30 |  | 2,004,483 | 88 | 269,974 | 99,558 | 369,532 | 12 | 3,034,015 | . 34 | $\cdot 13$ | . 47 |
| 1930-31 |  | 1,695,317 | 91 | 128,742 | 33,800 | 162,542 | 9 | 1,857,859 | - 16 | . 04 | $\cdot 47$ |
| 1931-32 |  | 1,003,758 | 77 | 260,956 | 37,265 | 298,221 | 23 | 1,301,979 | -34 | .05 | .39 |
| 1932-33 |  | 1,567,000 | 85 | 215,906 | 69,306 | 285,212 | 15 | 1,852,212 | . 31 | -10 | . 41 |
| 1933-34 |  | 1,739,893 | 86 | 225,908 | 49,948 | 275,854 | 14 | 2,015,747 | . 34 | . 07 | . 41 |
| 1934-35 |  | 1,901,995 | 86 | 261,754 | 47,950 | 309,704 | 14 | 2,211,699 | -40 | . 07 | -47 |
| 1935-36 | , | $1,028,645$ $2.424,427$ | 89 89 | 202,313 | 31,233 51 | 233,546 | 11 | 2,162,191 | -31 | -05 | $\cdot 36$ |
| 1937-38 |  | 2,522,769 | 90 | 219,178 | 57,443 | 278,821 | 10 | $2,723,283$ $\mathbf{2 , 7 9 0 , 3 9 0}$ | - 36 | .08 | -48 |
| 1938-39 | .... | 2,498,015 | 90 | 203,090 | 83,005 | 286,095 | 10 | 2,784,110 | -31 | $\cdot 13$ | . 44 |
| 1939-40 |  | 3,202,898 | 92 | 213,956 | 80,044 | 294,000 | 8 | 3,496,898 | $\cdot 31$ | -12 | -43 |
| 1940-41 |  | 3,248,226 | 94 | 155,337 | 60,573 | 215,910 | 6 | 3,464,136 | $\cdot 22$ | .09 | -31 |
| 1941-42 | ..... | 2,252,911 | 92 90 | 157,943 145,381 | 34,965 | 192,908 | 8 | 2,445,819 | -23 | . 05 | . 28 |
| 1943-44 |  | 1,811,530 | 90 | 145,381 188,453 | 22,058 | 167,439 202,641 | 10 | 2,720,984 | .21 | .03 | .24 |
| 1944-45 |  | 1,894,802 | 90 | 200,707 | -20,323 | 221,030 | 10 | 2,115,922 | -28 | . 02 | $\cdot 39$ |
| 1945-46 |  | 2,103,031 | 88 | 273,764 | 17,193 | 290,957 | 12 | 2,393,988 | $\cdot 39$ | . 03 | . 42 |
| $1946-47$ <br> $1947-48$ |  | 2,787,931 | 89 | 308,530 | 10,548 | 328,078 | 11 | 3,116,009 | $\cdot 43$ | .03 | -46 |
| 1947-48 |  | $3,120,547$ $3,092,858$ | 89 | 322,627 361,784 | 47,816 65,760 | 370,443 427544 | 11 | 3,490,990 | . 43 | .06 | $\cdot 49$ |
| 1949-50 |  | 3,920,922 | 98 | 361,784 326,936 | 65,60 81,497 | 408,433 | 12 | 3,520,402 | -47 | $\stackrel{.08}{\cdot 10}$ | . 55 |
| 1950-51 |  | 4,760,512 | 89 | 549,372 | 66, 863 | 616,235 | 11 | 5,376,747 | -61 | . 07 | -68 |
| 1951-52 |  | 7,095,032 | 91 | 604,211 | 58,904 | 663,115 | 9 | 7,758,147 | $\cdot 61$ | . 06 | $\cdot 67$ |
| . |  | 67,225,941 | 89 | 7,045,919 | 1,522,535 | 8,568,454 | 11 | 75,794,395 | -35 | -08 | $\cdot 43$ |

Appendix No. 18-conlinued.
C.-Total of County of Cumberland and Country.

