

Specification for first group of cars  
purchased by HTT (include N<sup>o</sup> 8)

1915  
Duncan Fraser

# Hawthorn Tramways Trust.

Melbourne, Victoria.

## Manufacture, Supply, Delivery and Erection of Car Bodies for Maximum Traction Trucks and Combination Type for Single Trucks.

CONTRACT No. 12.

### Specification.

#### NATURE OF CONTRACT.

1. The work for which tenders are invited and to which this Specification refers, includes the manufacture, supply, delivery and erection complete (inclusive of painting, lettering, varnishing and all necessary accessories, etc.), at the Car Depot, Wallen Road, Hawthorn, Victoria, of Car bodies for Maximum Traction Trucks and Combination Type for Single Trucks.

2. The entire material to be supplied and work done under this Contract is to be constructed and finished in a good substantial and workmanlike manner, complete and in accordance with this Specification and Conditions of Contract, to the full extent and meaning of the same, and to the entire satisfaction, approval and acceptance of the Engineer, and under the supervision and direction of such Assistant, Assistants, Inspector or Inspectors as may be appointed by the Trust for the purpose of this contract.

#### TYPES OF CAR BODIES.

3. The Combination type of Car Body is shown on Drawing No. 36, and comprises a single deck Car Body with a central saloon compartment with end open compartments, the floor level of which is dropped below the saloon floor level. The saloon is provided with a single door at each end and side drop lights and contains side longitudinal seats. The motorman's compartments are separated from the open compartment by a bulkhead and are provided with glazed fronts to act as weather screens. The roof of the Car Body is of the monitor type with glazed side ventilator sashes.

4. The Maximum Traction Car Bodies shall be to the design shown on Drawing No. 38 & 42, being Car Bodies for mounting on maximum traction trucks, and having a saloon at either end with overhung drop platforms, and a centre open compartment, with the floor level dropped below the floor level of the saloons.

## DRAWINGS.

5. The drawings accompanying this Specification show the general design of the combination type and maximum traction type of Car Body, and include longitudinal elevations and sections and plan views showing arrangement and layout of underframes. For further particulars of details and fittings tenderers may make arrangements to inspect the Prahran and Malvern Tramway Trust's existing Combination and Maximum Traction Cars at the Car Depot, Malvern, which are designed on similar lines. Details of general construction will be supplied to the Contractor as required.

## PATTERNS AND TEMPLATES.

6. The Contractor shall provide at his own expense all Templates, measuring rods, pillar spacing rods, and jigs as may be determined necessary by the Engineer for the preparation of the work to ensure the various component parts being strictly interchangeable, and to enable the Inspector to accurately test and check the work during progress.

## IRONWORK.

7. All steel for plates or angles to be of the best quality, free from blisters, cracks, or other imperfections, and absolutely free from rust and scale, and shall be capable of bearing without fracture a tensile strain of 26 tons per square inch of section with an elongation of 20 per cent. in a length of eight (8) inches.

8. All cast iron work shall be of the best description, remelted, of fine grain, homogeneous, and of even gray colour, and castings to be clean, sharp, true and symmetrical, free from air holes and other defects.

9. All forgings to be of the best description, free from hammer marks and weld flaws, clean and properly finished.

10. All bolts and nuts to be Whitworth standard gauge and threads shall be clean, full cut and accurately fit the nuts. Heads of the bolts to be machine made cup, hexagon or countersunk, and all nuts to be machine made hexagon shape. Square head bolts will only be allowed in specially approved positions, and when tightened up the bolts must not project beyond the nut more than  $\frac{1}{8}$ in., and in facing work they must be cleaned off flush with nut.

11. Wood screws to be Nettlefold's or equal approved quality, clean, sharp and well cut threads. Only even gauge numbers to be used. In all facing work, glazing slips and on all interior work where screw heads show, they shall be of brass and shall have countersunk washers placed under them, if directed, and shall have the saw cuts turned in one direction. All metal fittings of a polished finish to have screws to match.

12. All holes in plate work or forgings must be drilled and where necessary squared out afterwards. In no case will a finished punched hole be accepted, but the Contractor may, if he desires, punch a hole  $\frac{1}{16}$  inch less in diameter than the finished size, and then reamer it out to the finished diameter.

13. The dashers shall be of No. 14 S.W.G. ground face mild steel plate rebated to roof corner pillars, and screwed in position. The dashers are to be hydraulic pressed to shape, free from all hammer marks and blemishes.

14. The plates must be absolutely free from rust or the indication of their having been previously rusted. In facing them no water must be used until such time as it is necessary to pumice them in the course of painting. Holes are to be cut in dashers for the reception of headlights.

15. Steel for panels shall be of steel plate free from all rust, hammer marks and blemishes and shall have a ground face finish, the result of successive scourings of pumice and turps. No water pumice-stoning shall be used on the panel plate until after it has been painted.

#### BRASS AND BRONZE-WORK.

16. All brass-work and bronze-work shall be sound and free from honeycomb and other defects. The brass shall be composed of eighty-three per cent. of copper and seventeen per cent. of zinc, and the bronze shall be composed of ninety per cent. of copper, two per cent. of zinc, and eight per cent. of tin.

#### TIMBERS.

17. The timbers for Car Bodies shall be of the best of their respective kinds, dry, sound and well seasoned and free from knots, shakes, and other defects, and to the entire satisfaction of the Engineer.

#### UNDERFRAMING AND FLOORING.

18. The Combination type of Car Body is supported by two longitudinal side sills, which shall consist of steel angles 7in. x 3½in. x ½in. cranked at each end of saloon in order to lower the floor level of the open compartments by an amount equal to nine inches below the level of the saloon. These steel sills shall be in one piece and shall be formed with a camber such as will allow for the settlement due to the weight of a loaded Car Body when placed on the trucks. With the side sills shall be provided and attached all plates and angles required for the attachment of Car Body to the sills and also the truck truss rods.

The underframing timbers shall be of the best quality pitch pine to sizes shown on drawings, and the various members of the framing are to be secured by tenon and mortice and carefully fitted and securely fastened together and further secured by angle cleats, cross rods, screws or pins. The underframe timbers as indicated on the drawings shall be rebated 1in. x 7⁄8in. to take flooring boards.

19. The underframe timbers of maximum traction type trucks are to be of the best of their respective kinds, dry, sound and well seasoned, and free from knots, shakes, or other defects. The side sills shall be in three lengths of long leaf yellow or Pitch pine 7½ inches by 4½ inches, bolted and secured together as indicated on drawings, and reinforced by means of a steel side sill plate. Head-stocks shall be of Pitchpine, 9½ inches by 4 inches. Cross bearers of Pitchpine 7 inches by 4½ inches, 7½ inches by 3¾ inches and 4½ inches by 3¾ inches. Body bolsters of oak or iron bark 8¾ inches by 5½ inches. Cross timbers at the dropped portion of frame shall be of pitchpine, 9½ inches by 3½ inches, and 8½ inches by 4½ inches. Longitudinal timbers shall be of pitchpine 3½ inches by 3½ inches, and 4½ inches by 3½ inches. The foregoing figures are finished dimensions to which the timbers must be accurately prepared. The deep timbers to be double tenoned with haunchings, and secured by angle cleats, cross rods, screws or pins as indicated at the several junctions of the underframe members on Drawings.

