

**PUBLIC WORKS DEPARTMENT  
WESTERN AUSTRALIA**

**QUOTATION DOCUMENT  
FOR  
CONSTRUCTION OF  
HELENA FORESTRY CATCHMENT  
YARRA ROAD  
GAUGING STATION**

**K.C.WEBSTER  
ENGINEER,  
PLANNING, DESIGN and INVESTIGATION**

**PERTH, WESTERN AUSTRALIA**

**DATE:** 23/10/73

**FILE :** WS 996/73

PUBLIC WORKS DEPARTMENT

WESTERN AUSTRALIA

Specification for  
Construction of

.....  
YARRA ROAD.....  
.....  
GAUGING STATION.....  
.....  
.....

S.1 Extent of Contract

The Contract to which this Specification applies shall consist of the supply of all labour, materials and plant necessary for the construction, completion and maintenance of the Works included in this Contract with the exception of the supply of the floatwell pipes, inlet pipes, weir plates and recorder sheds as specified in their respective clauses.

S.2 Definitions

S.2.1 The term "Standard Level" or "SL" refers to the vertical control adopted for the project. The lowest point of the weir crest line shall be 10.000 m.

S.2.2 The term "Engineer's Representative" shall mean the person appointed by the Engineer, Planning, Design and Investigation Branch or any person acting on his behalf to directly supervise all aspects of the Contract.

3 S.3 Survey Information

The Engineer's Representative shall provide a bench mark on the site plus three pegs, one on each side of the river and one on the centre line, to indicate the crest line of the weir and position of the centre of the weir.

S.4 Excavation

S.4.1 Excavation shall be carried out to the lines and grades as shown on the Drawings accompanying these Specifications or as directed by the Engineer's Representative at a rate to be negotiated.

S.4.2 Any other excavation other than that above shall be at the Contractor's expense.

S.5 Blasting

S.5.1 All blasting shall be carried out by competent personnel with due regard to the pertinent regulations of the Government of Western Australia at present in force.



S.5.2 Damage to property and injury to personnel shall be the sole responsibility of the Contractor.

S.5.3 Any damage beyond the required excavation shall be repaired at the Contractor's expense.

#### S.6 Backfill

S.6.1 No backfill operations shall be carried out without the prior approval of the Engineer's Representative.

S.6.2 Excavated material which will not be used for backfilling shall be disposed of to the satisfaction of the Engineer's Representative.

#### S.7 Concrete

S.7.1 Concrete cylinder stress shall be 20 MPa (3000 psi) and the water/cement ratio shall not exceed 0.65.

S.7.2 The coarse aggregate for the concrete shall be either crushed granite, diorite or crushed river gravel of maximum size 20 mm. The sand shall be well graded and free of any deleterious mineral or organic material. The Engineer's Representative may reject any portion of the materials he considers to be ineffective.

S.7.3 The water to be used for the concrete shall be free of any deleterious amounts of acids, alkalis, salts and oils.

S.7.4 The Contractor may use ready-mixed concrete or manufacture the concrete on site, batching by weight.

S.7.5 All concrete shall be adequately vibrated using an immersion type vibrator.

S.7.6 The Contractor shall give the Engineer's Representative at least ...<sup>24</sup>... hours notice before placing concrete.

#### S.8 Formwork

S.8.1 Before commencing to form up the Contractor shall submit a free hand sketch of his proposals for the approval of the Engineer's Representative.

S.8.2 After forming has been completed and before concrete is poured the Engineer's Representative shall inspect the formwork.

#### S.9 Tolerances

S.9.1 Concrete: Unless otherwise stated on the Drawings, all dimensions and standard levels for concrete shall be constructed with a tolerance of  $\pm 5$  mm.

S.9.2 Steel: Where steel plates are to be attached to form the weir crest, the steel plates must be positioned such that the dimensions and standard levels specified on the drawings are achieved within a tolerance of  $\pm 2$ mm. The steel plate must not be distorted more than 2 mm out of line.

S.9.3 It is the Contractor's responsibility to remedy measurements outside the above tolerances, to the satisfaction of the Engineer's Representative.



S.10 Construction Methods

- S.10.1 A 150 mm minimum layer of free draining compacted gravel will be laid down over any soil that is to have a concrete slab poured on it.
- S.10.2 All concrete work shall be trowelled smooth so that it is free of any cracks, holes or any other imperfections.
- S.10.3 All concrete shall be adequately cured to maintain water content and to minimise shrinking and cracking for a minimum of ten days. Water or an approved curing oil may be used.
- S.10.4 Reinforcement shall be protected for a distance of 150 mm on either side of a construction joint by an approved mastic or coal tar epoxy. A groove at the construction joint surface 25 mm deep by 15 mm wide shall be filled with Mastijoint R60 or similar approved substance.
- S.10.5 The Contractor shall ensure that all the weir crest forms maintain the required slope.
- S.10.6 Forms shall not be removed within 24 hours of the completion of pouring concrete.

S.11 Anchoring Concrete to Rock

- S.11.1 Concrete will be anchored to rock by using grouted anchor bars, 12 mm minimum diameter, 0.75 m long at 0.1m intervals. The Contractor will ensure a water tight joint between the concrete and the rock.
- S.11.2 If under any circumstances, excavation reveals no rock where drawings indicate rock should be present, the Contractor will continue excavation until either:
- (i) Rock is found.
  - (ii) The Engineer's Representative indicates that excavation has continued to a reasonable depth to ensure a good strong water tight seal.

S.12 Weir Plate

- S.12.1 The Contractor shall collect the weir plate from the Water Resources Depot at *Corner New and Harris Streets - Welshpool...* and transport it to the site.
- S.12.2 Selleys Butyl Mastic or similar approved substance shall be used to provide a 230 mm wide by 3 mm thick strip along the entire length of the weir plate to provide adequate sealing.
- S.12.3 There will be a gap of 3 mm between any two sections of the weir plate when bolted to the wall. This gap will be filled with a bitumastic compound that will not set hard, for instance Selleys Butyl Mastic Gun Grade compound, when the plate has finally been fixed in position and sealed.



S.12.4 The Contractor may fix the weir plate to the wall by either:

(i) Using bolts concreted into the wall.

(ii) Using a powder actuated system.

The Contractor shall ensure that the holes drilled in the weir plate shall be adequate for whichever method he employs.

S.12.5 Any coatings damaged during transit or positioning of the weir plate shall be reinstated to the Engineer's Representative's satisfaction by the application of two or more coats of an organic zinc rich paint, such as Roval or an approved equivalent, applied over a thoroughly wire brushed surface.

### S.13 Floatwells and Inlet Pipes

S.13.1 The Contractor shall collect the floatwell and inlet pipes from the Water Resources Depot at Cnr. Key & Harris Streets, Welshpool. and transport them to the site.

S.13.2 The float well shall be vertical and the inlet pipes straight and horizontal.

S.13.3 The float well pipes shall be 3 foot internal diameter, internal flush jointed Class S concrete pipes or their metric equivalent as shown on the Drawings.

S.13.4 The concrete base for the float well shall be a minimum 1.5m x 1.5m and 250 mm thick and reinforced with F605 reinforcement.

S.13.5 All the pipes in the float well shall be jointed with an approved epoxy resin, e.g. Resi Weld Epoxy Resin.

S.13.6 The pipes in the float well shall be set in position before the holes for the inlet pipes are made.

S.13.7 Inlet pipes shall be 3" diameter class PD PVC water pipe or their metric equivalent. There will be a male end at the orifice and a female end at the float well. The joints need not be glued, but shall be tapped tightly home ensuring the ends of the pipes are adequately protected against damage.

S.13.8 The top of the bottom inlet pipe shall not be higher than SL 9.850 m.

S.13.9 All inlet pipes shall be laid on a 150 mm layer of compacted river sand. Stones larger than 50 mm shall not be allowed within 150 mm of the pipes.

S.13.10 The orifice shall be well clear of the river bank and river bed and shall be supported 300 mm from the end with grouted stonework on a firm foundation.



S.14 Upstream River Cross-Section

The Contractor shall ensure that the river cross-section is cleared of any vegetation and large rocks for a distance upstream of at least 5 m. The bank shall be stable and shall not interfere with the operation of the weir in any way whatsoever. If the banks are unstable or interfere with the operation of the weir the Contractor shall cutback and support the banks with grouted stone work to the satisfaction of the Engineer's Representative. See Appendix A.

S.15 Recorder Shed

The Contractor shall prepare a 75 mm thick slab suitable for the nine foot by six foot shed at the SL shown on the Drawings and in a position relative to the float well as shown on the Drawings. He shall collect the shed from the Water Resources Depot, at Cnr. Kew and Harris Streets, Welshpool.....transport it to site, assemble it and fix it to the concrete slab.

S.1 Cleaning Up

The Contractor shall remove all construction equipment and material from the site and generally leave the site in a tidy condition, to the approval of the Engineer's Representative.

S.17 Maintenance

The Contractor shall maintain the Works against leakage or defects due to faulty workmanship or materials for a period of three months after the date on which construction is deemed to be completed and shall be responsible for the repair of any leaks occurring in the first 12 months of operation.

The cost of such maintenance will be born by the Contractor.

