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3 April 2007

Mr S Gregson,
General Manager – Adjudication
Australian Competition and Consumer Commission,
P.O. Box 1199
Dickson ACT 2602

FILE No:	
DOC:	
MARS/PRISM:	

Dear Sir,

Authorisation Application by the Construction Material Producers Association Inc. (CMPA)

Attached is an application for authorisation to enable the CMPA to “to develop and publish standard form contracts for use between its members, private principals and contractors” and “to develop and publish a standard form contract for use between members and owner drivers”.


The application had been developed in the latter half of 2006 using the form of application required at that time. In that form it has been approved by the management committee of the CMPA. The CMPA is aware that the form of application has since changed but after your telephone conversation with me on 28 March it was decided to proceed with the original form rather than having to delay the matter to rewrite the submission. I believe that the information required by the new form is contained in the attached submission although not necessarily in the sequence required by the new form.

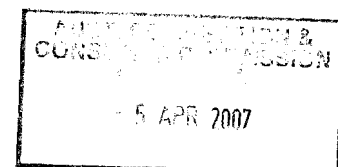
The CMPA is seeking interim authorisation for the agreement so that:

- (a) training in the procedures which will be necessary for the implementation of the major contract can commenced.
- (b) hirers can entered into agreements with drivers by 1 May 2007 as required by Victorian legislation.

A cheque for the application fee of \$7,500.00 is enclosed.

Yours Faithfully


Lindsay Coombs



Form B

Commonwealth of Australia
Trade Practices Act 1974 ---Sub-section 88(1)
AGREEMENTS AFFECTING COMPETITION:
APPLICATION FOR AUTHORISATION

A91047

To the Australian Competition and Consumer Commission:

Application is hereby made under sub-section 88(1) of the *Trade Practices Act 1974* for an authorisation under that sub-section ~~to make a contract or arrangement, or arrive at an understanding, a provision of which would have the purpose, or would have or might have the effect, of substantially lessening competition within the meaning of section 45 of that Act.~~
• to give effect to a provision of a contract, arrangement or understanding which provision has the purpose, or has or may have the effect, of substantially lessening competition within the meaning of section 45 of that Act.
(Strike out whichever is not applicable)

(PLEASE READ DIRECTIONS AND NOTICES ON BACK OF FORM)

1. (a) Name of Applicant Conundrum Holdings Pty Ltd.....

(See Direction 2 on the back of this Form)

(b) Short description of business carried on by applicant

..... Supply of aggregate and other materials for construction works.....

(c) Address in Australia for service of documents on the applicant

..... Construction Material Producers Association Inc.....

..... C/ Mr B.L. Coombs 11 Coolidge Wynd... Macleod... Vic... 3085.....

2. (a) Brief description of contract, arrangement or understanding and, where already made, its date

..... See page 2 of the submission at Attachment A.....

(b) Names and addresses of other parties or proposed parties to contract, arrangement or understanding

..... See list at Attachment B.....

(See Direction 4 on the back of this Form)

3. Names and addresses (where known) of parties and other persons on whose behalf application is made

..... As for Clause 2 (b).....

4. (a) Grounds for grant of authorisation

..... See submission at Attachment A.....

(b) Facts and contentions relied upon in support of those grounds

..... See submission at Attachment A.....

(See Notice 1 on the back of this Form)

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5. This application for authorisation may be expressed to be made also in relation to other contracts, arrangements or understandings or proposed contracts, arrangements or understandings, that are or will be in similar terms to the above mentioned contract, arrangement or understanding.

(a) Is this application to be so expressed? No.....

(b) If so, the following information is to be furnished:

(i) the names of the parties to each other contract, arrangement or understanding.

(ii) the names of the parties to each other proposed contract, arrangement or understanding which names are known at the date of this application

(See Direction 5 and Notice 2 on the back of this Form)

6. (a) Does this application deal with a matter relating to a joint venture (See section 4J of the Trade Practices Act 1974) No.....

(b) If so, are any other applications being made simultaneously with this application in relation to that joint venture..

(c) If so, by whom or on whose behalf are those other applications being made

7. Name and address of person authorised by the applicant to provide additional information in relation to this application.

...Mr Lindsay Coombs, Competition Economics Services Pty Ltd, 11 Coolidge Wynd, Macleod Vic 3085.....