20. The tenons and mortices shall each receive a coat of first quality thick white lead in oil, the lead to be thoroughly wiped into all the corners and the joint driven while the lead is wet.

21. Two trapdoor openings to be framed to the dimensions as shown on Drawings to give access through the floor to the motors. Trapdoors shall be ledged and braced and provided with lifting rings let into wood mat. The nuts and washers of these rings are to be let in flush on the under side. A tee bar  $1\frac{1}{4} \times 1\frac{1}{4} \times 3/16$  inch to be placed at the meeting joint of hatchway and take its bearing in the body timber and screwed into position.

22. Flooring to be of best quality  $6 \times 7/8$  inch grooved, tongued and square edge red flooring Baltic Pine, laid diagonally and reversed in adjoining bays. The flooring to fit rebates  $1 \times 7/8$  inch deep, the ends of each board to be cut a tight fit into the rebate and well cramped up before screwing. Special care must be used to obtain a thoroughly tight fit in the rebates, the boarding adding materially in keeping the underframe square.

23. The floor between seats and in gangways shall be covered with a grooved wooden mat  $\frac{3}{4}$  in. thick.

#### BODY FRAMING.

24. All pillars, rails, bracing and other parts of the body framing shall be of the best quality straight grained white ash, free from shakes, or defects of any description and thoroughly dry and well seasoned.

25. The body pillars shall be grooved for lights or blinds as required and shall be tenoned into underframe timbers, tightly fitting in their respective mortises and draw pinned with rendered straight grained hickory pins. Every tenon and mortise shall receive a coat of best quality white lead in oil, and be driven while wet. The pillars are further secured by knees or strap bolts. The ends of strap are to be turned over and checked into posts.

26. Cant rails shall be of best quality yellow or pitch pine mortised on to the pillars and secured by draw pinning and tee plates. The bow rail to be of Blackwood bent to shape. Fascia boards to be  $7/8$  in. thick gained on pillars and rebated to cant rails.

27. Belt rails to be of pitch pine.

#### PANELS.

28. The upper side panels, and end panels of saloon shall be made of best selected cedar or approved suitable timber backed with burlap glued to the panels and all curved panels before being placed in position must be properly heated, and then glued to the pillars or ribs. The burlap shall receive two coats of paint after the glue is thoroughly dry.

29. The lower side panels of saloon shall be of steel of No. 14 S.W.G., as specified for dashers.

30. Steel panels for motormen's bulkhead shall be of No. 20 S.W.G. fixed over  $\frac{1}{2}$  in. wood boards, the latter to be coated with boiled linseed oil and the steel panel with red oxide of lead and fixed whilst same is in wet condition. Steel panel to be screwed to post and rail rebate by countersunk head screws.

31. The body sides are to be moulded up as shown on drawings. Mouldings are to be run clean, correct to shape and scribed to each other at all inter-sections and screwed in position.

## DOORS.

32. Saloon sliding doors to have ash frames 1 in. thick, with dark wood panels, with sunk bevelled chamber and provided with all overhead hangers and wheels, top rollers, runner bars, rubber stops, anti-rattlers, wearing strips and bottom cast iron guides suitable also as foot treads.

Through bolts  $\frac{3}{4}$  in. dia. at the front ends of Saloon framing, right through the top saloon end framing, down the door pillars, and through the ends sills.

## ROOF.

33. The roof of combination type Car Body shall be of the monitor type as shown on drawings extending over the saloon and portion of each open compartment, and from the end of the monitor portion the roof is to be finished with canopies as shown.

34. The monitor roof is to be fitted with moveable hinged lights, glazed with figured glass of approved pattern. The roof sticks to consist of best selected ash, cut to template. Upper roof sticks to have shaped and chamfered ends screwed to upper deck rail, and tenoned for edging piece. Roof top and bottom rails to be of ash mortised to receive mountings.

35. The roof of the maximum traction type of Car Body shall be of the plain arch type, with roof sticks of bent blackwood, tough, straight grained, and of the best quality. Roof sticks to be halved into cant rails and screwed up with joint, well coated with white lead.

36. The roof framing shall be covered with  $2\frac{1}{2} \times \frac{1}{2}$  rabbeted roof boards, securely screwed to the roof sticks. Where showing underneath the roof boards shall be V jointed. The roof boarding, after having been laid and securely screwed, shall be well dressed to a smooth surface, and shall not show ridges along the joints of the boards.

37. The roof shall be reinforced with steel car lines bolted to roof sticks, and secured to cant rail.

38. The roof shall be covered with scrim, well glued to boards, and then covered with approved cotton duck, laid as follows:—

The scrim to receive two coats of white lead, and when this is set a coating of white lead  $\frac{1}{16}$  in. thick is to be applied, and while this is wet lay the canvas on and thoroughly stretch same and rub down into the white lead and close tack round the edges with copper tacks. Fix on the cover mouldings and paint the canvas with three coats of good white lead in oil. After fixing the trolley board the canvas shall have a coat of "Bon Accord" paint, in an approved finishing tint.\*

39. The underside of roof boarding and framing, where covered by ceiling, shall have a coat of white lead paint before fixing the decorative ceiling.

40. The decorative ceiling, where indicated on Drawing, shall consist of the best selected 3-ply veneer of birdseye maple, secured by approved beads and screws, and suitably decorated and varnished, and the back coated with two coats of white lead paint before fixing.

\* Letter dated 26/7/1916 forming part of Contract No 12A (for later cars) specifically calls up roofs painted "white". Can it therefore be inferred that the earlier cars (i.e. No 8) had a roof of color other than white? — perhaps green?

41. Trolley boards shall be of the best quality white pine, two boards wide, carried on arch pieces cut from ash, as shown on Drawing. The ash pieces to be bedded in good thick white lead, and securely screwed to the roof, the trolley boards being painted with a coat of thick white lead, turned over on the arch pieces and screwed down. The trolley base blocks to be blackwood, two inches thick, suitable in size for trolley base and supplied with square head bolts for securing the trolley pole base. Heads of bolts to be sunk  $\frac{1}{4}$ -inch below flush and covered with insulating compound.

#### INTERIOR FINISH.

42. The interior finish of the Car Bodies shall be a combination of ash framing, silky oak panelling, and blackwood facings, in such combination as shall be approved by the Engineer or his Inspecting Officer.

#### SEATS.

43. The seats in saloon shall be side seats as shown. Rattan Covers and backs.

44. Seats in the open compartments shall be of the slat type, composed of ash framings, filled with slats alternately light and dark wood, such as ash and blackwood, or other approved combination. Throughout the backs and seat slats all screws must be driven from the under side, and not appear on the facing side.

#### BLINDS.

45. The sun blinds shall be of Pantasote of approved pattern, attached to spring rollers, with approved automatic fixings. Both edges of blinds to be finished in leather.