The Contractor on expiry of the period of maintenance shall be bound to hand over the Works in good and sufficient repair, and to the approval of the Engineer's Representative.

S.18 Transport

S.18.1 Rail transport is to be used whenever possible.

S.18.2 In respect of any road haulage the tenderer shall satisfy himself of his obligations under the Road and Air Transport Commission Act, 1966, by making inquiries at the office of the Western Australian Road and Air Transport Commission, 136-138 Stirling Highway, Nedlands, Western Australia, 6009. Phone 86.7511.

PUBLIC WORKS DEPARTMENT

WESTERN AUSTRALIA

APPENDIX A TO SPECIFICATION FOR

CONSTRUCTION OF

YARRA ROAD

GAUGING STATION

A.1 Variations

A.1.1 Clause S.11 is hereby cancelled.

A.1.2 Clause S.14 shall be varied by Clause A2.

A.2 Downstream River Cross-Section

The downstream river cross-section will be graded to form a trapezoidal channel, by the Forests Department. The Contractor shall maintain the dimensions of the channel at all times.

A.3 Earth Wing Walls

The earth wing walls shall be constructed by the Public Works Department and shall not be included in the price.

A.4 Dieback

A.4.1 The Contractor shall ensure that adequate precautions are undertaken to prevent the spread of Dieback spores. The Engineer's Representative, on advice from Forestry Department officers, reserves the right to prohibit access to each site of any vehicle reasonably suspected of having moved through an infected area.

A.4.2 The Engineer's Representative will make every reasonable attempt to advise the Contractor of any such infected areas in the vicinity of each site.

A.4.3 If any vehicle has moved through an infected area and is reasonably suspected of carrying dieback spores, the Contractor shall take immediate steps to disinfect the aforesaid vehicle at his own expense.



## SPECIAL CONDITIONS OF CONTRACT

### 1. Insurance of Workmen.

The Contractor shall, during the continuance of the contract, effect and maintain, in an approved office, insurance against claims that may arise under the Workers' Compensation Act and all amendments thereto, or otherwise.

### 2. Money due to State Trading Concerns.

The Minister reserves the right to deduct from any moneys due or to become due under this contract any amounts that may be owing by the Contractor to any State Trading Concern for material or requisites purchased for use on this contract.

### SALES TAX

1. Sales Tax is not payable by the Contractor upon the purchase of any materials to be used in, so as to form part of, the completed works or buildings under this contract, and the Contractor shall therefore exclude Sales Tax from his contract price.

2. Any supplier, contractor, or sub-contractor who is a registered person under the Sales Tax Acts may obtain the goods, etc., for inclusion in the work for this Department free of Sales Tax by quoting his certificate to the vendor of the goods (Sales Tax Regulation 12 (2) (2)).

3. An unregistered person may obtain goods for his contract free of Sales Tax by giving a certificate on his order to the registering vendor of the goods in the following form:—

“To—

The Commissioner of Taxation and the Commonwealth  
of Australia.

I certify that these goods are purchased specifically for re-sale  
to the Department of.....

.....

(Signed).....”

The Departmental Officer supervising the Contract will endorse the Contractor's order (or, if that is not practicable, vendor's delivery note), as follows:—

“I certify that these goods are for the official use of the Department of.....and are not for re-sale.”

4. Where goods for use in connection with the contract have been purchased at a tax-inclusive price (either because of the Contractor's failure to obtain the certificate of the Departmental Officer or because the goods were not purchased specifically for the contract) the Contractor will be required to furnish evidence that Sales Tax has not been included in the contract price. Provided the Tax has been excluded from the contract price the Taxation Department will refund to the Contractor the amount of Sales Tax passed on to him, subject to compliance with the conditions prescribed by that Department.



**PUBLIC WORKS DEPARTMENT  
WESTERN AUSTRALIA**

**QUOTATION DOCUMENT  
FOR**

**CONSTRUCTION  
HELENA FORESTRY CATCHMENT  
WELLBUCKET ROAD  
GAUGING STATION**

**K.C.WEBSTER  
ENGINEER,  
PLANNING , DESIGN and INVESTIGATION**

**PERTH, WESTERN AUSTRALIA**

**DATE: 23.10.73**

**FILE : WS 996/73**

PUBLIC WORKS DEPARTMENT  
WESTERN AUSTRALIA

Specification for  
Construction of

.....WELLBUCKET ROAD.....  
.....GAUGING STATION.....  
.....

S.1 Extent of Contract

The Contract to which this Specification applies shall consist of the supply of all labour, materials and plant necessary for the construction, completion and maintenance of the Works included in this Contract with the exception of the supply of the floatwell pipes, inlet pipes, weir plates and recorder sheds as specified in their respective clauses.

S.2 Definitions

- S.2.1 The term "Standard Level" or "SL" refers to the vertical control adopted for the project. The lowest point of the weir crest line shall be 10.000 m.
- S.2.2 The term "Engineer's Representative" shall mean the person appointed by the Engineer, Planning, Design and Investigation Branch or any person acting on his behalf to directly supervise all aspects of the Contract.

Survey Information

The Engineer's Representative shall provide a bench mark on the site plus three pegs, one on each side of the river and one on the centre line, to indicate the crest line of the weir and position of the centre of the weir.

S.4 Excavation

- S.4.1 Excavation shall be carried out to the lines and grades as shown on the Drawings accompanying these Specifications or as directed by the Engineer's Representative at a rate to be negotiated.
- S.4.2 Any other excavation other than that above shall be at the Contractor's expense.

S.5 Blasting

- S.5.1 All blasting shall be carried out by competent personnel with due regard to the pertinent regulations of the Government of Western Australia at present in force.



S.5.2 Damage to property and injury to personnel shall be the sole responsibility of the Contractor.

S.5.3 Any damage beyond the required excavation shall be repaired at the Contractor's expense.

#### S.6 Backfill

S.6.1 No backfill operations shall be carried out without the prior approval of the Engineer's Representative.

S.6.2 Excavated material which will not be used for backfilling shall be disposed of to the satisfaction of the Engineer's Representative.

#### S.7 Concrete

S.7.1 Concrete cylinder stress shall be 20 MPa (3000 psi) and the water/cement ratio shall not exceed 0.65.

S.7.2 The coarse aggregate for the concrete shall be either crushed granite, diorite or crushed river gravel of maximum size 20 mm. The sand shall be well graded and free of any deleterious mineral or organic material. The Engineer's Representative may reject any portion of the materials he considers to be ineffective.

S.7.3 The water to be used for the concrete shall be free of any deleterious amounts of acids, alkalis, salts and oils.

S.7.4 The Contractor may use ready-mixed concrete or manufacture the concrete on site, batching by weight.

S.7.5 All concrete shall be adequately vibrated using an immersion type vibrator.

S.7.6 The Contractor shall give the Engineer's Representative at least <sup>24</sup>... hours notice before placing concrete.

#### S.8 Formwork

S.8.1 Before commencing to form up the Contractor shall submit a free hand sketch of his proposals for the approval of the Engineer's Representative.

S.8.2 After forming has been completed and before concrete is poured the Engineer's Representative shall inspect the formwork.

#### S.9 Tolerances

S.9.1 Concrete: Unless otherwise stated on the Drawings, all dimensions and standard levels for concrete shall be constructed with a tolerance of  $\pm 5$  mm.

S.9.2 Steel: Where steel plates are to be attached to form the weir crest, the steel plates must be positioned such that the dimensions and standard levels specified on the drawings are achieved within a tolerance of  $\pm 2$ mm. The steel plate must not be distorted more than 2mm out of line.

S.9.3 It is the Contractor's responsibility to remedy measurements outside the above tolerances, to the satisfaction of the Engineer's Representative.



## S.10 Construction Methods

- S.10.1 A 150 mm minimum layer of free draining compacted gravel will be laid down over any soil that is to have a concrete slab poured on it.
- S.10.2 All concrete work shall be trowelled smooth so that it is free of any cracks, holes or any other imperfections.
- S.10.3 All concrete shall be adequately cured to maintain water content and to minimise shrinking and cracking for a minimum of ten days. Water or an approved curing oil may be used.
- S.10.4 Reinforcement shall be protected for a distance of 150 mm on either side of a construction joint by an approved mastic or coal tar epoxy. A groove at the construction joint surface 25 mm deep by 15 mm wide shall be filled with Mastijoint R60 or similar approved substance.
- S.10.5 The Contractor shall ensure that all the weir crest forms maintain the required slope.
- S.10.6 Forms shall not be removed within 24 hours of the completion of pouring concrete.

## S.11 Anchoring Concrete to Rock

- S.11.1 Concrete will be anchored to rock by using grouted anchor bars, 12 mm minimum diameter, 0.75 m long at 0.1m intervals. The Contractor will ensure a water tight joint between the concrete and the rock.
- S.11.2 If under any circumstances, excavation reveals no rock where drawings indicate rock should be present, the Contractor will continue excavation until either:
- (i) Rock is found.
  - (ii) The Engineer's Representative indicates that excavation has continued to a reasonable depth to ensure a good strong water tight seal.

