

# RAILWAY LOAN APPLICATION BILL 1967.

## EXPLANATORY MEMORANDUM.

Generally, the Bill seeks Parliamentary sanction for expenditure of the Loan funds allotted to the Railway Department for the 1967-68 financial year.

The Loan funds allotted to the Department for the year amount to \$17,038,000, including amounts specifically allotted for completion of the purchase of 100 bogie hopper grain wagons, progress payments on a further 100 bogie hopper grain wagons and two airconditioned diesel rail cars for the Ararat-Hamilton-Portland line, and for acquisition of the Portland North Exchange Sidings from the Portland Harbor Trust. As this Act must continue to operate until a new Act is passed and has received the Royal Assent—possibly late in 1968—provision is made in the Bill for sufficient authority (\$24,000,000) to cover the Department's estimated expenditure up till 31st December, 1968.

The 1968 Act, when it comes into operation, will automatically cancel the unexhausted provision in the 1967 Act.

Sub-items 101 to 113 of Item 1, 201 to 206 of Item 2, and 302 and 303 of Item 3 refer to annual provisions, i.e., continuing works and purposes on which expenditure is incurred year by year. Under these items no figure can be supplied under the heading "estimated total cost", the only estimate available being that of proposed expenditure during the currency of the Act.

Sub-items 114 to 126 of Item 1 refer to specific works, each of which is estimated to cost \$50,000 or more.

The following information is supplied for the assistance of Honorable Members in considering the various items and sub-items in the Bill :—

### ITEM 1—WAY AND WORKS.

#### *Sub-Item.*

#### (101) *Stations, yards, &c.*

This sub-item provides for the large number of minor additions, improvements and reconstructions that must be carried out at stations and yards throughout the System each year in order to meet varying traffic requirements or replace obsolete facilities.

Included under this sub-item is the expenditure involved in extending platforms to enable a limited number of eight-car trains to be operated to improve peak period services on the Frankson line.

#### (102) *Accommodation for locomotives, carriages, &c.*

This sub-item provides for additions, improvements and reconstructions, mainly of a minor nature, in and about rolling stock workshops, depots and stabling areas.

#### (103) *Signalling, interlocking and traffic control systems.*

As well as covering a number of minor works in connexion with signalling and safeworking throughout the System, this sub-item provides for the progressive extension of automatic power signalling, which has two important advantages over manual signalling :—

- (a) It enables long block sections to be subdivided into short sub-sections, thus greatly increasing the capacity of lines ;

ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*(103)—*continued.*

- (b) It results in important savings by enabling crossing loops to be remotely controlled ; by reducing the number of signal-boxes required ; and by eliminating the necessity to keep staff on duty at safeworking stations at times when the stations do not need to remain open for the transaction of public business!

During the currency of the Act funds are required to enable tenders to be invited for the installation of automatic signalling between Macaulay-Coburg, and towards a number of minor works.

(104) *Lines, &c.*

The principal expenditure under this sub-item is represented by the annual programme of relaying of tracks and renewal of points and crossings. Provision is also made for minor improvements to banks, cuttings, curves, gradients, &c., which can often be carried out economically in conjunction with track relaying, and which can yield operating economies by way of higher sustained speeds or increased loads.

(105) *Level crossings, &c.*

This sub-item covers improvements to existing level crossings, including the provision of automatic boom barriers or flashing light signals, and various measures to improve the view of approaching trains or otherwise increase safety.

A continuous programme of improving level crossings by these means is being carried out as rapidly as the available funds and technical resources will permit.

(106) *Grade separation at level crossings, &c.*

Under the Country Roads and Level Crossings Funds Act passed in 1954 (now section 115 of the *Country Roads Act 1958*), grade separation is being undertaken at various locations, and it has been agreed that the Commissioners will contribute 20 per cent. of the cost of these works.