46. The weather blinds shall be of best approved fancy duck, reinforced with steel laths to glide in grooves formed of angle irons with cover plates as indicated on Drawings. The rollers must have powerful springs for rolling up curtains.

47. All blinds shall be fitted with frictional device working in the grooves, which will lock in any position, and be released by means of thumb grips in centre of blind, similar to as shown in Figure 637, page 149, of the Electric Railway Dictionary.

#### LIGHTS.

48. The saloon shall be provided with drop lights on each side of saloon, arranged to drop on to rubber cushions. The sash frames shall be of ash, securely mortised, glued and wedged and rebated for plate glass. Top and bottom finger lifts shall be provided, the bottom lifts being of aluminium, with leather flaps, to sample. The number of lights required will be given by the Engineer.

The saloon bulkheads shall each have one fixed and one swing light on one side of door opening, and one drop light on the other side. The open compartment bulkhead shall have three fixed lights, the centre being provided with sliding shutter, and also two leaded lights.

#### GLAZING.

49. The clear glass shall be of Pilkington's best quality polished plate, 3-16 inch thick, free from blemish of any description.

50. All glazing to be well bedded in best putty. Glazing fillets shall be of rounded front edge section, neatly mitred at corners, and screwed in position with countersunk screws and washers under the heads. All sashes to be glazed at least two weeks before being placed in cars, and all fixed lights to be glazed in time to allow all putty being well set and hardened before cars are handed over for traffic.

51. Saloon doors to have embossed monograms to design.

*Did this really happen? Know no evidence to prove it did.*

#### WINDOW GUARDS.

52. On the outside of the saloon bulkhead lights and for the motor-man's bulkhead lights there shall be provided window guards consisting of three bars of  $\frac{1}{4}$ -inch gas pipe set in bronze sockets.

#### FOOT BOARDS.

53. The foot boards and toe boards to be of pitch pine, free from shakes, large knots, resinous patches and other blemishes, of good quality, well seasoned and in one length. Foot boards shall be carried by hinged brackets, and shall be coupled from side to side of car, with connecting rods, so that both foot boards cannot be down at the same time.

#### BUMPERS.

54. The end bumpers shall be of mild steel angles, 6in. x  $3\frac{1}{2}$ in. x  $\frac{1}{2}$ in., bent to curvatures shown, and supported on and bolted through pull knee extended from under framing.

#### BRAKE GEAR.

55. A hand brake, complete of "Ackley" or similar approved pattern, to be provided; the brake to be operative from each end of car. Shafts to be 1 $\frac{1}{8}$ in. diameter at top, and 1 $\frac{3}{8}$ in. diameter at bottom, and fitted with bevelled gearing, enclosed in a light iron dust-proof case, with necessary means for lubrication. A 15in. diameter hand wheel, placed vertically, to be provided for working the gear, and securely fixed to spindle. Gear case to be securely fixed to dasher rail, and further supported by two suitable struts fixed to crown piece.

56. The above to be complete with brake shaft ratchet, pawl and chain, and to be erected and adjusted to the satisfaction of the Trust's Engineer. The Trust will provide the brake pull rods, floating levers, and brackets, but the Contractor shall attach the same to the underframe, and provide all necessary bolts, etc., required.

#### COLLAPSIBLE GATES.

57. Collapsible Gates, of the type indicated on Drawings, are to be provided, two on each motorman's compartment, to swing either across motorman's or passengers' entrance as required.

#### HAND RAILS AND WATER PIPES.

58. Grab Hand Rails to be fixed, two in each saloon, and supported by brackets to roof framings. The grab hand rails to be 1 $\frac{1}{2}$ in. diameter, and to be turned from straight grained stringy bark. To each grab rail are to be attached and fixed six strap hangers of best quality oak bark tanned leather.

59. Grab handles of the above dimensions are to be fixed on each side of Cars, as indicated on drawings, and supported by bronze brackets. Water down pipes to act also as grab handles, to be of  $\frac{3}{4}$  in. black iron piping bent to sweep of car, and supported by bronze brackets and bronze sockets screwed to top end of pipe.

60. On saloon bulkheads horizontal bronze grab handles shall be fitted, four per Combination Car.

61. Hand Rails of polished bronze to be fixed, two in each end platform, and hand rails of  $\frac{3}{4}$  in. round iron to be fixed on side panels of centre compartment, four on each side of Maximum Traction Car.

#### PARCEL RACKS.

62. Parcel Racks shall be provided at each end of Combination type Car on motorman's bulkhead, and shall consist of four approved bronze end brackets, carrying a grab hand rail  $1\frac{1}{8}$  in. diameter, as specified above, and the rack formed with  $5\frac{1}{8}$  in. brassed iron tubes.

#### SAFETY TREADS.

63. On all steps and at all entrances to Cars, Safety Treads of approved metal and design to be provided.

#### SANDING GEAR.

64. Four galvanised iron Sand Hoppers, with "Dumpit" valve boxes, springs and levers to be fitted to each Car, and worked by levers extending from platform pedals. The sand hoppers to be fitted with flexible steel tubing, supported by clips on truck pilot board.

#### LIFE GUARDS.

65. The Life Guards shall be of the "H.B." universal type, complete with fender, gate, and tripping gear. The fender and gate hangers to be fixed to underframing with bolts.

#### ROOF STEPS.

66. Bronze footplates and steps fixed on posts, and hand grabs and foot boards on roof, shall be provided at diagonally opposite corners of cars to allow access to the roof.

#### BELLS.

67. "Retriever" Hand Signal Bells shall be supplied and be fixed, two under each canopy, and operated by  $\frac{3}{4}$  in. diameter oak tanned leather cord supported by bronze brackets, and at bulkheads by ferrules, all with chamfered eyes to prevent wear of bell cord. Gongs and foot gear supplied by the Trust shall be fixed at each end of the car.

#### TOOL BOX.\*

68. One Motorman's tool box to be made of best quality white pine  $\frac{3}{4}$  in. thick, dovetailed at corners, reinforced with No. 18 gauge sheet iron, provided with handles at each end and carried in an angle iron frame fixed to underframe timbers.

#### LOCKERS.

69. Provide and fix under seats where directed four lockers in each saloon, with hinged doors and standard Trust lock.

\* Shown on side view in photograph  
to be supplied by Michael Norbury.

## BARRIER RAILS.

70. Barrier drop rails of the type indicated on drawings shall be provided with necessary rubber buffers, wearing plates, guides, and gravity catches. Rails to be of straight grain ash free from knots, shakes, and all other defects.

## MOTORMANS SEAT.

71. Motorman's detachable seat and fixings of the type indicated on drawing shall be provided in each car.

## MATCH STRIKERS.

72. Match Strikers shall be provided and fixed as directed.

## SWITCHBOARDS, LIGHT FITTINGS, ETC.

73. Switchboards, 24 inches by 18 inches by  $\frac{3}{4}$  inch, to be provided, one on each end bulkhead, and all holes and grooves required for switchgear and wiring shall be made by Contractor.