## S.12 Weir Plate

- S.12.1 The Contractor shall collect the weir plate from the Water Resources Depot at *Corner Kew and Harris Streets - Walshpool...* and transport it to the site.
- S.12.2 Selleys Butyl Mastic or similar approved substance shall be used to provide a 230 mm wide by 3 mm thick strip along the entire length of the weir plate to provide adequate sealing.
- S.12.3 There will be a gap of 3 mm between any two sections of the weir plate when bolted to the wall. This gap will be filled with a bitumastic compound that will not set hard, for instance Selleys Butyl Mastic Gun Grade compound, when the plate has finally been fixed in position and sealed.



S.12.4 The Contractor may fix the weir plate to the wall by either:

(i) Using bolts concreted into the wall.

(ii) Using a powder actuated system.

The Contractor shall ensure that the holes drilled in the weir plate shall be adequate for whichever method he employs.

S.12.5 Any coatings damaged during transit or positioning of the weir plate shall be reinstated to the Engineer's Representative's satisfaction by the application of two or more coats of an organic zinc rich paint, such as Roval or an approved equivalent, applied over a thoroughly wire brushed surface.

### S.13 Floatwells and Inlet Pipes

S.13.1 The Contractor shall collect the floatwell and inlet pipes from the Water Resources Depot at Cnr. Kew & Harris Streets, Welshpool and transport them to the site.

S.13.2 The float well shall be vertical and the inlet pipes straight and horizontal.

S.13.3 The float well pipes shall be 3 foot internal diameter, internal flush jointed Class S concrete pipes or their metric equivalent as shown on the Drawings.

S.13.4 The concrete base for the float well shall be a minimum 1.5m x 1.5m... and 250 mm thick and reinforced with F605 reinforcement.

S.13.5 All the pipes in the float well shall be jointed with an approved epoxy resin, e.g. Resi Weld Epoxy Resin.

S.13.6 The pipes in the float well shall be set in position before the holes for the inlet pipes are made.

S.13.7 Inlet pipes shall be 3" diameter class PD PVC water pipe or their metric equivalent. There will be a male end at the orifice and a female end at the float well. The joints need not be glued, but shall be tapped tightly home ensuring the ends of the pipes are adequately protected against damage.

S.13.8 The top of the bottom inlet pipe shall not be higher than SL 9.850 m.

S.13.9 All inlet pipes shall be laid on a 150 mm layer of compacted river sand. Stones larger than 50 mm shall not be allowed within 150 mm of the pipes.

S.13.10 The orifice shall be well clear of the river bank and river bed and shall be supported 300 mm from the end with grouted stonework on a firm foundation.



S.14 Upstream River Cross-Section

The Contractor shall ensure that the river cross-section is cleared of any vegetation and large rocks for a distance upstream of at least 5 m. The bank shall be stable and shall not interfere with the operation of the weir in any way whatsoever. If the banks are unstable or interfere with the operation of the weir the Contractor shall cutback and support the banks with grouted stone work to the satisfaction of the Engineer's Representative. See Appendix A.

S.15 Recorder Shed

The Contractor shall prepare a 75 mm thick slab suitable for the nine foot by six foot shed at the SL shown on the Drawings and in a position relative to the float well as shown on the Drawings. He shall collect the shed from the Water Resources Depot, at Cnr. Kew and Harris Streets, Welshpool.....transport it to site, assemble it and fix it to the concrete slab.

S.16 Cleaning Up

The Contractor shall remove all construction equipment and material from the site and generally leave the site in a tidy condition, to the approval of the Engineer's Representative.

S.17 Maintenance

The Contractor shall maintain the Works against leakage or defects due to faulty workmanship or materials for a period of three months after the date on which construction is deemed to be completed and shall be responsible for the repair of any leaks occurring in the first 12 months of operation.

The cost of such maintenance will be born by the Contractor.

The Contractor on expiry of the period of maintenance shall be bound to hand over the Works in good and sufficient repair, and to the approval of the Engineer's Representative.

S.18 Transport

S.18.1 Rail transport is to be used whenever possible.

S.18.2 In respect of any road haulage the tenderer shall satisfy himself of his obligations under the Road and Air Transport Commission Act, 1966, by making inquiries at the office of the Western Australian Road and Air Transport Commission, 136-138 Stirling Highway, Nedlands, Western Australia, 6009. Phone 86.7511.



PUBLIC WORKS DEPARTMENT  
WESTERN AUSTRALIA

APPENDIX A TO SPECIFICATION FOR  
CONSTRUCTION OF  
WELLBUCKET ROAD  
GAUGING STATION

A.1 Variations

A.1.1 Clause S.11 is hereby cancelled.

A.1.2 Clause S.14 shall be varied by Clause A2.

A.2 Downstream River Cross-Section

The downstream river cross-section will be graded to form a trapezoidal channel, by the Forests Department. The Contractor shall maintain the dimensions of the channel at all times.

A.3 Earth Wing Walls

The earth wing walls shall be constructed by the Public Works Department and shall not be included in the price.

A.4 Dieback

A.4.1 The Contractor shall ensure that adequate precautions are undertaken to prevent the spread of Dieback spores. The Engineer's Representative, on advice from Forestry Department officers, reserves the right to prohibit access to each site of any vehicle reasonably suspected of having moved through an infected area.

A.4.2 The Engineer's Representative will make every reasonable attempt to advise the Contractor of any such infected areas in the vicinity of each site.

A.4.3 If any vehicle has moved through an infected area and is reasonably suspected of carrying dieback spores, the Contractor shall take immediate steps to disinfect the aforesaid vehicle at his own expense.

## SPECIAL CONDITIONS OF CONTRACT

### 1. Insurance of Workmen.

The Contractor shall, during the continuance of the contract, effect and maintain, in an approved office, insurance against claims that may arise under the Workers' Compensation Act and all amendments thereto, or otherwise.

### 2. Money due to State Trading Concerns.

The Minister reserves the right to deduct from any moneys due or to become due under this contract any amounts that may be owing by the Contractor to any State Trading Concern for material or requisites purchased for use on this contract.

### SALES TAX

1. Sales Tax is not payable by the Contractor upon the purchase of any materials to be used in, so as to form part of, the completed works or buildings under this contract, and the Contractor shall therefore exclude Sales Tax from his contract price.

2. Any supplier, contractor, or sub-contractor who is a registered person under the Sales Tax Acts may obtain the goods, etc., for inclusion in the work for this Department free of Sales Tax by quoting his certificate to the vendor of the goods (Sales Tax Regulation 12 (2) (2)).

3. An unregistered person may obtain goods for his contract free of Sales Tax by giving a certificate on his order to the registering vendor of the goods in the following form:—

“To —

The Commissioner of Taxation and the Commonwealth  
of Australia.

I certify that these goods are purchased specifically for re-sale  
to the Department of .....

(Signed) .....

The Departmental Officer supervising the Contract will endorse the Contractor's order (or, if that is not practicable, vendor's delivery note), as follows:—

“I certify that these goods are for the official use of the Department of ..... and are not for re-sale.”

4. Where goods for use in connection with the contract have been purchased at a tax-inclusive price (either because of the Contractor's failure to obtain the certificate of the Departmental Officer or because the goods were not purchased specifically for the contract) the Contractor will be required to furnish evidence that Sales Tax has not been included in the contract price. Provided the Tax has been excluded from the contract price the Taxation Department will refund to the Contractor the amount of Sales Tax passed on to him, subject to compliance with the conditions prescribed by that Department.