The amount provided is the estimated expenditure by the Railway Department during the currency of the Act on the following projects which are in hand or are to be commenced :—

Princes Highway East, Kilmany (completion).	} (progress).
Canterbury-road, Canterbury	
Fish Creek Road, Hoddle	
South Gippsland Highway, Loch	
Warrigal-road, Oakleigh	
Princes Highway East, Traralgon	
Princes Highway West, Winchelsea	

In addition, funds are required for land acquisition in preparation for grade separation work to be carried out in later years at Princes Highway West, Garvoc ; High-street, Shepparton ; and Somerville-road, Yarraville.

ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*(107) *Dwelling accommodation for employés, &c.*

This sub-item is to provide for expenditure during the currency of the Act on additional or improved dwelling accommodation which it may be necessary to provide to meet staffing requirements, mainly in country locations.

(108) *Staff amenities in depots, workshops, stations, offices and yards.*

This sub-item is to authorize expenditure on a progressive programme of improvements to staff amenities, including meal and locker rooms, showers, sanitary facilities, &c., that is being carried out as rapidly as the available funds will permit.

In addition to the works provided for under this sub-item, modern staff amenities are being incorporated in the rearrangement of the Melbourne goods sheds and marshalling yards (sub-item 115) as the work proceeds.

(109) *Communication lines, &c.*

This sub-item provides for additions to and modernization of the Department's communications network. The planned programme provides for the progressive displacement of morse telegraph circuits by a system of teleprinter centres located at key points throughout the State, local communications with these centres to be by telephone.

In order to implement this programme it will be necessary to upgrade a number of the principal pole lines. During the currency of the Act it is proposed to carry out this work on the Ballarat-Ararat and Horsham-Dimboola sections of the Serviceton line.

(110) *Electricity supply, &c.*

This sub-item provides for additions and improvements to electricity supply, both for normal lighting, heating and industrial purposes and for the operation of electrified lines. Under the latter heading the principal item of expenditure is in connexion with a long-range programme to convert the high tension supply for the Melbourne electrified lines from 25 to 50 cycles, in anticipation of the eventual discontinuance of 25 cycle supply from the Newport Power Station.

Provision is also made for additional substations to meet traffic demands, the replacement of oil circuit breakers, modifications to protective equipment designed to minimize interruptions to the services through faults on high-tension feeders, and extensions to the supervisory control system to control the additional substations.

(111) *Bridges, &c.*

This sub-item provides for expenditure during the currency of the Act on the reconstruction of bridges, with particular emphasis on the programme of replacing timber or part timber bridges, as they reach the end of their economic life, with permanent structures of steel and concrete, and for other improvements or modifications to bridges to meet altered rail traffic conditions or drainage requirements.

ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*(112) *Plant and equipment, &c.*

This sub-item provides for the purchase of all plant and equipment other than road motor vehicles and rolling stock plant and machinery.

Included under this sub-item are all track maintenance motors and machines ; goods handling equipment for traffic purposes such as cranes and fork-lift trucks ; printing machinery ; platform trolleys ; and accounting machines.

(113) *Private sidings constructed on railway land.*

As part of their concentrated drive to obtain new business in the face of intense competition, the Commissioners have adopted the policy of contributing towards the cost of private sidings constructed on railway land in suitable cases where a guarantee of substantial rail traffic is forthcoming.

Previously, the siding owner was required to meet the whole of such costs.

The amount provided is the estimated expenditure on this work during the currency of the Act.

(114) *East Camberwell—Mont Albert : Provision of additional track, including acquisition of land and roads.*

This work was authorized under the previous Loan Act.

Total expenditure to 26th August, 1967, \$1,835.

Following completion of two additional tracks between Richmond and Burnley (sub-item 116), it is proposed, as the next stage of the programme designed to improve peak period services on the Box Hill group of lines, to extend the Hawthorn—East Camberwell third track to a convenient point between Mont Albert and Box Hill.

This will enable additional trains to be scheduled to and from Box Hill, with consequential increased scope for the express running of long distance trains.

Funds are required during the currency of the Act to enable the work to proceed in conjunction with the Canterbury grade separation project (sub-item 106).