74. Blocks for carrying lamp fittings shall be provided and fixed to ceilings. All mouldings required for covering wires and all grooves, holes or trapdoors in any part of the Car Body for taking light or power wires or electrical fittings shall be made by the Contractor.

75. Provide all holes required in dashers or elsewhere and attach and fix destination signs and head lights provided by the Trust.

76. Every facility shall be given by the Contractor for this Contract to the Trust's staff carrying out the wiring for electrical equipments and the erection of the trucks and magnetic brakes.

## SIDE SILL PLATES.

77. The side sill plates on the Maximum Traction bodies shall be of mild steel of the best quality free from blisters, cracks, or other imperfections, and absolutely free from rust and scale and to the general Specification for plate work and drilling. Each sill plate shall be built up of three pieces of 11 in. x  $\frac{3}{4}$  in. plate, with  $\frac{3}{4}$  in. cover plate securely riveted. The rivets shall be counter-sunk flush on the outside, and also on the inside, where they are in contact with the framing timbers or angles.

## TRUSS RODS.

78. The Maximum Traction bodies shall have two external truss rods under the mainside frame drop centre portion, one each side.

The Bolster timbers shall be trussed each by means of two  $\frac{3}{4}$  in. diameter truss rods, with cast steel compression and anchor plates.

## ERECTION AND MOUNTING OF BODIES.

79. The Contractor for the Car Bodies must see during the course of construction that the sills are laid down with a proper allowance for the sag of the Car Body when placed on the trucks and loaded, and the angle sills shall be formed with the necessary camber to allow for this sag.

The Contractor shall mount and fix Car Bodies on the trucks supplied by the Trust at the Car Depot, and shall attach brake gear and fix truck truss rods.

## ERECTION AND MOUNTING OF BODIES.

80. The Contractor shall conform to all instructions regarding sanitary arrangements and the cleanliness of buildings and Car Bodies, and provide one watchman to be in attendance during the whole of the time men are not working. Every precaution to be taken to guard against fire, and all the Contractor's employees to be properly drilled to operate hydrants, etc., in case of fire.

81. Every possible precaution is to be taken to avoid straining the underframe or body after its erection, and the Engineer or his Inspecting Officer will exercise absolute control over the method to be employed in lifting the completed body, moving the same in the Contractor's works during the transit into the Car Depot, and lifting and mounting the body on the truck after its arrival at the Depot.

82. All cars to be mounted at the Trust's Car Depot, on the trucks to be supplied by the Trust. Adjust the brake rods and chains to the requisite length.

83. The mounting of Car Bodies to be carried out by competent men under the constant supervision of the Contractor, or Contractor's representative.

84. The Contractor to secure the body to the maximum traction trucks by means of the King pin and its plates, the radial side bearing plates and the spring post bolster wearing plates; and fix the safety chains supplied with the trucks.

## PAINTING AND DECORATING.

85. In all cases where framing joints are made, iron knees, strap bolts, etc., adjoin wood work, all edges of grooved and tongued boarding, the back side of all panel plates, and in every similar case, and elsewhere as directed by the Engineer, the Contractor must provide for and use a liberal coating of good genuine white lead in oil, or other approved paint.

86. After erecting the underframe it is to be coated with two coats of lead paint, well worked and wiped into all angles and corners, rebates, notchings, bolt heads, etc., and after laying the floor, the underside shall be similarly coated.

87. The inside finish of all Car Bodies shall be in the colour of the natural wood.

88. All inside work, window frames, etc., shall receive a first coating of varnish and size, and shall then be properly sand-papered, followed by a second coat of clear varnish, then stopped, and followed by two more coats of varnish evenly applied, the last coat being finishing body varnish. The ceilings shall be decorated, and lined either in gold or aluminium, as directed.

89. The under side and back of all seat slats and the unexposed portion of all varnished work shall have two coats of varnish and size.

90. Succeeding coats of paint must be of a distinctive tint, and a colour board, showing the rotation of these distinctive tints, must be prepared before painting is commenced, and filed with the Engineer for reference during the progress of the contract. A similar board being exhibited in the Contractor's paint shop.

91. The body exterior shall be finished in tints to be approved of by the Engineer.

\* Confirmed by TMSV secretary Bob Searle (aged 77) who can remember the original cars having a flat non-glossy finish

92. Before any colour is applied the whole of the wood work is to be thoroughly sandpapered down to a smooth finish, and all oily spots cleaned off before any paint is applied.

93. The steel panels to be filled and well rubbed down.

94. The whole of the woodwork to be painted shall then be thoroughly primed with three coats of genuine lead colour, mixed in linseed oil and turps, care to be taken to run paint well into all pin holes, screw and nail holes, cracks, etc., and be well sandpapered between each coat of paint.

95. Five coats of filling up to be applied, the time between each application being at least 24 hours.

96. In the intervals between all holes, cracks, etc., to be thoroughly stopped up with hard stopping. The component parts and their proportions shall be submitted to the Engineer for his approval beforehand. After standing 24 hours it shall be thoroughly rubbed down to a smooth finish with pumice stone, and then allowed to dry out before anything further is done. When perfectly dry it shall be lightly sandpapered and two coats of lead colour supplied.

97. After being lightly sandpapered and carefully dusted down, any remaining holes must be stopped up, and then the approved body colour applied.

98. Three coats of body colour is used, the last coat of which must be applied with varnish added.

99. Care must be taken to allow each coat to thoroughly dry, 18 hours at least being allowed between each coat.

100. The varnish colour after being dulled, all main panels shall have a thin coat of flattening varnish, after which the whole must be flattened down with ground pumice powder and water until a smooth dull surface is obtained.\*

101. The lining, lettering and decorating to be provided as directed by the Engineer.

102. The broad lines on panels and all lettering to be provided in gold leaf, and shaded in suitable colours to relieve.

103. The whole, after being thoroughly cleaned down, to receive two coats of hard drying body varnish, and after standing at least 48 hours again flattened down, and the final coat put on of best wearing or finishing body varnish.

104. The floor to be coated with two coats of lead colour, all holes and cracks being filled with putty, and then finished with two coats of approved floor colour.

105. The name "Municipal Tramways" shall be lettered on the lower side panel of saloon, and the H.T.T. standard monogram on the side panel.

106. The dashers to have the number of car each side of the head-light, and tin. line around same, with a black  $\frac{1}{4}$  in. line inside of gold lines, and edged with yellow on the outside.

107. All external ironwork to have two coats of priming and then finished with two coats of approved colour and varnished with hard drying varnish.

108. Trolley pole and base to have a coat of lead and then two coats of black.

109. No boiled oil shall be used under any circumstances on the body of cars, with the exception of the roof and floor portions, the final coats of which may have a fair proportion of boiled oil and varnish added.

+ Photographic evidence suggests this did not occur

110. All materials shall be of the highest grade, and the varnish shall be Harland's, or other approved maker, subject to the decision of the Engineer.