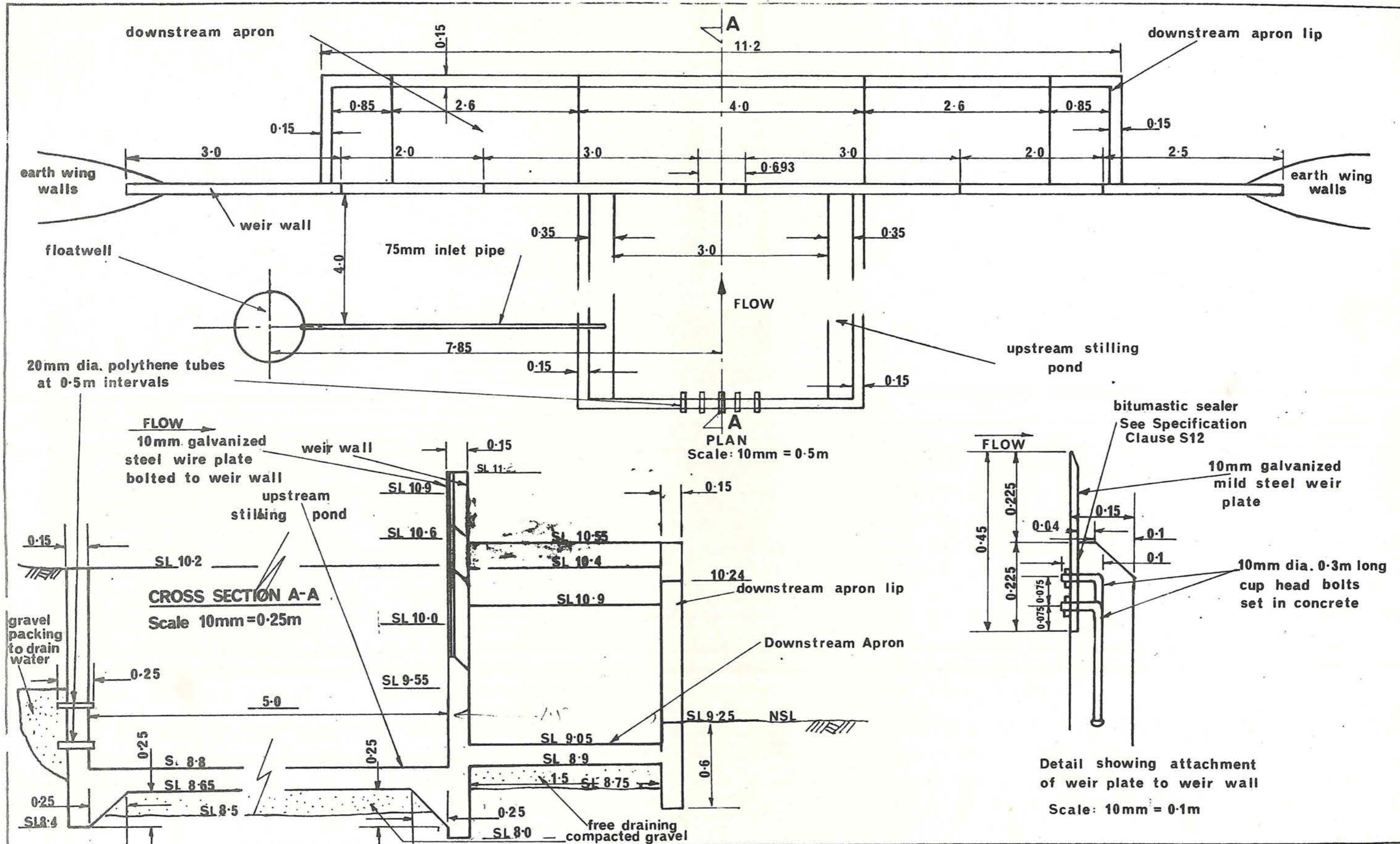


Public Works Department  
Western Australia

CONSTRUCTION OF HELENA FORESTRY CATCHMENT  
YARRA ROAD AND WELLBUCKET ROAD  
GAUGING STATIONS

Drawings





**GENERAL NOTES**

1) All dimensions in metres.

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

SCALE AS SHOWN

**HELENA FORESTRY CATCHMENT  
WELLBUCKET ROAD GAUGING STATION  
PLAN AND CROSS SECTIONS**

FILE NO

DR'N *[Signature]*  
CH'D *[Signature]* DATE 17-10-73

SUBMITTED

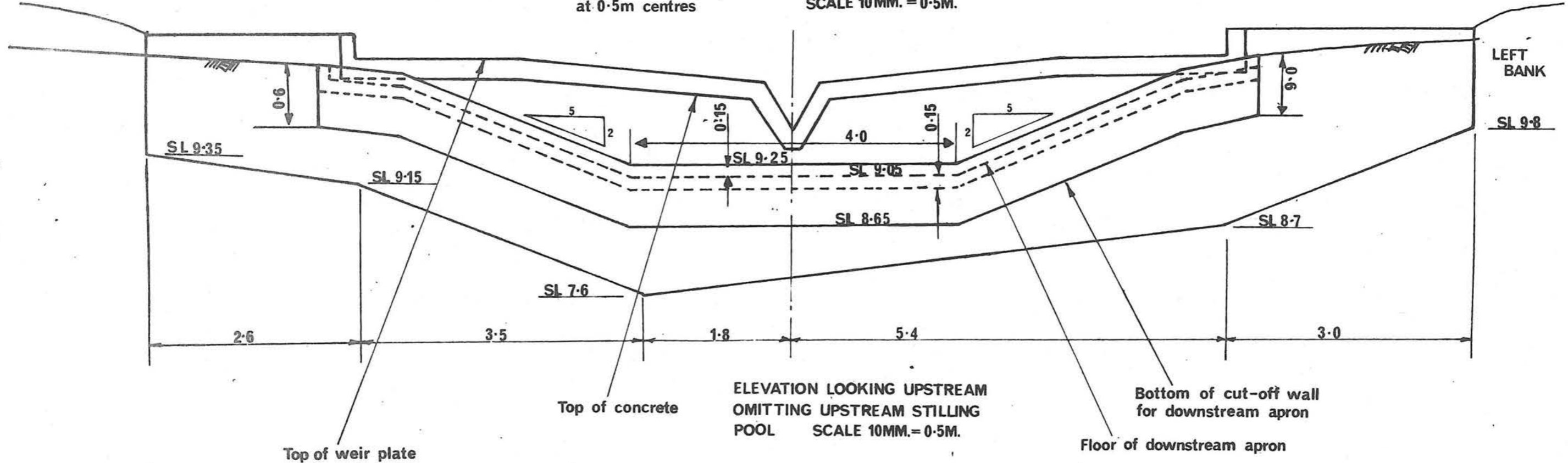
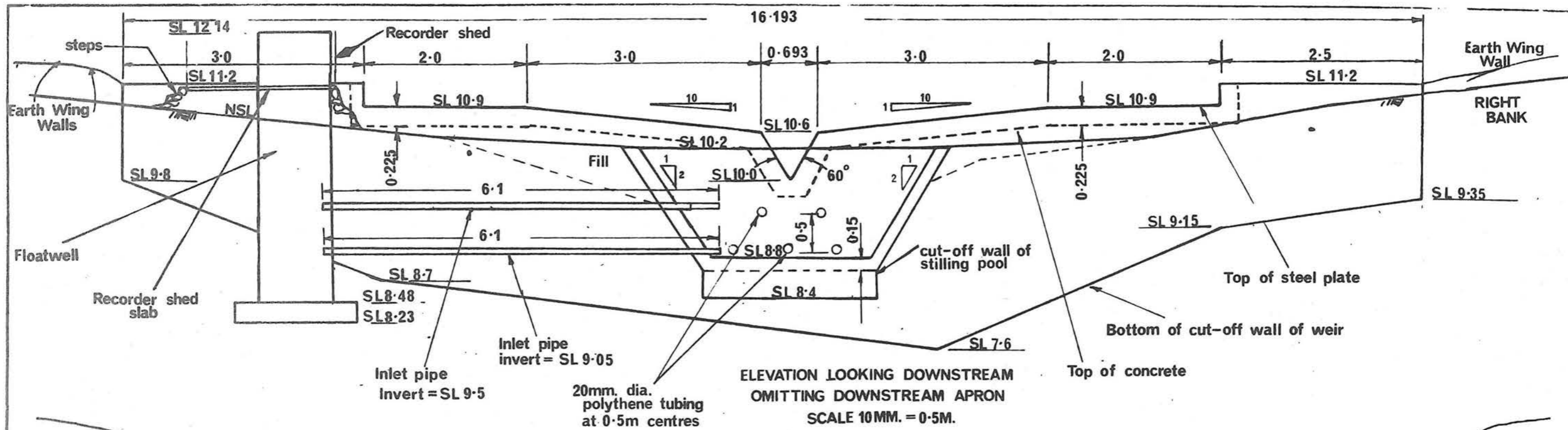
*[Signature]* 19.10.73

APPROVED

*[Signature]* 19.10.73

P.W.D., W.A.





GENERAL NOTES

- 1) Floatwell and inlet pipe details see separate sheet
- 2) All dimensions in metres
- 3) Earth Wing Walls to be constructed by PWD Department