... Telephone 03 94593350.....

Dated 3-4-07, 20.....

RK

Signed by /on behalf of the applicant

R Kerr

(Signature)

Ronald Frederick Kerr

(Full Name)

Director

(Description)

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DIRECTIONS

1. Where there is insufficient space on this form to furnish the required information, the information is to be shown on separate sheets, numbered consecutively and signed by or on behalf of the applicant.
2. Where the application is made by or on behalf of a corporation, the name of the corporation is to be inserted in item 1(a), not the name of the person signing the application and the application is to be signed by a person authorised by the corporation to do so.
3. In item 1(b), describe that part of the applicant's business relating to the subject matter of the contract, arrangement or understanding in respect of which the application is made.
4. Furnish with the application particulars of the contract, arrangement or understanding in respect of which the authorisation is sought. Those particulars shall be furnished —
 - (a) in so far as the particulars or any of them have been reduced to writing —by lodging a true copy of the writing; and
 - (b) in so far as the particulars or any of them not been reduced to writing ---by lodging a memorandum containing a full and correct statement of the particulars that have not been reduced to writing.
5. Where the application is made also in respect of other contracts, arrangements or understandings, which are or will be in similar terms to the contract, arrangement or understanding referred to in item 2, furnish with the application details of the matter in which those contracts, arrangements or understandings vary in their terms from the contract, arrangements or understanding referred to in item 2.

NOTICES

1. In relation to item 4, your attention is drawn to sub-sections 90(6) and (7) of the *Trade Practices Act 1974* which provide as follows: -
 - "(6) The commission shall not make a determination granting an authorisation under sub-sections 88(1), (5) or (8) in respect of a provision (not being a provision that is or may be an exclusionary provision) of a proposed contract, arrangement or understanding, in respect of a proposed covenant, or in respect of proposed conduct, unless it is satisfied in all the circumstances that the provision of the proposed contract, arrangement or understanding, the proposed covenant, or the proposed conduct, as the case may be, would result, or be likely to result, in a benefit to the public and that that benefit would outweigh the detriment to the public constituted by any lessening of competition that would result, or be likely to result, if
 - (a) the proposed contract or arrangement were made, or the proposed understanding were arrived at, and the provision concerned were given effect to;
 - (b) the proposed covenant were given, and were complied with; or
 - (c) the proposed conduct were engaged in, as the case may be.
 - "(7) The Commission shall not make a determination granting an authorisation under sub-section 88(1) or (5) in respect of a provision (not being a provision that is or may be an exclusionary provision) of a contract, arrangement or understanding, or, in respect of a covenant, unless it is satisfied in all the circumstances that the provision of the contract, arrangement or understanding, or the covenant, as the case may be, has resulted, or is likely to result, in a benefit to the public and that that benefit outweighs or would outweigh the detriment to the public constituted by any lessening of competition that has resulted, or is likely to result, from giving effect to the provision or complying with the covenant."
2. If an authorisation is granted in respect of a proposed contract, arrangement or understanding the names of the parties to which are not known at the date of this application, the authorisation shall, by sub-section 88(14) of the *Trade Practices Act 1974*, be deemed to be expressed to be subject to a condition that any party to the contract, arrangement or understanding will, when so required by the Commission, furnish to the Commission the names of all the parties to the contract, arrangement or understanding.

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Attachment to Form B Application for Authorisation.