#### MAINTENANCE.

111. The Contractor shall maintain at his own expense every section of the works included in this Contract for a period of six months after the final completion of same as certified by the Engineer. The maintenance period for each car shall start from the date upon which it is handed over to and accepted by the Trust's Engineer as completed, and if any part of the work within that period shows signs of mechanical weakness or other defect, due, in the opinion of the Engineer, whose decision thereon shall be final, to faulty material or workmanship, he shall make good the same at his own expense to the satisfaction of the Engineer before becoming entitled to receive any monies held by the Trust under Clauses 24 and 34, of the Conditions of Contract. The Trust shall have full, free and unrestricted use of the said works without any interference whatever on the part of the Contractor during the currency of the maintenance period, and such use of the said works on the part of the Trust shall not relieve the Contractor of any liabilities or obligations whatever in respect to this Contract.

#### DUTIES.

112. The whole of the Customs duties, wharfage, landing, and other charges upon the material and apparatus included in this Contract, shall be paid by the Contractor and included in the Contract price.

113. Alternative Tenders will be received (a) for Car Bodies, metal work as specified; (b) for metal work to be as far as possible sherardised.

All sherardised work to be first brought up to smooth surface before sherardising, after which it is to be well buffed, to the entire satisfaction of the Engineer.

#### QUANTITY.

114. The number of Car Bodies to be supplied under this Contract shall be 10 (ten) Car Bodies for Maximum Traction Trucks, and nine (9) Car Bodies for Single Type Trucks, as shown in the Schedule of Prices accompanying this Specification.

115. The Trust shall have the right at any time during the currency of this Contract to increase the number of Car Bodies to be built and supplied under this Contract.

#### DELIVERY.

116. Tenderers shall state the earliest date at which they can guarantee to deliver and hand over complete to the Trust the Car Bodies as specified.

F. A. McCARTY,

Melbourne, January, 1915.

Consulting Engineer.

This is the Specification marked *C* referred to in the annexed Agreement with the Trust dated the *22<sup>nd</sup>* day of *April* 191*5*.

Chairman *[Signature]* Contractor *[Signature]* **DUNC** **TR LTD.**  
*[Signature]* *[Signature]*

## Schedule of Documents.

- A. Conditions of Tendering.
- B. Conditions of Contract.
- C. Specification.
- D. Advertisement. *Schedule of Prices*
- E. *Tender Form*
- F. *Form of Contract.*
- G. *Letter dated 13<sup>th</sup> April 1915*
- H. *Letter dated 20<sup>th</sup> April 1915*
- I. *Letter dated 22<sup>nd</sup> April 1915*
- J. ....
- K. ....
- L. ....
- M. ....
- N. ....
- O. ....
- P. ....
- Q. ....
- R. ....
- S. ....
- T. ....
- U. ....
- V. ....
- W. ....
- X. ....
- Y. ....
- Z. ....

# Hawthorn Tramways Trust.

Melbourne, Victoria.

## SCHEDULE OF PRICES. Alternative "A"

for

## CAR BODIES.

CONTRACT No.

Ten (10) Car Bodies, bogie type, with dropped centre, for maximum traction trucks, erected, painted and delivered complete, as specified, and mounted on trucks at Car Depot, Hawthorn at £ 795 ——— each ... ..

7950.0.0

Nine (9) Car Bodies, Combination type, erected, painted and delivered complete as specified, and mounted on trucks at Car Depot, Hawthorn, at £ 550 '0 '0 each ... ..

4950

Total...

£ 12900

### TIME FOR COMPLETION.

The whole of the Car Bodies to be delivered and mounted within seven months from the date of acceptance of tender.

Tenderer

R. Duncanson Director.

Address

46 Franklin Street Adelaide

Witness

W. M. Ross

This is the Schedule of Tender marked D referred to in the annexed Agreement with the Trust dated the 32<sup>nd</sup> day of April 1913.

Chairman

R. Duncanson

Contractor

DUNCAN & FRASER LTD.

R. Duncanson

# Hawthorn Tramways Trust.

Melbourne, Victoria.

## CAR BODIES.

CONTRACT No. 12.

# TENDER FORM.

To The Chairman,  
The Hawthorn Tramways Trust,  
Melbourne, Victoria.

Under and subject to the Conditions of Tendering, Conditions of Contract, Specification and Schedules of Prices hereto attached <sup>we</sup> the undersigned <sup>do</sup> hereby tender and offer to supply and deliver to THE HAWTHORN TRAMWAYS TRUST, completed at Car Depot, Hawthorn, Victoria, the materials described in the Specification hereto attached and at the prices set opposite each item in the Schedules of Prices hereto attached.

<sup>we</sup> enclose a Bank <sup>cheque</sup> for the sum of <sup>one hundred</sup> £ 135 — , being at the rate of not less than One Per Centum (1<sup>0</sup>/0) on the total of our highest tender, as a preliminary deposit, and <sup>we</sup> agree that such sum shall be absolutely forfeited if <sup>we</sup> at any time within <sup>ten</sup> 10 days after the said tender is opened withdraw same, or if in the event of this tender being accepted fail to execute the contract as hereinafter mentioned within fourteen days thereafter.

<sup>we</sup> further undertake in the event of any of the alternatives under this tender being accepted to execute, when called upon by you to do so, a formal contract for the due supply and delivery of such materials in the terms of the form of contract hereto attached, subject to such final additions thereto and alterations therein as in your opinion may be necessary to adapt the same to the conditions of this tender.

<sup>we</sup> further undertake that this tender shall not be withdrawn by <sup>us</sup> before <sup>24<sup>th</sup> April 1915</sup> and may be accepted by you at any time before <sup>that date</sup>.

WITNESS on hand this

<sup>13<sup>th</sup></sup> day of <sup>April</sup> 1915

Tenderer's Name... A. W. Curran Director.

Address... 46 Franklin Street Adelaide

Witness... Wm Ross

This is the Form of Tender marked E referred to in annexed Agreement with the Trust, Dated the 22<sup>nd</sup> day of April 1915

Chairman [Signature]

Contractor DUNCAN & FRASER LTD.

[Signature]

This is the Document marked *F* referred to in annexed Schedule of Documents.  
Chairman. *A. McCreary* Contractor **DUNCAN & FRASER LTD.**

# Hawthorn Tramways Trust.

Melbourne, Victoria.

## CAR BODIES

CONTRACT No. 12.

# FORM OF CONTRACT.

AN AGREEMENT made the *22<sup>nd</sup>* day of *April* 191*5* between *Duncan & Fraser Ltd* of *46 Franklin Street Adelaide* hereinafter and in the several documents hereto annexed referred to as "THE CONTRACTOR" of the one part, and the Hawthorn Tramways Trust, hereinafter and in the several documents hereto annexed referred to as "THE TRUST" of the other part.

1. The Contractor will execute and complete in a thoroughly sound and workmanlike manner the works defined in the Specification signed by the Contractor in accordance in every respect with the requirements, stipulations and conditions set out in the Conditions of Contract and Specification hereunto annexed, and in accordance with the Schedules of Prices set forth in the Form of Tender signed by the Contractor.

2. It is hereby agreed and declared that all the provisions of the said Conditions of Contract and Specifications and the said Schedules of Prices shall be as binding upon the Contractor and upon the Trust as if the same had been repeated herein and shall be read as part hereof.