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

SCALE AS SHOWN

HELENA FORESTRY CATCHMENT  
WELLBUCKET RD GAUGING STATION  
ELEVATIONS

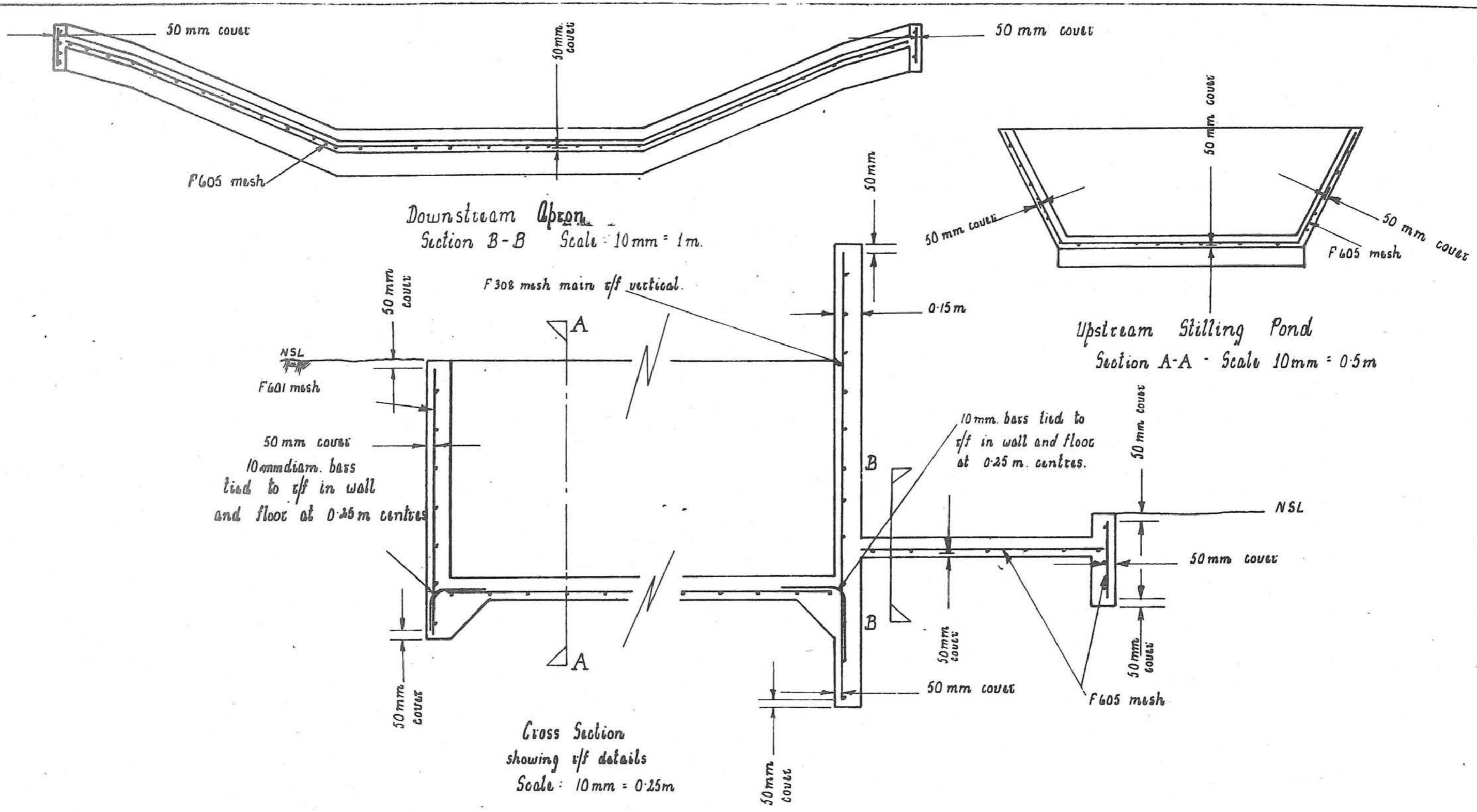
FILE NO

DR'N *[Signature]*  
CH'D *[Signature]* DATE 17-10-73

SUBMITTED  
*[Signature]* 19.10.73

APPROVED *[Signature]*

PWD, W.A.



GENERAL NOTES

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

SCALE AS SHOWN

**HELENA FORESTRY CATCHMENT  
WELLBUCKET ROAD GAUGING STATION  
REINFORCEMENT DETAILS**

FILE NO

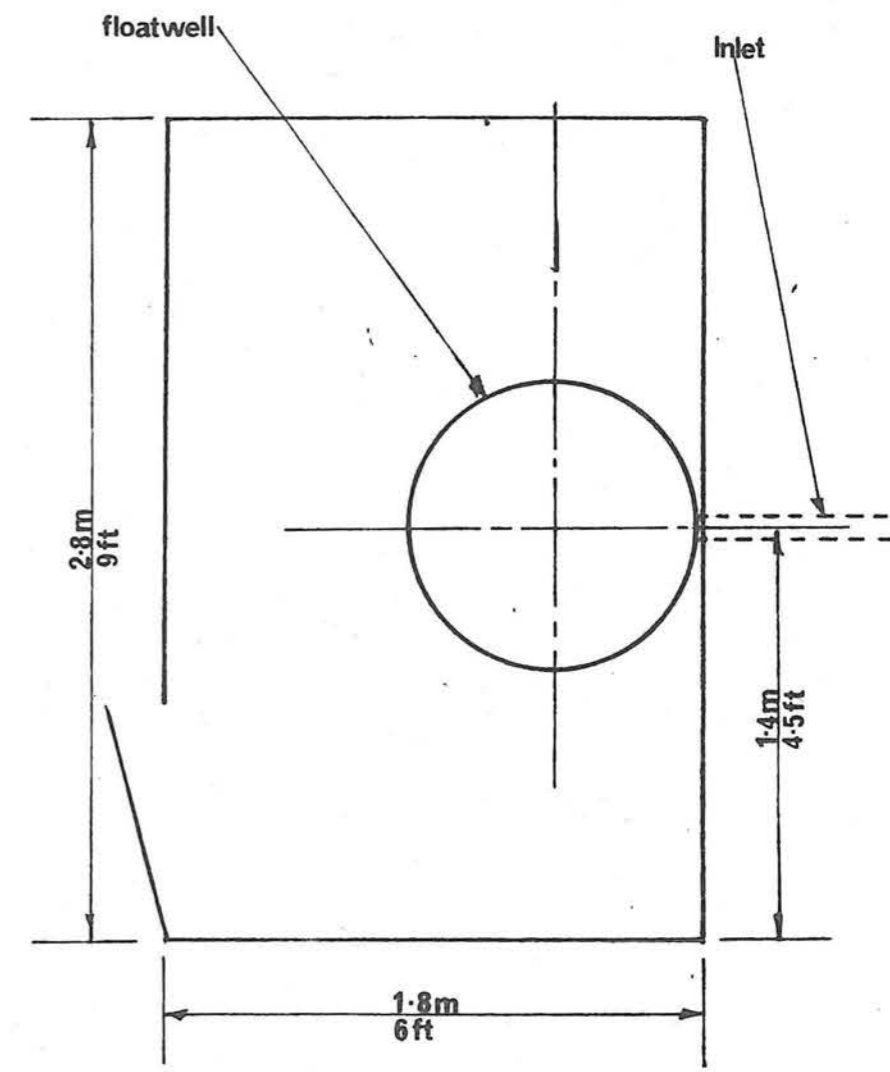
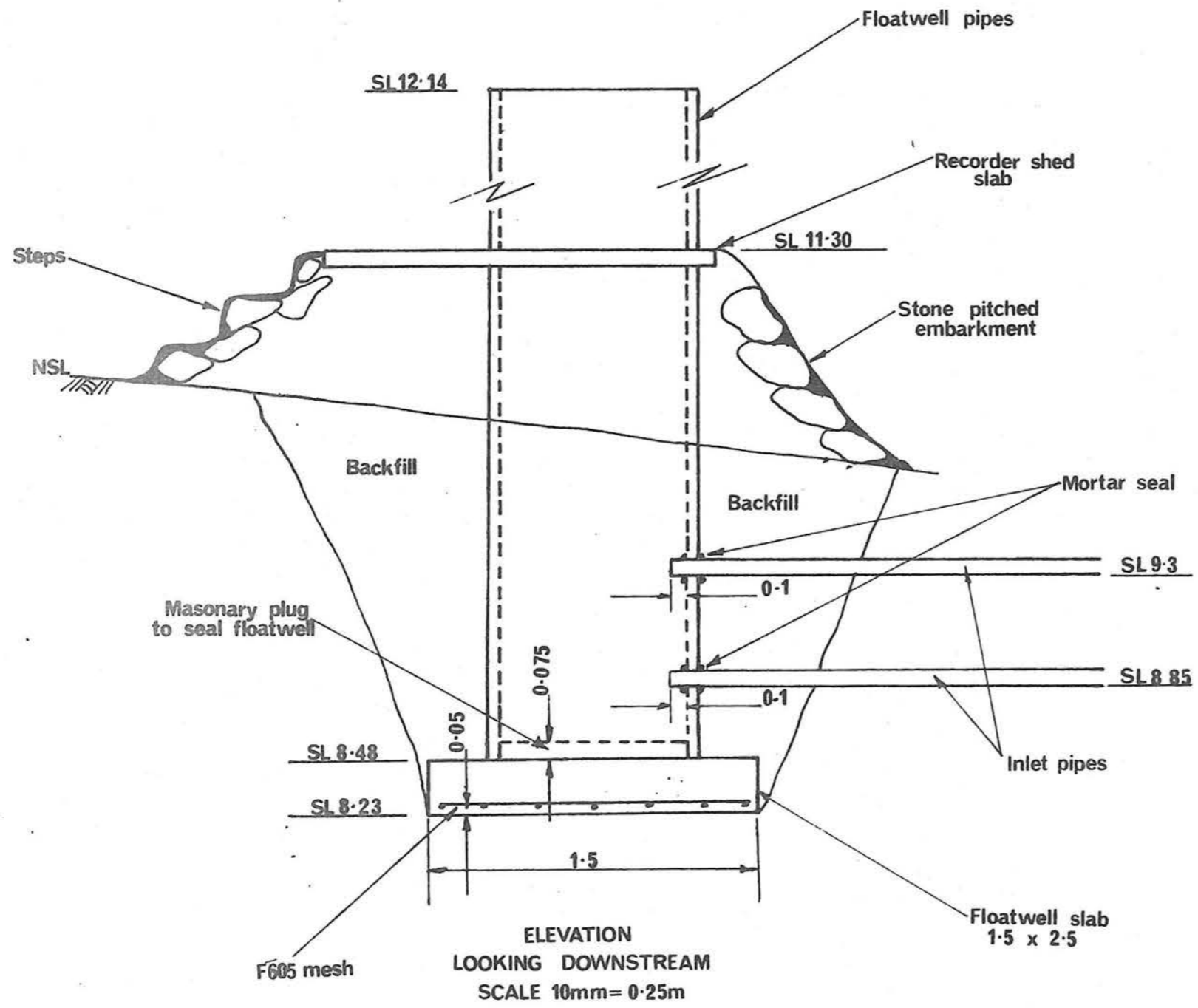
DR'N *[Signature]*  
CH'D *[Signature]* DATE 17-10-73

SUBMITTED *M. L. Barrett* 19.10.73

APPROVED *[Signature]* 19.10.73

P.W.D., W.A.