(115) *Melbourne goods sheds and marshalling yards—Rearrangement and provision of additional facilities, including acquisition of land.*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, \$3,998,580.

The existing Melbourne marshalling yards, whilst ideally located having regard to the task they have to perform, have grown up piecemeal over the years without any opportunity for unified planning, and as a result are not only costly to operate but result in delays to wagons which appreciably reduce the Department's standards of service in the handling of goods, particularly in regard to speed of delivery.

ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*(115)—*continued.*

A detailed investigation into the shortcomings of the yards has disclosed that provision of a modern automatic hump shunting yard (which is practicable within the space available) will revolutionize existing standards of service and at the same time yield very considerable economies—both direct savings in the cost of operating the yard itself and indirect savings from quicker turnround, and thus increased earning capacity, of locomotives and rolling stock.

To enable the new yard and the various inward and outward goods sheds to operate as a fully integrated and efficient whole, the functions of the existing sheds will be revised as the work proceeds, and additional shed space will be provided in order to eliminate the carrying out of loading and unloading work at uncovered platforms.

Both for financial reasons and because of the intricate nature of the staging work required to rearrange the yard without interrupting the flow of traffic, the project will take some four to five years to complete.

(116) *Melbourne (Flinders-street)—East Camberwell : Duplication of line, including provision of a flyover between Melbourne and Richmond and acquisition of land.*

This work was authorized under previous Loan Acts and the amount provided is the estimated expenditure during the currency of the Act.

Total expenditure to 27th August, 1966, \$4,517,971.

In order to enable the peak period needs of both short and long distance passengers to be adequately met on the busy Box Hill group of lines, and at the same time provide for the extra traffic that will be generated by the city underground railway, additional tracks are necessary.

Approved works include provision of two extra tracks between Jolimont Junction—Burnley, together with a third track, signalled for two-way operation, between Burnley—East Camberwell.

The Hawthorn—East Camberwell section of the proposed Burnley—East Camberwell third track and the two additional tracks between Richmond and Burnley have now been completed, and during the currency of the Act it is proposed to commence construction of the proposed third track from Burnley to Hawthorn.

(117) *Newport—Geelong : Duplication of line, including acquisition of land.*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, \$2,432,967.

The capacity of the existing single line is inadequate for the efficient handling of the traffic offering, and it is proposed to duplicate it section by section as circumstances permit.

The Corio—North Geelong and Newport South—Laverton sections have been completed, and during the currency of the Act it is proposed to complete the section between Laverton—Werribee, and to make a start on the earth works between Werribee and Little River.

ITEM I—WAY AND WORKS—*continued.**Sub-Item.*(117)—*continued.*

For maximum flexibility of operation, two-way automatic signalling is being installed on each track. At a later stage it is proposed to install a centralized traffic control system at Spencer-street to directly control all train movements between Newport South and North Geelong.

(118) *North Melbourne—Richmond and Jolimont—Princes Bridge (between) : Provision of connexions, and all work appurtenant thereto, between the Melbourne Underground Railway and existing lines, (preliminary planning and investigation).*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, \$9,619.

The Melbourne underground railway will be built by the Railway Construction Board (*vide* Item 3, sub-item 301), but a further major task will be involved in the flyovers, rearranged tracks, signalling, &c., which will be necessary to connect the underground with the existing lines.

Funds are required to meet the cost of the preliminary planning, test bores, &c., required for these works.

(119) *North Shore—Provision of additional sidings, including acquisition of land.*

This work was authorized under the previous Loan Act.

Total expenditure to 26th August, 1967, \$171,583.

In order to facilitate the despatch of full trainloads of superphosphate from Cresco Fertilizers Ltd's. works at North Shore, thus obviating delays and additional marshalling costs in North Geelong Yard, additional sidings have been provided at North Shore.

A direct lead has also been provided from the Cresco sidings to the main line in the "up" direction, thus enabling Melbourne-bound trains to run direct without having to reverse at North Geelong.