| Yent. | Expenditure from Main Roads Funds, excluding Councils' contributions. |  | . Councils' contributions to works. |  | Total Expenditure: | Rate per $£$ on U.C.V. of Councils' contributions. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount. | Percentage of total expenditure. | Amount. | Percentage of total expenditure. |  |  |
|  | $\stackrel{\text { ¢ }}{\substack{\text { 98,849 }}}$ | ${ }_{\text {per cent. }}$ | $\begin{gathered} \boldsymbol{f} \\ 612,922 \end{gathered}$ | per cent. | $\stackrel{\text { 1,611,771 }}{ }$ | $\begin{gathered} \text { pence. } \\ .39 \end{gathered}$ |
| 1925-27 | 2,175,419 | 79 | 567,868 | 21 | 2,743,287 | $\cdot 43$ |
| 1927-28 | 2,679,488 | 77 | 807,121 | 23 | 3,486,609 | . 56 |
| 1928-29 | 2,960,679 | 80 | 730,652 | 20 | 3,691,331 | $\cdot 49$ |
| 1929-30 | 3,569,571 | 82 | 758,161 | 18 | 4,327,732 | -48 |
| 1930-31 | 2,065,428 | 79 | 544,974 | 21 | 2,610,402 | -34 |
| 1931-32 | 1,154,679 | 65 | 635,417 | 35 | 1,790,096 | $\cdot 40$ |
| 1932-33 | 1,815,681 | 76 | 562,038 | 24 | 2,377,719 | -41 |
| 1933-34 | 2,072,437 | 80 | 523,503 | 20 | 2,595,940 | $\cdot 40$ |
| 1934-35 | 2,425,885 | 81 | 566,081 | 19 | 2,991,966 | . 44 |
| 1935-36 | 2,323,928 | 83 | 480,470 | 17 | $2,804,398$ $\mathbf{3 , 3 6 3 , 6 2 7}$ | . 38 |
| 1936-37 | 2,820,093 | 84 | 543,534 512,740 | 16 | 3,363,627 $\mathbf{3 , 6 3 1 , 4 3 2}$ | . 44 |
| 1937-38 | 3,118,692 | 86 | 512,740 521,999 | 14 14 | $3,631,432$ $3,664,815$ | $\stackrel{.43}{+47}$ |
| 1938-39 | $3,142,816$ $4,187,952$ | 86 89 | 521,999 525,463 | 14 | $3,614,815$ $4,713,415$ | . 45 |
| 1939-40 | $4,187,952$ $4,230,760$ | 89 90 | 525,463 458,019 | 10 | 4,688,779 | -39 |
| 1940-41 | $4,230,760$ $\mathbf{2 , 9 6 7 , 6 4 0}$ | 90 88 | 421,831 | 12 | 3,389,471 | $\cdot 35$ |
| 1942-43 | 1,732,810 | 81 | 415,437 | 19 | 2,148,247 | -34 |
| 1943-44 | 2,034,214 | 82 | 447,779 | 18 | 2,481,993 | $\cdot 36$ |
| 1944-45 | 2,105,104 | 82 | 468,147 | 18 | 2,573,251 | $\cdot 37$ |
| 1945-46 | 2,452,015 | 82 | 525,497 | 18 | 2,977,512 | :42 |
| 1946-47 | 3,372,845 | 85 | 587,771 | 15 | 3,960,616 | $\cdot 47$ |
| 1947-48 | 3,813,565 | 86 | 639,512 | 14 | $4,453,077$ 4702639 | . 50 |
| 1948-49 | 4,010,939 | 85 | 691,700 | 15 | $4,702,639$ $\mathbf{5 , 7 2 5 , 2 3 0}$ | . 51 |
| 1949-50 | $5,009,883$ $6,114,925$ | 88 | 715,347 984,810 | 14 | - $7,099,735$ | . 63 |
| 1951-52 | $6,966,380$ | 89 | 1,104,257 | 11 | 10,070,637 | $\cdot 63$ |
|  | 84,322,677 | 84 | 16,353,050 | 16 | 100,675,727 | $\cdot 44$ |


[^0]:    * The cost of the purchase and repair of the whole of the Department's plant and motor vehicles is met from the Country Main Roads Fund. Recoupment is effected by means of hire rates charged against the works-mostly Departmental day labour-on which the plant is used.

[^1]:    State Highway No. 10-Pacific Highway. Municipality of Ku-ring-gai. Reconditioning of bituminous pavement Roseville to Wahroonga.

    This work, involving reconstruction of damaged areas of pavement, approximately 26,0000 square yards in all, has been in progress since the middle of 1951. Reconditioning is being effected by removal of damaged areas and replacement by a concrete base course and premixed bituminous macadam surface course. The work is being carried out by the Department by day labour.