RECORDER SHED  
FLOOR PLAN  
SCALE 10mm=0.25m

GENERAL NOTES

- 1) All dimensions in metres

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

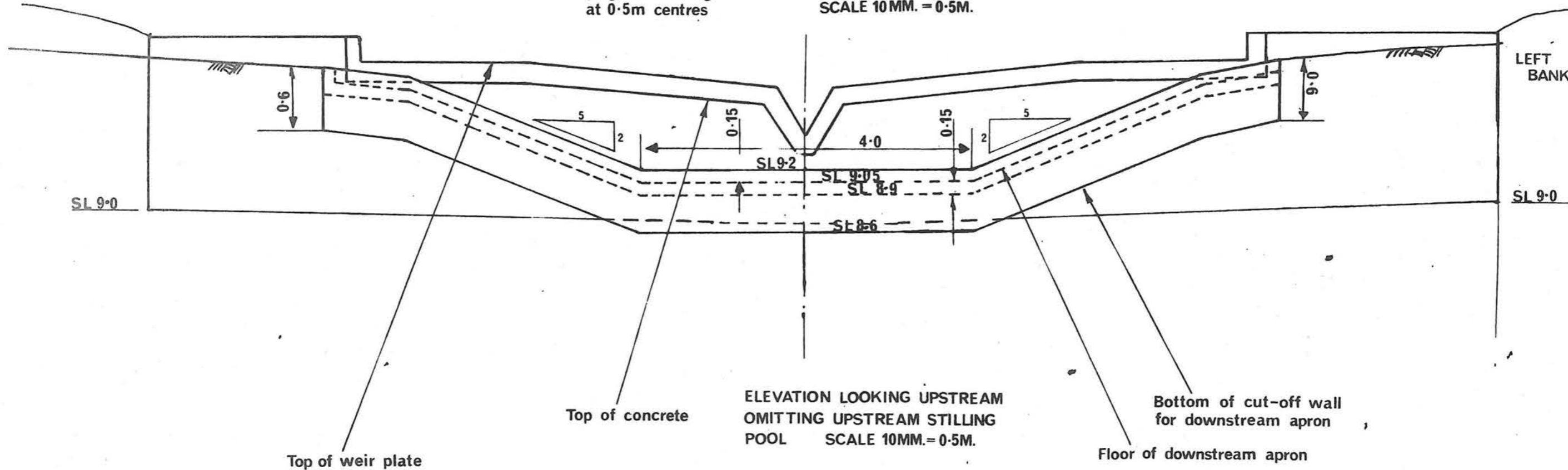
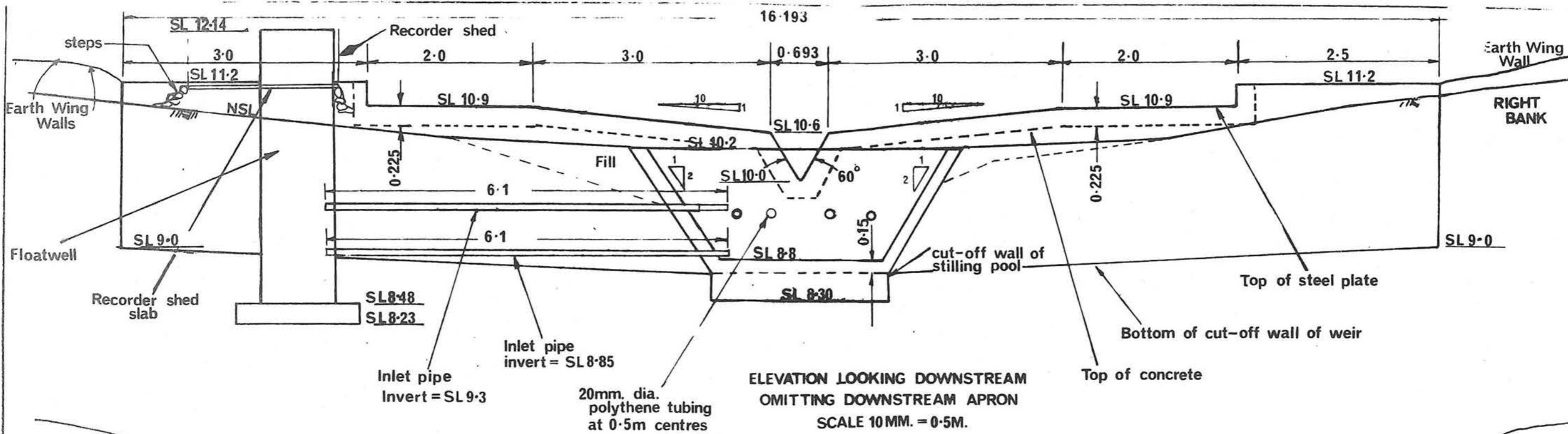
PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

SCALE AS SHOWN  
FILE NO  
DR'N *[Signature]*  
CH'D *[Signature]* DATE 17-10-73  
APPROVED

**HELENA FORESTRY CATCHMENT  
WELLBUCKET ROAD GAUGING STATION  
FLOATWELL DETAILS**

SUBMITTED  
*[Signature]* 19.10.73

P.W.D., W.A.



**GENERAL NOTES**

- 1) Floatwell and inlet pipe details see separate sheet
- 2) All dimensions in metres
- 3) Earth Wing Walls to be constructed by PWD Department