3. The Trust shall, in a manner provided by the said Conditions of Contract, pay to the Contractor for the execution, furnishing and performance of the said materials, things and services the sum or sums set forth in the said Tender and Schedule of Prices therein referred to, or such greater or lesser sum as, according to the terms of the said Specifications and Conditions of Contract, shall become payable by the Trust to the Contractor.

The Contractor has paid to the Trust the sum of *Six hundred forty five* (£645.00) under clause No. *13* of the said Conditions of Contract.

4. The various documents referred to and scheduled on the back of Tender Form shall be part of the contract hereby made.

Signed by..... *A. McCreary*

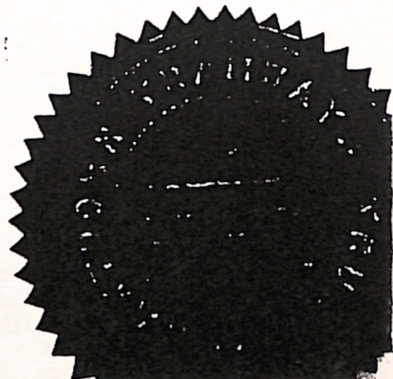
In the presence of..... *F. A. M. [unclear]*

The Common Seal of the Hawthorn Tramways Trust was affixed hereto in the presence

Chairman..... *A. McCreary*

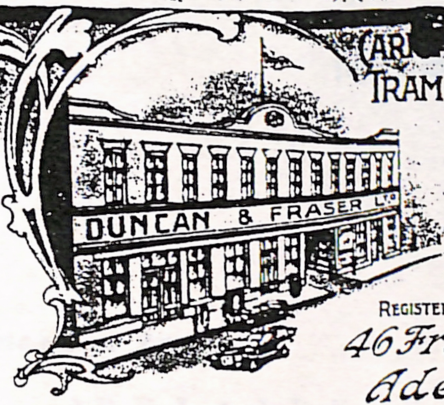
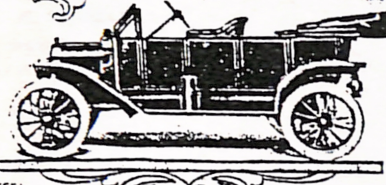
Member..... *Vincent Bolan*

Secretary..... *[unclear]*



# Duncan & Fraser Ltd

(ARRANGES) BUGGIES  
TRAM (ARS) MOTOR (ARS)



CABLE ADDRESS: "AUTOCAR" ADELAIDE.  
CODES: WESTERN UNION (UNIVERSAL EDITION) A. B. C. S.™ EDITION.

REGISTERED OFFICE  
46 Franklin St  
Adelaide. 13th April, 1915.

The Chairman,  
The Hawthorn Tramway Trust,  
31, Queen Street, MELBOURNE.

Dear Sir,

We are wiring you today as follows :-

"POSTED TENDER FOR CAR BODIES TO CHAIRMAN HAWTHORN TRAM TRUST".

In submitting our tender we beg to state that a saving can be made if local timbers are used in some parts where ash is specified. In your specification you mention Ash for several parts; we take this to mean American Ash. There are a number of species of Ash on the market, and especially those from the East (Japan, Siberia, etc.) although good looking, and appears good enough for this class of work will not give good service; they are too brittle and get more so as time goes on. They are procurable in Australia in any quantity, but we advise strongly against using these.

The delivery time we put in as October, but if this does not fit in with your contracts we could arrange otherwise.

We have posted our Tender together with bank cheque for deposit under separate cover, and it should reach you by same mail as this letter.

Yours faithfully,

DUNCAN & FRASER LTD.

*A. W. Dawney* Director

RD/IDA.

*This is the letter marked 'G' referred to in the annexed agreement with the Trust dated 22 April 1915. Chairman A. W. Dawney. Contract for DUNCAN & FRASER LTD. Adelaide.*



CHAIRMAN:  
D. H. DUREAU  
SECRETARY:  
L. A. CLEVELAND, F.I.A.V.

CHAIRMAN'S OFFICE

9 QUEEN STREET

MELBOURNE, 20th April 1955

Messrs. Duncan & Fraser,

ADELAIDE. S.A..

Dear Sirs,

CAR BODIES

Confirming your interview with Mr. Cleveland and Mr. McCarty on last Saturday morning, I have pleasure in now advising the acceptance of your tender for Car Bodies as per our specification @ £795/-/- each for Bogie and £550/-/- each for Combination types, subject to the following conditions :-

1. You to submit to the Trust your schedule showing the amounts calculated for the various timbers as given in our specification, and your agreeing to construct the bodies of Australian timbers as may be selected by the Trust, any saving in cost of timbers thereby effected to be deducted from your tender price.
2. Delivery to be completed within six (6) months.

Provided you telegraph me on receipt your acceptance of above I shall be glad if you will make it convenient to meet the special committee of the Trust at this office on Thursday 22nd inst. at 3 p.m. to further discuss the matter, and oblige,

Yours faithfully,

CHAIRMAN.

*This is the letter ref marked 'H' referred to in the annexed agreement with the Trust dated 22<sup>nd</sup> April 1955*

*Chairman* *D. H. Dureau*

DUNCAN & FRASER LTD.

*Contractor*

*Robert Dureau*



CHAIRMAN:  
D. H. DUREAU  
SECRETARY:  
L. A. CLEVELAND, F.I.A.V.

CHAIRMAN'S OFFICE

9 QUEEN STREET

MELBOURNE, 22nd April, 1915

Messrs. Duncan & Fraser,  
46 Franklin Street,  
ADELAIDE.

Dear Sirs,

Further to our letter of the 20th inst. and in accordance with arrangement made with your Mr. Dunsan at interview this afternoon, we have now pleasure in confirming the acceptance of your tender for Car Bodies, as per our specification contract No. 12 as follows:-

For the nine Combination Cars the price to be £548.2.6 each

For the ten Bogy Cars the price to be £792.15.0 each

delivered finished on our trucks at car depot Hawthorn

It is agreed that in place of ash as specified, you will use first quality Queensland Maple suitable for the purpose.

Delivery, to be completed within six months from signing of contract.

It is further agreed that should it be decided to use Australian instead of Harland's or any other varnish, as specified, the price to be reduced by £1.4.6 per car for the nineteen cars. Should Australian varnish be decided upon, you are to be notified within two months from the signing of contract.

Contracts are now being prepared for signature and will be submitted to you promptly.

Yours faithfully,

CHAIRMAN.

*This is the letter marked 'I' referred to in the annexed agreement with the Trust dated 22nd April 1915.*

*Chairman*  
*Contractor*  
DUNCAN & FRASER LTD.  
*Robert Fraser*

## Hawthorn Electric Tramways

**PRINCE'S BRIDGE TO WATTLE PARK (Route No. 17).**—One Red and one Yellow light at night.

Connecting with Cable Cars at Prince's Bridge for Carlton, Prahran, North Carlton, St. Kilda Esplanade, Toorak, Brighton-road and Queensberry-street; also with Electric Cars running via Glenferrie-road to Malvern, St. Kilda, Kew, Deepdene and Mont Albert, and all Southern routes.