Funds are required to enable a shunting neck to be provided to facilitate the working of the new sidings.

(120) *Portland North : Rearrangement of yard and acquisition of land, including acquisition of that portion of the port access railway between and including the Exchange Sidings and the connexion with the main railway system at 249m. 64c. 54l. from Melbourne.*

This work was authorized under the previous Loan Act.

Total expenditure to 26th August, 1967, \$38,226.

This sub-item provides for the expenditure entailed in putting into effect the purchase by the Department, from the Portland Harbor Trust Commissioners, of the Exchange Sidings, on the port access railway, together with that portion of the access railway connecting these sidings with the main railway system at Portland North.

As part of the take-over agreement, it has been further agreed that the Harbor Trust Commissioners will utilize \$60,000 of the amount received for transfer of these facilities to purchase, in turn, the Portland North—Portland section of line from the Railway Department. This amount will be utilized to rearrange Portland North as the terminal station of the line.

ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*(120)—*continued.*

The net effect of the agreement is therefore that \$410,000 will be paid to the Portland Harbor Trust Commissioners and \$60,000 will be spent on rearranging railway facilities at Portland North.

A Bill—the Portland Harbor (Exchange of Land) Bill—to ratify the agreement and authorize the land transfers involved has been brought before Parliament during the present Session.

(121) *Ringwood: Provision of an additional platform and train stabling sidings, including acquisition of land.*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, Nil.

The present arrangement of trackwork at Ringwood, where the stabling sidings are directly connected to only one of the two existing platforms, results in delays at peak periods, when local trains are being originated and terminated and only one platform is available for through working.

Investigation has shown that provision of a third platform at Ringwood, by converting the existing “up” (south) platform into an island type, will not only eliminate the present congestion there but will have beneficial effects on train running throughout the East Camberwell-Ringwood section.

The provision of additional train stabling sidings at Ringwood, connected to all platforms, will result in the saving of considerable empty train mileage between Ringwood and Box Hill, where it is at present necessary to stable trains for which there is no room at Ringwood.

During the currency of the Act funds are required to enable construction of the third platform to be put in hand.

(122) *Spotswood: Provision of automatic telephone exchange, including acquisition of land.*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, \$132,761.

The departmental telephone system in the Newport-Spotswood area, consisting of a total of 220 extensions, is served by four old manual switchboards.

This results in slow and inefficient communication both locally and with Head Office, and to rectify the situation a modern automatic exchange is being provided to meet the whole of the requirements of the area.

The exchange building has been completed and the necessary equipment purchased, and funds are required to meet the cost of completing the installation of the equipment.

ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*

- (123) *Stray Current Electrolysis Mitigation : Provision of metallic return circuits for stray currents from electrified lines.*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, \$294,992.

Electrolysis—the corrosion of underground cables, water pipes, and other metal objects, by stray return currents—is a problem encountered to some degree in all cities having electrified transport systems which use the rails to return traction current to the substations. In Melbourne the problem is particularly acute.

Various devices have been employed to combat this problem since Melbourne's tramways and railways were electrified, but with the growing number of underground facilities provided by various authorities the present measures are proving increasingly ineffective.

A technical committee, comprising representatives of the State Electricity Commission, the Melbourne and Metropolitan Board of Works, the Gas and Fuel Corporation, the Postmaster-General's Department, the Melbourne and Metropolitan Tramways Board, and this Department, investigated the matter and recommended the provision of metallic return circuits to "trap" the stray currents that cause the trouble. The work has been commenced and the cost is being shared by the various authorities concerned.

The amount provided is the estimated expenditure by the Department during the currency of the Act.

- (124) *Tallarook : Provision of standard gauge crossing loop, including acquisition of land.*

Since the Albury-Melbourne standard gauge line was opened in January, 1962, goods traffic has steadily increased, and for the six months ended 30th June, 1967, the total contents tonnage handled over the line increased by 620,000, or 150 per cent., compared with the corresponding period in 1962.