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

SCALE AS SHOWN

**HELENA FORESTRY CATCHMENT  
YARRA ROAD GAUGING STATION  
ELEVATION**

FILE NO

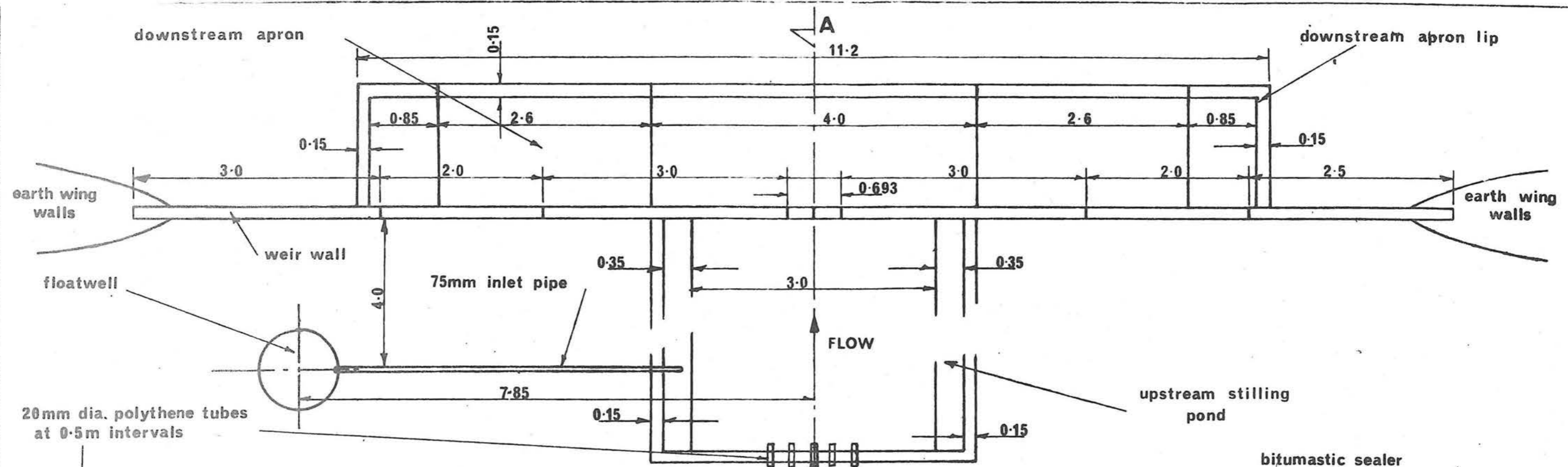
DR'N *RS*  
CH'D *R.O.B.* DATE 12-10-73

SUBMITTED *H.L. Bennett* 19.10.73

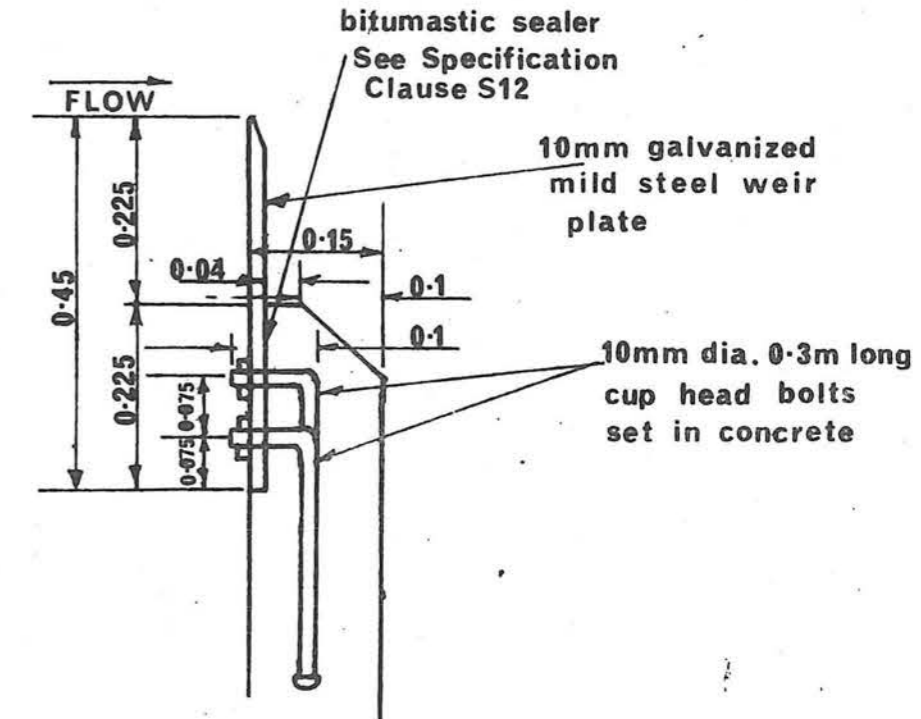
APPROVED *[Signature]*

P.W.D. W.A.

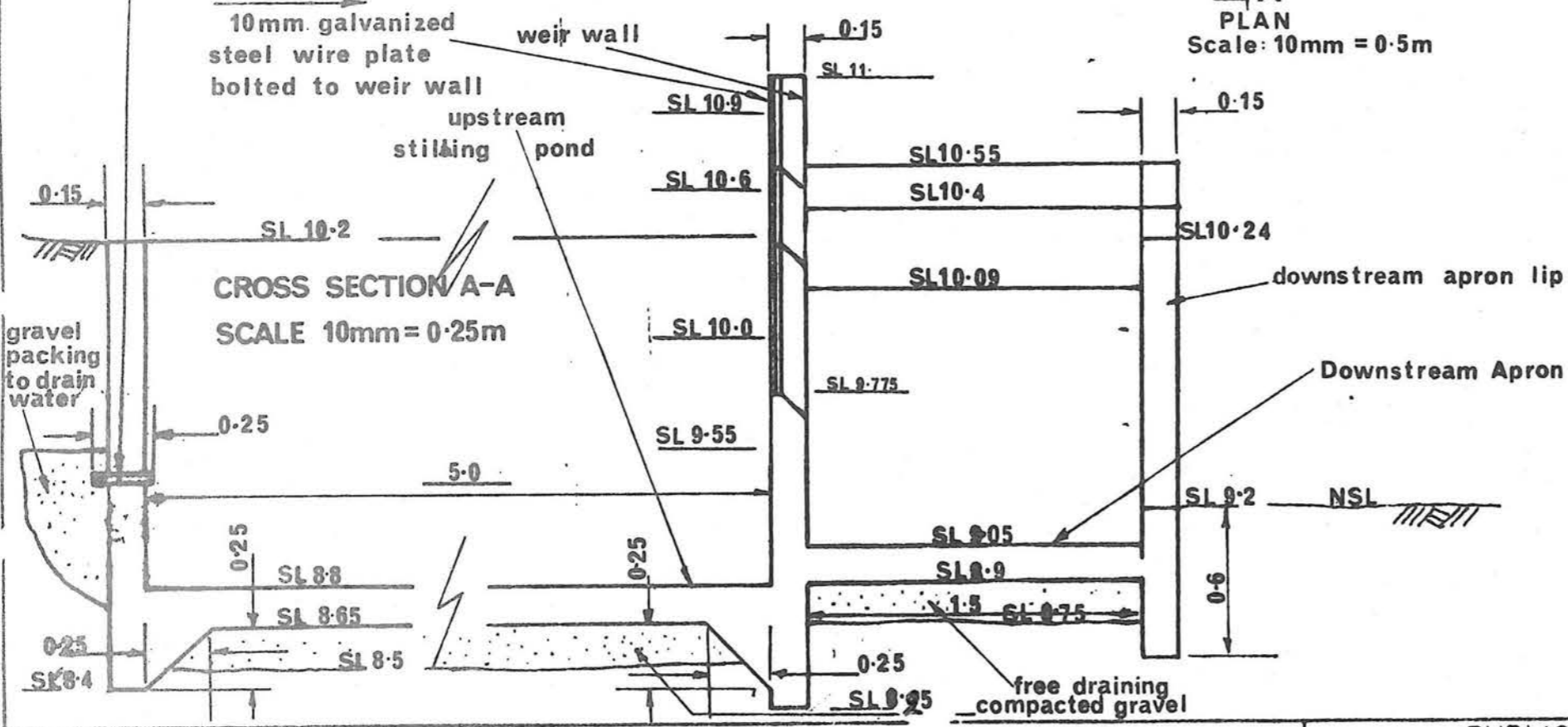




PLAN  
Scale: 10mm = 0.5m



Detail showing attachment of weir plate to weir wall  
Scale: 10mm = 0.1m



CROSS SECTION A-A  
SCALE 10mm = 0.25m

GENERAL NOTES

1) All dimensions in metres.

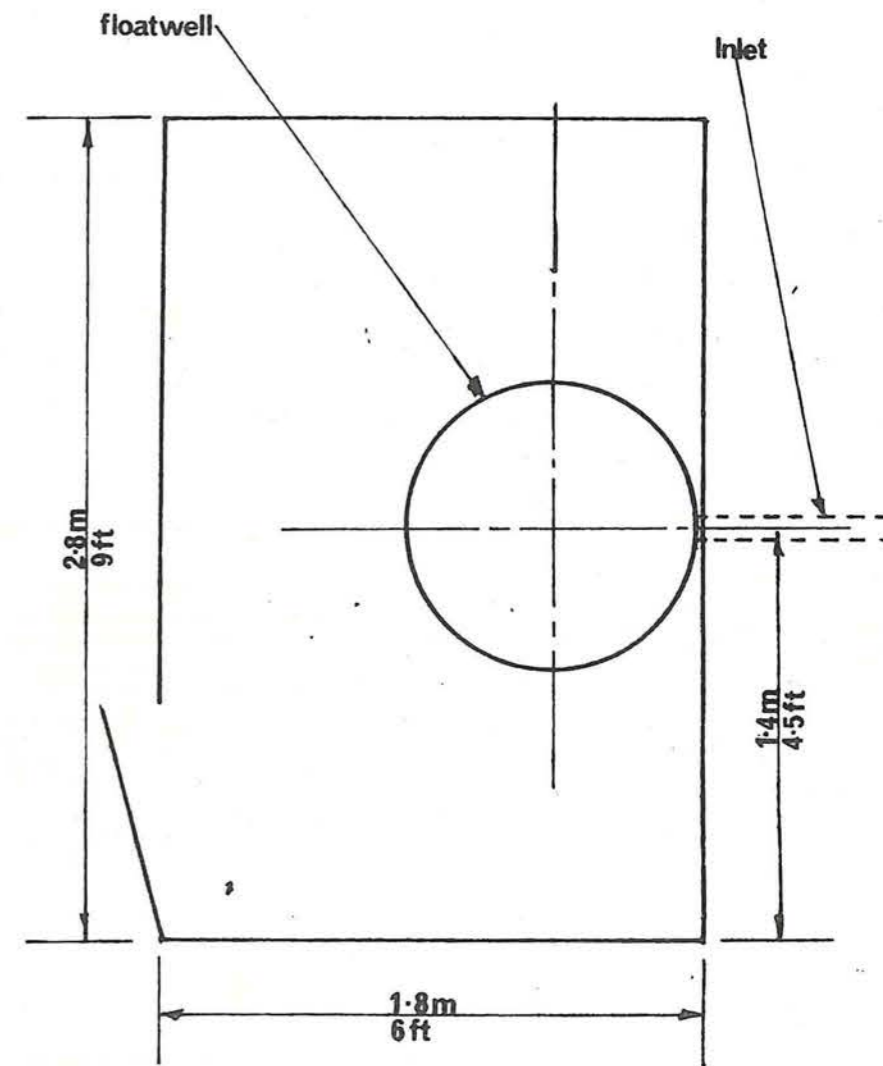
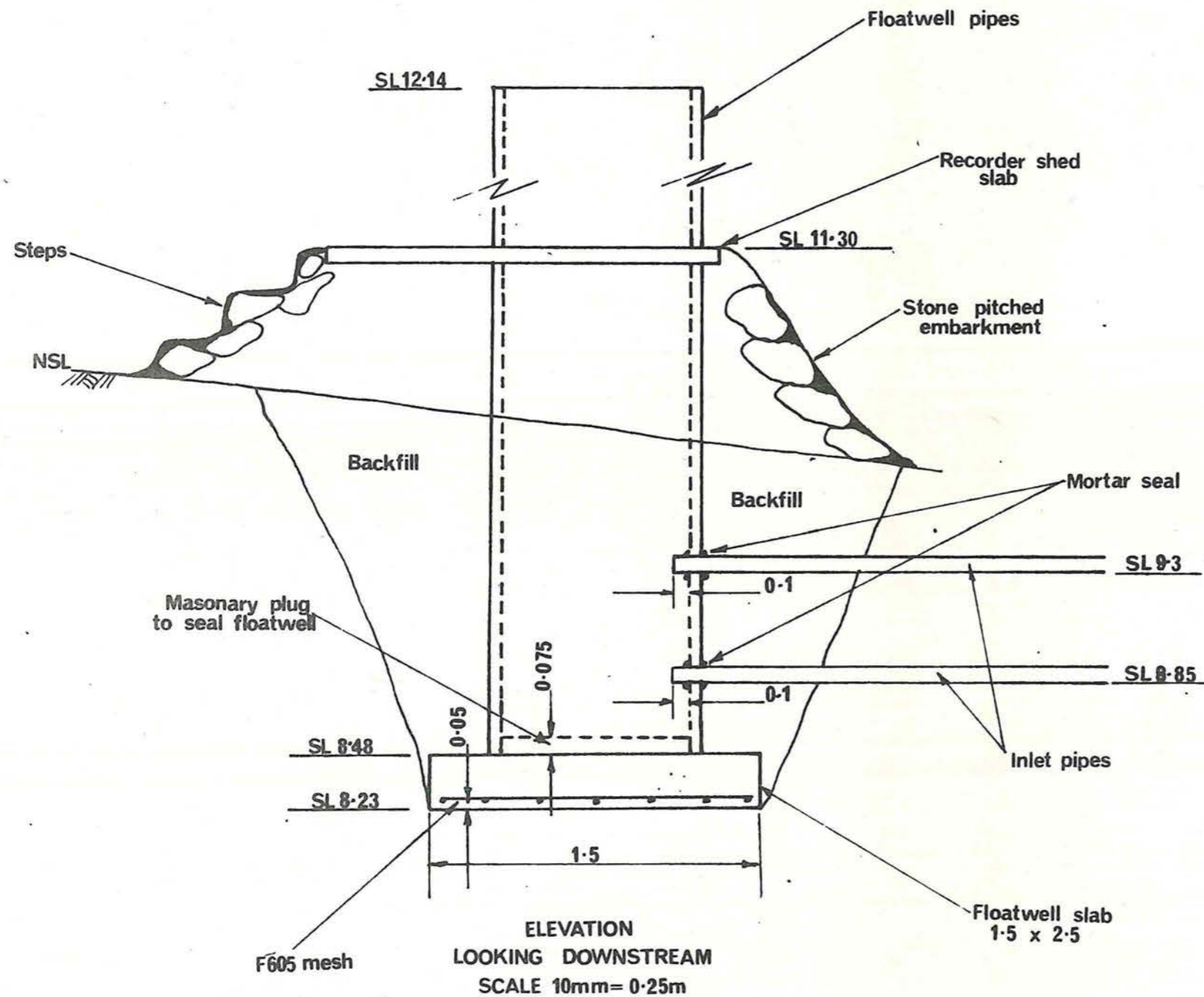
THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