1 BACKGROUND

THE CONSTRUCTION MATERIALS SECTOR IN VICTORIA AND THE CMPA

The Industry

- 1.1 A key component of the construction, building and, in many cases, manufacturing industries is the supply of competitively priced rock, stone, sand, clay and gravel products which are essential for the production of concrete, cement, bricks, tiles, asphalt, crushed rock products and a host of other applications. Stone is primarily used for construction of roads and buildings but also has other uses in engineering and manufacturing.
- 1.2 Victoria has an abundance of good quality construction materials which, unlike metallic minerals and ores, are low in value. This means that, to be viable, extraction needs to occur close to market sources. Many small-scale quarry operations have developed in rural and regional areas to satisfy a local demand.
- 1.3 The industry is characterised by a three large operators and over ninety medium to small operations engaged in the extracting, processing or otherwise working hard rock, gravel, sand, masonry, clay, lime, soil, gypsum or recycling.
- 1.4 Investment in quarries can range from \$650,000 up to \$50,000,000 although the parties to this agreement are mainly at the lower end of the scale. This illustrates that the owners have considerable equity to service.
- 1.5 These large and small operators supply material to construction contractors who work for major organisations (referred to as the "principal") such as:
 - (a) VicRoads
 - (b) Local Government
 - (c) Water authorities
 - (d) Railway operators, and
 - (e) Private construction businesses.
- 1.6 Based on the state's annual production of 46,207,414 tonnes of quarry material in 2005/06¹ and its value of \$532,540,353 (excluding transport costs) it is clear that the industry requires clear contractual relationships between supplier and contractor being clarified.
- 1.7 On average a truck carries 13 tonnes of material and a truck with quad-dog trailer carries 33 tonnes of material, so from the above figures it can be assumed that between 1.4 million and 3.6 million transport movements occur in the industry annually². These movements occur for distances up to 250kms. This demonstrates the importance to the industry of owner drivers and the importance of ensuring the needs, duties and responsibilities of both suppliers and owner-drivers are recorded in a contract.
- 1.8 While trucks and trailers used by the industry are basically simple they have few other uses than for carrying quarry products or products related to the construction industry. Trucks cost around \$220,000 and dog-trailers around \$75,000. It can be seen that owner drivers have a large investment in the industry which they must service to remain viable.

The Construction Materials Producers Association (CMPA) and other associations.

- 1.9 The CMPA represents the smaller businesses across Victoria which are involved in construction material processing. These suppliers account for approximately 25% of quarry materials supplied in Victoria.

¹ p38, Department of Primary Industries, Victoria's mineral, petroleum and extractive industries 2004/05 statistical review

² These figures are only accounting for the transport movement from the quarry to the purchaser. As many purchasers are in their own right resellers, this figure may be substantially higher

- 1.10 The Association has 98 Voting Members and 114 Associate Members. Members are quarry owners and operators while associate members are interested parties who supply goods and services to members.
- 1.11 The members in the most part engage owner drivers to supplement, or instead of, their own transport fleet. It is estimated that up to 700 owner drivers are engaged across the industry.
- 1.12 The major quarry owners and operators are generally subsidiaries of the major construction companies or materials suppliers and are members of the Cement, Concrete and Aggregates Association (CCAA).
- 1.13 Owner drivers do not have their own association but are often represented by the Transport Workers Union. The Union is represented on the Transport Industry Council and is generally aware that the CMPA has prepared a contract for use by its members and owner drivers contracted by them.

Contractual Relationships

- 1.14 In the past detailed contracts have been written between the principal and the contractors but relationships between the contractor and material suppliers have been limited to order forms or even oral orders. This has led to situations where there has been confusion as to specifications of the material required, arguments as to responsibility for materials performance at various times of construction, delivery schedules, preparation of sites, safety, insurance responsibilities and other operational requirements.
- 1.15 Similarly the relationship between suppliers and owner drivers has often been a handshake followed by a site induction course and little else. On 24 August 2005 the Owner Drivers and Forestry Contractors Act 2005 of Victoria (the Owner Drivers Act) received royal assent and its provisions are currently being implemented. This act, among other things, requires that there be written contracts between owner drivers and their hirers and stipulates certain factors which have to be incorporated in such contracts. Contracts are required to be in force by 1 May 2007.
- 1.16 In preparing the contracts under the agreement for which authorisation is sought the CMPA has been careful to ensure that the obligations and responsibilities between the principal and the contractor are reflected in the form, obligations and responsibilities set out in the lower contracts. Because of differences in the head contract the standard form version may vary as between the principals and variations will probably be made in each contractual situation because of site requirements.
- 1.17 To conform to the Owner Driver's Act the CMPA wishes to have a contract which is suitable for this industry rather than use the generic model supplied by the Transport Industry Council (TIC) established under that act. This will enable the contract to be a continuation of form, obligations and responsibilities from the contract between the contractor and the supplier.
- 1.18 While Section 64 of the Owner Drivers Act purports to exempt from the Trade Practices Act "anything done by a person in order to comply with this Act, or regulations or to a code of practice", the CMPA is concerned that this is too broad and does not satisfy the requirements of Section 51 of the Trade Practices Act as interpreted by the Federal Court in Ku-ring-gai Co-operative Building Society (No 12) Ltd 36 FLR 134 22 ALR 621.
- 1.19 Consequently authorisation is being sought for an agreement to produce this common form contract as well.