The stage has now been reached at which, if further traffic growth is to be catered for without congestion and delays to trains at busy periods, additional crossing loops must be provided.

In the first instance it is proposed to construct a loop at Tallarook, utilizing portion of an existing 5' 3" gauge dead-end siding to reduce earthworks and trackwork costs. Points and signals at the loop will be controlled from the C.T.C. panel at Spencer Street.

Funds are required to enable the work to be put in hand during the currency of the Act.

- (125) *Tottenham : Provision of additional sidings in marshalling yard.*

The Tottenham marshalling yard, which is strategically situated in the heart of Melbourne's western industrial suburbs and has direct connexions with all main country lines, is the ideal location for the marshalling



ITEM 1—WAY AND WORKS—*continued.**Sub-Item.*(125)—*continued.*

of local goods trains serving the area bounded roughly by Footscray, Spotswood, Williamstown, Paisley, Ardeer and Albion, and including particularly the many busy private sidings served by the Brooklyn-Newport loop line.

The provision of additional sidings at Tottenham will enable all the yard work for this traffic, at present divided between Tottenham and Newport, to be concentrated at the former location with substantial operating savings, and will also give capacity for continuation of the traffic expansion which has been experienced throughout the area since the war.

Early completion of the additional sidings will confer a further benefit in that they will enable the Tottenham yard to relieve some of the heavy pressure that will be brought to bear on Melbourne yard during 1968-69 when certain of the existing sidings in that yard will have to be closed during a major stage of the rearrangement scheme (sub-item 115).

Funds are accordingly required to enable the work at Tottenham to be carried out during 1967-68.

(126) *Westall : Provision of public goods siding, including acquisition of land.*

This work was authorized under previous Loan Acts.

Total expenditure to 26th August, 1967, \$205,761.

The previously existing public goods sidings at Clayton and Springvale were inadequate for the traffic offering and had no room for expansion ; moreover, neither could be serviced without interfering with road traffic at busy level crossings.

It was accordingly decided to abolish both yards and replace them at Westall by a new facility which does not involve shunting over a level crossing and which has been established on an area allowing room for future expansion.

One siding at Westall is now in use, and Clayton and Springvale goods yards have been closed.

Provision is made in the planning for additional sidings to be constructed at Westall if justified by the traffic offering, and funds are sought to enable another siding to be put in hand if required during the currency of the Act.

## ITEM 2—ROLLING STOCK, EQUIPMENT, MACHINERY AND OTHER WORKS.

*Sub-Item.*(201) *Locomotives.*

This sub-item provides for expenditure during the currency of the Act on the Department's diesel locomotive programme, which is aimed at eliminating steam traction from the System by 1971.

The amount provided is to meet final payments on six "X" class locomotives of 1,800 h.p. and ten "T" class units of 950-1,050 h.p. (all of which are in service) and progress payments towards 25 "Y" class

ITEM 2—ROLLING STOCK, EQUIPMENT, MACHINERY AND OTHER WORKS—*continued.**Sub-Item.*(205)—*continued.*

units of 650 h.p., delivery of which is expected to commence in January, 1968, and a further ten "T" class units of 950—1,050 h.p., which are required for delivery early in 1969. Five of the latter locomotives will be fitted with special controls to make them suitable for hump shunting work in the new Melbourne yard (sub-item 115).

Provision is also made for the purchase of a number of rail tractors for shunting work.

(202) *Suburban electric trains.*

A continuous programme of construction of suburban electric trains is necessary, both to provide for growing outer suburban traffic and to replace outworn rolling stock. First to be replaced will be the outmoded swing-door cars; after all these have been scrapped, the oldest of the "Tait" type sliding-door cars will progressively become due for replacement.

Since 1956, sixty new trains of the "Harris" type have been placed in service, and the number of swing-door trains still running has been reduced to nine.

Specifications are now in course of preparation for the next major suburban train construction programme, in which further modifications in design, compared with the "Harris" trains, are proposed.