City terminus—Intersection of Swanston-street and Batman avenue.  
Suburban terminus—Intersection of Riversdale and Boundary roads, Wattle Park.

**PRINCE'S BRIDGE TO WATTLE PARK, 20-minute service.**

Week days (including Saturdays)—First car, 6.30 a.m.; last car, 11.30 p.m.  
Sundays—First car, 1.10 p.m.; last car, 10.30 p.m.

**WATTLE PARK TO PRINCE'S BRIDGE, 20-minute service.**

Week days (including Saturdays)—First car, 6.31 a.m.; last car, 11.16 p.m.; last car to Depot only, 12.16 a.m.

Sundays—First car, 1.35 p.m.; last car, 9.56 p.m.; last car, to Depot only, 11.16 p.m.

**PRINCE'S BRIDGE TO BURNLEY.**—One Green and one Amber light at night.

**PRINCE'S BRIDGE TO BURKE-ROAD (Route No. 20).**—One Blue and one Yellow light at night.

**PRINCE'S BRIDGE TO BOWEN-STREET (Route No. 19).**—Two Blue lights at night.

Between 8 a.m. and 9 a.m., and 5 p.m. and 6 p.m., cars leave for Richmond, Burnley, Hawthorn and Burke-road junction (Camberwell) every 2½ minutes.

Passengers for Richmond and Burnley can take any car leaving Prince's Bridge, except between busy periods, when special cars are provided for each of the destinations.

**POWER STREET (DEPOT) TO BRIDGE-ROAD (Route No. 21).**—Two Yellow lights at night.

Connecting at intersection of Power-street and Riversdale-road with Electric Cars for Camberwell, Burwood, and Wattle Park routes, also for Burnley, Richmond and Melbourne; and at Hawthorn Bridge with Cable Cars for Melbourne.

**BRIDGE-ROAD TO POWER-STREET, 15 and 20 minute service.**

Week days (including Saturdays)—First car, 7.23 a.m.; last car, 11.55 p.m.  
Sundays—First car, 2.33 p.m.; last car, 10.55 p.m.

**POWER-STREET TO BRIDGE-ROAD, 15 and 20 minute service.**

Week days (including Saturdays)—First car, 7.15 a.m.; last car, 11.40 p.m.  
Sundays—First car, 2.20 p.m.; last car, 10.40 p.m.

**PRINCE'S BRIDGE TO BURWOOD (Route No. 18).**—One Red and one Blue light at night.

Connecting with Cable Cars at Prince's Bridge for Carlton, Prahran, North Carlton, St. Kilda Esplanade, Toorak, Brighton-road, and Queensberry-street; also with Electric Cars running via Glenferrie-road to Malvern, St. Kilda, Kew, Mont Albert, and Deepdene, and all Southern routes.

City terminus—Intersection of Swanston-street and Batman avenue.  
Suburban terminus—Intersection of Norwood and Boundary roads, Burwood.

## HAWTHORN ELECTRIC TRAMWAYS—Continued.

**PRINCE'S BRIDGE TO BURWOOD, 20-minute service.**

Week days (including Saturdays)—First car, 6.20 a.m.; last car, 11.40 p.m.  
Sundays—First car, 1.20 p.m.; last car, 10.40 p.m.

**BURWOOD TO PRINCE'S BRIDGE, 20-minute service.**

Week days (including Saturdays)—First car, 6.45 a.m.; last car, 11.5 p.m.  
Sundays—First car, 1.25 p.m.; last car, 9.45 p.m.; last car, to Depot only, 11.25 p.m.

## North Fitzroy and Preston Electric Tramways

**NORTH FITZROY TO REGENT-STREET.**—Two Red lights at night.

Connecting with Cable Cars for Melbourne at intersection of St. George's-road and Barkly-street, North Fitzroy.

**BARKLY-STREET, NORTH FITZROY, TO REGENT-STREET, 15-minute service.**

Week days—First car, 6.2 a.m.; last car, 12.2 a.m.  
Saturdays—First car, 6.2 a.m.; last car, 12.32 a.m.  
Sundays—First car, 1.32 p.m.; last car, 11.2 p.m.

**REGENT-STREET TO BARKLY-STREET, NORTH FITZROY, 15-minute service.**

Week days—First car, 6.25 a.m.; last car, 11.39 p.m.  
Saturdays—First car, 6.25 a.m.; last car, 12.10 a.m.  
Sundays—First car, 1.10 p.m.; last car, 10.39 p.m.

**NORTH FITZROY TO TYLER-STREET.**—Two Green lights at night.

**BARKLY-STREET, NORTH FITZROY, TO TYLER-STREET, 15-minute service.**

Week days—First car, 5.10 a.m.; last car, 12.10 a.m.  
Saturdays—First car, 5.10 a.m.; last car, 12.10 a.m.  
Sundays—First car, 1.25 p.m.; last car, 11.10 p.m.

**TYLER-STREET TO BARKLY-STREET, NORTH FITZROY, 15-minute service.**

Week days—First car, 6.2 a.m.; last car, 11.16 p.m.  
Saturdays—First car, 6.2 a.m.; last car, 12.17 a.m.  
Sundays—First car, 1.2 p.m.; last car, 10.49 p.m.

### NIGHT DESTINATION LIGHTS.

Between North Fitzroy and Tyler-street—Two Green lights.  
Between North Fitzroy and Regent-street—Two Red lights.  
Between North Fitzroy and Dundas-street—Two Blue lights.  
Between North Fitzroy and Racecourse—One Red and one Blue light.

# BRUNTONS FLOUR

THE BEST  
FOR BREAD AND PASTRY.

## B.—PRINCES BRIDGE TO BURWOOD.

6.30 a.m., 6.40, 7.0, 7.25, 7.45, then at 5. 25 and 45 mins. past each hour until 11.25 p.m.

Sunday, 1.15 p.m., then as required until 10.30.

## R.—PRINCES BRIDGE TO RIVERSDALE EXTENSION.

7.15 a.m., then at 15, 35 and 55 mins. past each hour until 11.35 p.m. (last car).

Sunday, 1.34 p.m., then as required until 10.40.

## C.—PRINCES BRIDGE TO CAMBERWELL (BURKE ROAD).

6.20 a.m., 6.40, 7.0, 7.15, 7.20, then every

5 mins. until 8.35 a.m. 5 mins. until 6.45 p.m.

10 " " 1.25 p.m. 10 " " 12 p.m.

Sunday, 1.15 p.m., then as required until 10.40.

## A.—PRINCES BRIDGE TO AUBURN ROAD.

6.40 a.m., 6.40, 7.0, then every

5 mins. until 8.30 a.m. 5 mins. until 7.15 p.m.

10 " " 1.25 p.m. 10 " " 10.5 p.m.

5 " " 5 p.m. 5 " " 11.35 p.m.

2½ " " 6.45 p.m. then 11.45 and 12 p.m.

Sunday, 1.15 p.m., then as required until 10.40.