2. THE AGREEMENT RELATING TO STANDARD FORMS OF CONTRACT

- 2.1 The agreement was made by the Management Committee of the CMPA at its meeting on 2/3/2007.
- 2.2 The agreement states:

The members of the Construction Material Producers Association Inc, being concerned at the lack of certainty in relationships between Contractors and suppliers of quarry materials agree to develop and publish standard form

contracts for use between its members, private principals and contractors working for:

- VicRoads
- local government authorities in the State of Victoria
- water supply authorities in the State of Victoria
- railway operators in the State of Victoria

as principals.

Also, being required by the Owner Drivers and Forestry Contractors Act 2005 of the State of Victoria to have a regulated contract for use in employing owner drivers, the members of the Construction Material Producers Association Inc agree to develop and publish a standard form contract for use between members and owner drivers to ensure that requirements of the contract between contractors and suppliers are properly reflected in the contract between members and owner drivers.

While recommending the use of the forms they are intended for guidance to members only and there will be no compulsion to use them or to use them unamended.

This resolution was adopted by the Management Committee of the Construction Material Producers Association Inc on the second day of March 2007.

- 2.3 At this stage a draft contract has been developed for use between contractor's operating for VicRoads as principal and CMPA members for contracts valued at \$80,000 and above. A copy is at attachment C. The contract may also be used for contracts valued at less than \$80,000 if members so wish. The CMPA seeks authorisation to develop contracts for use in contracts involving:
- local government authorities in the State of Victoria
 - water supply authorities in the State of Victoria
 - railway operators in the State of Victoria
- and undertakes to provide the Commission with a copy of them when they are completed.
- 2.4 It is anticipated that the need will arise for a contract to be written for contracts between \$79,999.99 and \$10,000.00. This will be a "cut down" version of the major contract and will incorporate most of the same principles, obligations and responsibilities. The CMPA seeks authorisation for such a contract and undertakes to provide the Commission with a copy when it is completed.
- 2.5 It is expected that contracts of less than \$10,000 will be subject to the terms of trade of each member.
- 2.6 The contracts for use by contractors for local government authorities and CMPA members are currently being negotiated and it is expected that they will be substantially the same since local government authorities generally follow the practices and contracts of VicRoads. The major contracts will again be for amounts above \$80,000 but a minor contract for amounts from \$79,999.99 to \$10,000.00 may also be developed. Copies of each of these contracts will be provided to the Commission as they are completed.
- 2.7 The contracts for use in supply to water supply and rail authorities are also being negotiated and are expected to be the same in substance. There may also be special issues which have to be covered such as method of delivery and laying of products. The major contracts will again be for amounts above \$80,000 but minor a minor contract for amounts from \$79,999.99 to \$10,000.00 may also be developed. Copies of each of these contracts will be provided to the Commission as they are completed.
- 2.8 The contract with Owner Drivers has been completed and a draft copy is at attachment D. Minor variations may have to be made to cover work for local government authorities, water authorities and railway operators but such variations will not alter the general approach and principals in the draft contract.

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3. GROUNDS FOR GRANT OF AUTHORISATION

- 3.1 Under s90(6) of the *Trade Practices Act*, the Commission must weigh the public benefit of the proposed agreement against "the detriment to the public constituted by any lessening of competition that would result, or be likely to result" from the proposed agreement.

THE MAJOR AND MINOR CONTRACTS

- 3.2 CMPA seeks authorisation on the basis that the public benefit from the proposed agreements outweigh any lessening of competition that the production and distribution of the contracts may have. The effect on competition and the public benefits claimed are set out below.