SCALE AS SHOWN  
FILE NO  
HELENA FORESTRY CATCHMENT  
YARRA ROAD GAUGING STATION  
PLAN AND CROSS SECTIONS

DR'N *[Signature]*  
CHD *[Signature]* DATE 12-10-73  
APPROVED *[Signature]* 19.10.73

SUBMITTED  
*[Signature]* 19.10.73  
P.W.D., W.A.



RECORDER SHED  
FLOOR PLAN  
SCALE 10mm=0.25m

GENERAL NOTES

- 1) All dimensions in metres

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA

**HELENA FORESTRY CATCHMENT  
YARRA ROAD GAUGING STATION  
FLOATWELL DETAILS**

SCALE AS SHOWN

FILE NO

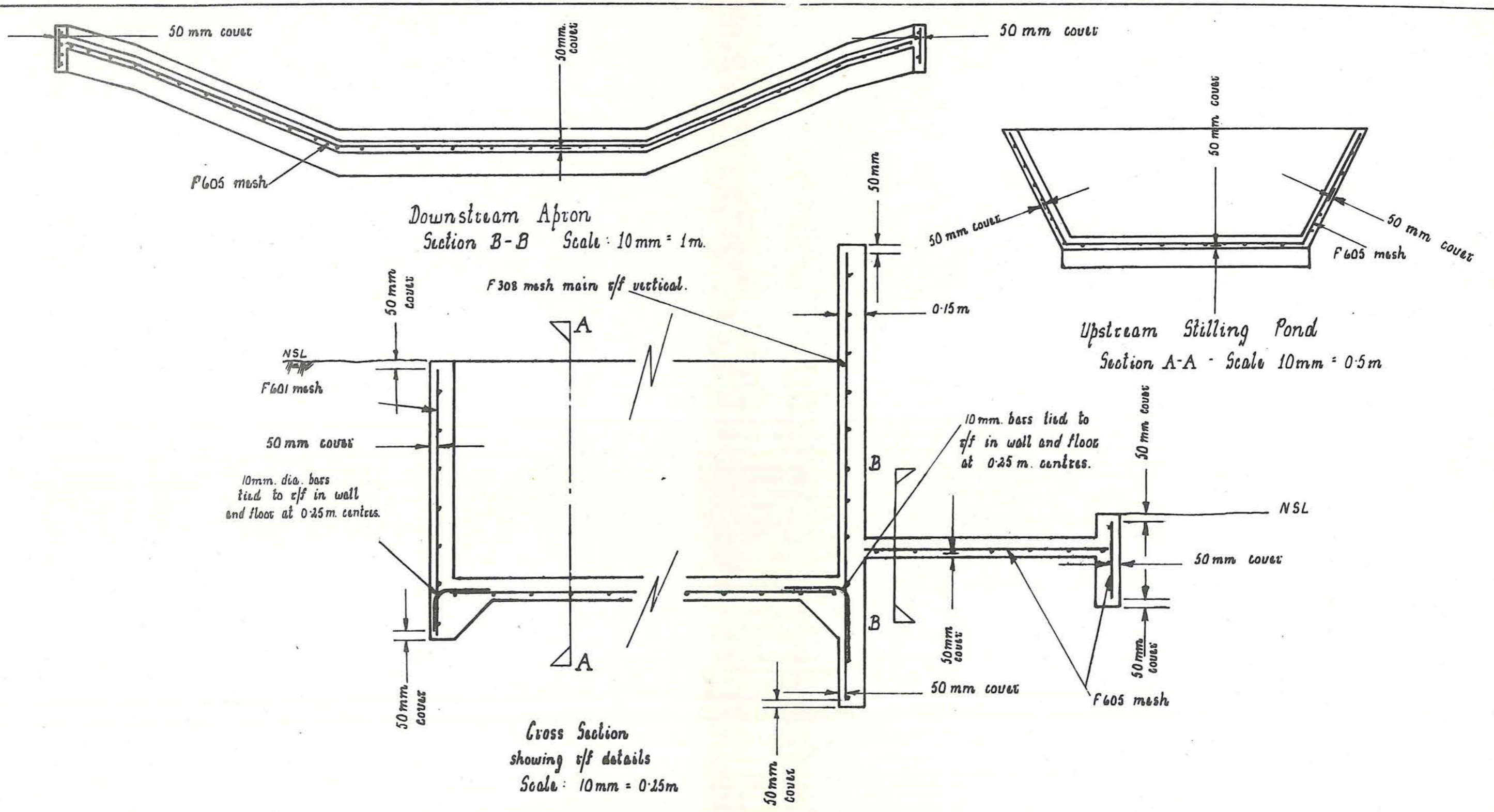
DR N *HS*  
CH'D *R.P.S.* DATE 12-10-73

APPROVED

SUBMITTED  
*H. J. Barrett* 19.10.73

P.W.D., W.A.





GENERAL NOTES

THIS DRAWING IS THE PROPERTY OF THE MINISTER FOR WORKS AND WATER SUPPLIES AND IS PROTECTED BY COPYRIGHT. IT SHALL NOT BE COPIED IN WHOLE OR IN PART AND SHALL BE USED ONLY FOR THE SPECIFIC PROJECT FOR WHICH IT IS ISSUED UNLESS WRITTEN CONSENT IS GIVEN BY THE MINISTER

PUBLIC WORKS DEPARTMENT - WESTERN AUSTRALIA	
SCALE AS SHOWN	<b>HELENA FORESTRY CATCHMENT YARRA ROAD GAUGING STATION REINFORCEMENT DETAILS</b>
FILE NO	
DR'N <i>AB</i>	SUBMITTED <i>K. L. Barrett 19.10.73</i>
CH'D <i>ROB</i> DATE <i>12.10.73</i>	
APPROVED <i>K. L. Barrett 19.10.73</i>	PWD WA