During the currency of the Act expenditure on this programme will be of only a minor nature, but funds are required to meet the cost of completing ten additional "Harris" motor carriages required for limited eight-car running on the Belgrave, Lilydale and Glen Waverley lines, and for six trailer carriages being built as prototypes in order to test, under operating conditions, certain design innovations under consideration for the forthcoming construction programme.

(203) *Country carriages, brake vans and sundry stock.*

The amount provided under this sub-item is required to meet Victoria's share of the cost of constructing two joint stock second-class saloon-type sitting carriages and two twinette sleeping carriages for the Melbourne-Adelaide "Overland" express; and towards the provision of forty bogie brake vans for fast goods trains.

(204) *Self-propelled rail cars and trailers.*

The amount provided under this sub-item is required to meet the cost of two air conditioned rail cars of the "Budd" type which are being purchased, with funds specially provided by the Government for the purpose, for service on the Ararat-Hamilton-Portland line.

(205) *Wagons.*

The amount provided is to meet the estimated expenditure during the currency of the Act on the purchase of a second batch of 100 hopper grain wagons (for which a special allocation of funds has been provided) and on the construction of new wagons and vans in Departmental workshops.

ITEM 2—ROLLING STOCK, EQUIPMENT, MACHINERY AND OTHER WORKS—*continued.**Sub-Item.*(205)—*continued.*

In order to provide for modern competitive conditions, new construction is being concentrated mainly on high-speed bogie vehicles for general goods and specific traffics, including containers, steel, cement, and pipes for natural gas projects.

All new vehicles are fitted with roller bearings, which practically eliminate the possibility of hot boxes.

(206) *Rolling stock equipment, machinery and other works, including road motor vehicles.*

This sub-item provides for the purchase of plant and machinery for rolling stock workshops, and the purchase of road motor vehicles including departmental cars, buses, goods vehicles and vehicles for servicing, inspection and breakdown purposes.

## ITEM 3—CONSTRUCTION OF NEW LINES OF RAILWAY, ETC.

*Sub-Item.*(301) *City of Melbourne underground railway (preliminary planning and investigation).*

This work was authorized under previous Loan Acts.

Preliminary planning and investigation is continuing for the proposed City of Melbourne Underground Railway, construction of which was authorized by this Parliament in 1960.

The total expenditure on this work at 23rd September, 1967, amounted to \$355,306.

The detailed survey of all known existing underground services along the route as laid down in the Act, has been completed including locations where further test drilling is desirable.

With respect to test drilling so far carried out, detailed reports including record of results and conclusions reached from laboratory testing of field core samples and in-situ field tests have been completed.

During the currency of the Act, it is proposed to carry out some further test drilling to supplement the information already obtained. Examination of the drill cores will provide additional information where the geology is in some doubt and will permit of the completion of the geological cross sections and block diagrams of the underlying rock structure. This work is portion of that projected for last year, but which was postponed so that available funds might be expended on collation of existing material.

It is proposed to embark on further water studies both in connexion with construction problems and the types of materials to be used in tunnel linings. The water is known to have a high saline content and its corrosive action on construction materials must be minimized.

ITEM 3—CONSTRUCTION OF NEW LINES OF RAILWAY, ETC.—*continued.**Sub-Item.*(301)—*continued.*

Plans for station layouts, points of entrance, &c. are being re-examined in the light of proposed developments along the route, including proposals of the Melbourne City Council for redevelopment of the Swanston-Elizabeth-Lonsdale-Latrobe Streets Square.

Work will be continued on the preparation of contract documents and associated descriptive material for tendering.

(302) *Surveys, Plans and Estimates.*

This amount covers the estimated expenditure for reports, inspections and surveys, and the preparation of any necessary plans and estimates during the currency of the Act.

(303) *Expenditure on other lines which have been or may be authorized by Parliament for construction.*

The amount sought is to cover expenditure, if required, on any new line that has been authorized, or on any new line that may be authorized during the currency of the Act.