Effect on competition

- 3.3 Given that there is no existing alternative to the proposed contracts there is a risk that the proposed contracts will become a standard and it could be alleged that this will produce anti-competitive effects. Additionally in developing the contract the CMPA has held discussions with the Civil Contractors Federation, the CCAA, VicRoads and others which may be seen as anti-competitive.
- 3.4 CMPA submits that there is unlikely to be any significant lessening of competition as a result of the arrangement. The contracts construct an order of responsibility and operations of the contractor and the supplier but leave the major competitive issues of the relationship for negotiation. These issues are set out in Annexure A of the contracts. Some of the issues contain a default arrangement which is used when no other arrangement is negotiated but it is submitted that this should not lessen competition in any way as the parties are free to negotiate alternative arrangements.
- 3.5 Further, CMPA member compete with members of the CCAA who are not party to the arrangement. Members of this Association are able to develop their own contract as an association or as individual companies.
- 3.6 In conclusion CMPA submits that there will be minimal, or no, lessening of competition from the product of its agreement.
- 3.7 The CMPA can envisage no other detriments to the public than the potential for a minimal lessening of competition.

Public Benefit

Certainty in Relationships.

- 3.8 The contract for the first time clearly state in writing the division of responsibilities and the obligations of the contractor and supplier, replacing the inefficient order and handshake system of supply. As indicated previously there is currently no record of the responsibilities of either the contractor or the supplier in transactions for material that are valued at over \$532,540,353 the vast majority of which is tax payer or rate payer money. The whole industry will derive benefit from this certainty and the public can have confidence that there is accountability for operations involved in construction funded by them.
- 3.9 The lack of recorded obligations and responsibilities leaves the possibility of disputes arising over almost all aspects of the relationship except where obligations or responsibilities are able to be deduced from common usage in the industry. When disputes do occur they are often technical and expensive to resolve.
- 3.10 Additionally when disputes arise there is no prescribed mechanism for resolving them apart from litigation. The contracts allow for the use of an agreed system of dispute resolution which it is anticipated will enable the majority of disputes to be settled expeditiously and at a low cost.

Reduced transaction costs

- 3.11 In the absence of the contracts produced under this agreement each of the 98 Voting Members of the CMPA would have to produce their own contract to achieve the certainty and operating

efficiency provided by the contract. This would involve them in substantial costs which can be avoided.

- 3.12 Contractors would also have to have the total contract of each supplier separately checked in detail rather than being able to concentrate on the important issues that are set out in Attachment A. of the draft contract.

Efficiency of operations

- 3.13 Each contractor would, over a period, potentially have to deal with each of these 98 contracts. Having one contract whose terms are well known by both parties will result in much higher efficiency for the industry as a whole and not just for CMPA members.
- 3.14 CMPA also considers that the contract will result in improved resource allocations as a consequence of the standardisation of operations.

Compliance with Victorian Law

- 3.15 The contract, in association with the Owner Driver's Contract, also assists in compliance with the National Chain of Responsibility in the Road Transport Laws by clarifying responsibility for various facets of the delivery of material. The chain of responsibility means that any person who has control in organizing a transport operation - not just the driver - can be held responsible for breaches of road laws and may be liable for breaches of any law affecting the operation. By clarifying who is responsible for each part of a delivery the responsibility for any road law contravention is more certain.
- 3.16 The contract also requires the implementation by contractors and suppliers of the method of claiming payment and making payment that is required under the Victorian Building and Construction Industry Security of Payment Act 2002 (the Security of Payments Act) and for the adoption in disputes about payment of the dispute resolution procedures required under that act. Although the act has been in force for over 4 years the payment claiming and payment procedures have been adopted by very few, if any contractors or suppliers. The purpose of the legislation is to ensure that proper payments are made and disputes over payment minimised.

THE OWNER DRIVER'S CONTRACT

- 3.17 CMPA seeks authorisation on the basis that the public benefit from the proposed agreements outweigh any lessening of competition that the production and distribution of the contracts may have. The effect on competition and the public benefits claimed are set out below.

Effect on competition

- 3.18 Competition for owner drivers is basically limited to competition between CMPA members and occasionally between those members, the CCAA's members and those not represented by either association. As indicated in paragraph 1.8 the trucks and trailers do not have a substitutable use other than carrying quarry products or similar products related to the construction industry.
- 3.19 While there is a model contract available from the Transport Industry Council the CMPA considers that it is more applicable to couriers and other delivery drivers than to this industry. Consequently it has drafted this contract to mesh in with the contracts involved in the principal, contractor and supplier hierarchy of the quarry material suppliers industry. There is consequently a risk that the proposed contract will become a standard and it could be alleged that this will produce anti-competitive effects.
- 3.20 However the CMPA submits that there is unlikely to be any significant lessening of competition as a result of the product of its arrangement to develop this contract. The contract constructs an order of responsibility and operations of the supplier and the owner driver but leaves the major competitive issues of the relationship for negotiation. These issues are set out in Annexure A of the draft contract. Some of the issues contain a default arrangement which is used when no other arrangement is negotiated but it is submitted that this should not lessen competition in any way because the parties are free to negotiate alternative arrangements.