## XI.—PRINCES BRIDGE TO BURNLEY.

6.20 a.m., 6.40, 7.0, 7.15, then every

5 mins. until 7.35 a.m. 5 mins. until 8.5 p.m.

5 " " 8.55 a.m. 10 " " 10.5 p.m.

5 " " 5 p.m. 5 " " 11.35 p.m.

2½ " " 6.25 p.m. then 11.45 and 12 p.m.

Sunday, 1.15 p.m., then as required until 10.40.

## P.—POWER STREET TO BRIDGE ROAD.

7.15 a.m., then every 15 mins. until 9.15 a.m.

9.37 a.m., then every 20 mins. until 4.57 p.m.

5.15, 5.30, 5.45, 6.0, 6.15, 6.30, 6.45, 7.0, 7.15,

7.37, then 20 mins. till 11.17, then 11.40.

Sunday, 2.17 p.m., then every 20 mins. until 10.37.

## BURWOOD TO PRINCES BRIDGE.

6.45 a.m., then at 5. 25, and 45 mins. past each hour until 11.5 p.m. (last car).

Sunday, 1.32 p.m., then as required until 9.50.

## RIVERSDALE EXTENSION TO PRINCES BRIDGE.

6.37 a.m., 6.57, then at 17, 37 and 57 mins. past each hour, until 11.17 p.m. (last car).

Sunday, 1.30 p.m., then as required until 10.2.

## CAMBERWELL (BURKE ROAD) TO PRINCES BRIDGE.

5.54 a.m., 6.14, 6.34, 6.49, 6.59, 7.0, 7.19, 7.29,

7.39, 7.49 a.m., then every 5 mins. until 9.9 a.m. 5 mins. until 6.59 p.m.

10 " " 5.9 p.m. 10 " " 11.29 p.m.

Sunday, 1.17, p.m. then as required until 10.14.

## AUBURN ROAD TO PRINCES BRIDGE.

5.57 a.m., 6.17, 6.37, 6.52, 7.2, 7.12, 7.22, 7.32,

7.42, then every 5 mins. until 8.12 a.m. 2½ mins. until 6.2 p.m.

2½ " " 8.37 a.m. 5 " " 7.42 p.m.

5 " " 9.37 a.m. 10 " " 10.32 p.m.

10 " " 1.27 p.m. 5 " " 11.12 p.m.

5 " " 5.22 p.m. then 11.22 and 11.32 p.m.

Sunday, 1.9 p.m., then as required until 10.17.

## BURNLEY TO PRINCES BRIDGE.

6.6 a.m., 6.26, 6.46, 7.11 and then every

5 mins. until 7.21 a.m. 2½ mins. until 6.11 p.m.

2½ " " 8.46 a.m. 5 " " 11.21 p.m.

5 " " 4.46 p.m. then 11.31 and 11.41

Sunday, 1.1 p.m., then as required until 10.46.

## BRIDGE ROAD TO POWER STREET.

7.23, then every 15 mins. until 9.8 a.m., then

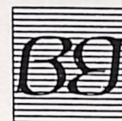
20 mins. until 4.48, then 5.7, 5.23, then 15 mins.

until 7.3, 20 mins. until 11.8, then 11.30 and

11.55 (last cars).

Sunday, 2.28 p.m., then 20 mins. until 10.43.

USE "KIWI" BOOT POLISH BLACK OR TAN



Our Ref.  
Your Ref.

7 October 1992

Mr Graham Jones  
Tramway Workshops  
St George's Road  
PRESTON VIC 3072

Dear Graham,

Sometime ago I mentioned it to you that I would supply you with a list of Hawthorn Tramways Trust letter codes and colourlight codes.

You will recall that the Hawthorn Tramways Trust placed a letterboard on the window sill of the front right window of its trams. The board was black with a large white letter to indicate the destination of the trams.

Many of the letter codes corresponded with the first letter of the destination. For instance, Power Street was a "P". I enclose copy timetable which has a complete list of such letters and destinations used by the Hawthorn Tramways Trust.

As for the colourlight codes, these are proving somewhat more difficult to establish. I have located the enclosed page from a directory published in 1924 which indicates the colourlight codes used on the Hawthorn routes (and for that matter the routes of the Fitzroy, Northcote and Preston Tramways Trust). You will appreciate, however, that the Melbourne and Metropolitan Tramways Board took over the Hawthorn Tramways Trust in February 1920 and it is therefore possible that the enclosed codes are not the appropriate Hawthorn Tramways Trust codes. I have not found any reference apart from this to the Hawthorn colourlight codes. You will also note that by the time of publication of this directory, the letter codes on the Hawthorn routes had been replaced by route number codes. I think that the Hawthorn routes were numbered sequentially after the Prahran and Malvern Tramways Trust route numbers.

**MELBOURNE**

9th Floor  
469 La Trobe Street  
Melbourne VIC 3000

GPO Box 2246U  
Melbourne VIC 3001  
DX402 Melbourne

Telephone (03) 605 1777  
Fax (03) 605 1737  
Link ID: Barkers

**PARTNERS**

Michael Taussig  
Bruce Lilley  
John McKell  
Michael Creelman  
Michael Brereton  
Charles Kovess  
Peter Szabo  
Debra Cherrie  
Bruce Adams  
David Bradley  
Michael Carr

**ASSOCIATES**

Paula Davies  
Leanne Cain  
Peter Davis  
John Waters  
Effie Kavadas  
Brendan Charles  
Michael Jacobs  
Andrew Bini  
Michael Norbury

**CONSULTANTS**

Jack Harty  
Nathan Jacobson oae

**SYDNEY**

135 King Street  
Sydney NSW 2000

Telephone (02) 391 3333  
Fax (02) 391 3456

**BRISBANE**

307 Queen Street  
Brisbane QLD 4000

Telephone (07) 221 1244  
Fax (07) 221 1219

**PERTH**

Downing & Downing  
37 St George's Terrace  
Perth WA 6000

Telephone (09) 221 2555  
Fax (09) 221 2525

**CANBERRA**

Crossin Barker Gosling  
40 Marcus Clarke Street  
Canberra ACT 2601

Telephone (06) 201 7222  
Fax (06) 257 4011

**ADELAIDE**

Andersons Barker Gosling  
185 Victoria Square  
Adelaide SA 5000

Telephone (08) 238 6666  
Fax (08) 238 6600

Barker Gosling is an association of the Melbourne Firm formerly known as Barker Harty & Co., the Sydney Firm formerly known as Priddle Gosling, the Brisbane Firm formerly known as Conwell Kirby & Lilley, the Perth Firm Downing and Downing, the Canberra Firm formerly known as Crossin Power Haslem, and the Adelaide Firm formerly known as Andersons Solicitors.

Nonetheless, from the enclosed codes, it is apparent that tram 217 should carry four yellow or amber lenses to be placed in front of the small lights above the driver's windows, so that it shows double yellow lights as is appropriate for Hawthorn Bridge to Power Street.

If I find a source of Hawthorn colourlight codes dating from the Hawthorn Tramways Trust period, I shall forward a copy to you.

Yours faithfully,  
BARKER GOSLING

Per: 

MICHAEL NORBURY