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- 3.21 In conclusion CMPA submits that there will be minimal, or no, lessening of competition.
- 3.22 The CMPA can envisage no other detriments to the public than the potential for a minimal lessening of competition.

Public Benefit

Certainty in Relationships.

- 3.23 The contract for the first time clearly state in writing the division of responsibilities and the obligations of the supplier and the owner driver, replacing the inefficient handshake and induction system of hiring. As indicated previously there is currently no record of the responsibilities of either the supplier or the owner driver although by law those responsibilities and obligations are interrelated.
- 3.24 The Owner Drivers Act now requires that all hirers of Owner Drivers enter into a written contract which covers prescribed events. The TIC has developed a model contract for use but it provides little certainty in describing the responsibilities and obligations which exist in this industry. While members are free to use that or any other contract there is no existing contract that provides the certainty in the overall relationship provided by this contract.
- 3.25 The lack of recorded obligations and responsibilities leaves the possibility of disputes arising over almost all aspects of the relationship except where obligations or responsibilities are able to be deduced from common usage in the industry. When disputes do occur they are often technical and expensive to resolve.
- 3.26 Additionally when disputes arise there is no prescribed mechanism for resolving them apart from litigation. The contract allows for the use of an agreed system of dispute resolution which it is anticipated will enable the majority of disputes to be settled expeditiously and at a low cost. It also includes the system of dispute resolution prescribed by the Owner Driver's Act when disputes occur over issues covered by that act.

Reduced transaction costs

- 3.27 In the absence of the contract produced under this agreement each of the 98 Voting Members of the CMPA would have to produce their own contract (or use the TIC model). To produce their own contract would involve them in substantial costs which can be avoided.
- 3.28 Owner drivers seeking employment would also have to check any contract suggested by a supplier to ensure that they were sure of its effect. For owner drivers moving between employment or who have more than one truck and each truck is hired to different suppliers this would create uncertainty and expense.

Efficiency of operations

- 3.29 In the absence of this contract each owner driver would, over a period, potentially have to deal with 98 contracts produced by members. Having one contract whose terms are well known by both parties will result in much higher efficiency of operations.
- 3.30 CMPA also considers that the contract will result in improved resource allocations as a consequence of the standardisation of operations.
- 3.31 The Small Business Commissioner of Victoria who has responsibilities under the Owner driver's Act has stated that one of the underlying purposes of the act is to encourage owner drivers to become more efficient businesses by forcing them into a clear contractual situation. CMPA believes that this contract will assist in achieving that aim in this industry.

Compliance with Victorian Law

- 3.32 The contract also assists in compliance with the National Chain of Responsibility in the Road Transport Laws by clarifying responsibility for various facets of the delivery of material. The chain of responsibility means that anybody - not just the driver - who has control in a transport

operation can be held responsible for breaches of road laws and may be made legally liable. In other words, if a business uses road transport the owners and employees of that business share responsibility for ensuring breaches of road laws do not occur. By clarifying who is responsible for each part of a delivery the responsibility for any road law contravention is more certain.

- 3.33 While it is unclear whether owner drivers are covered by the Security of Payment Act the contract has adopted the system of claim for payment, making payment and disputes regarding payment set out in that act. This will provide efficiencies in members accounting in that claims made by them and on them will be in the same form. The only variation is that whereas the Security of Payment Act requires documentation to state that it is produced under the Security of Payment Act because of the uncertainty of coverage that requirement has been omitted. If in the future it is ascertained that the owner drivers are covered by that act the requirement to make that statement can be included without changing the effect of the document on competition or any aspect of its general effect.

4. TERM OF THE AUTHORISATION

- 4.1 Work performed under the major contract is generally long term being anywhere from one year upwards. Work on projects such as freeways can cover several years. Membership of the industry is very stable so that changes in the market occur slowly. Consequently CMPA believes that there will be little, if any, change in the circumstances which justify authorisation over a long period and submits that an appropriate term for the grant of the authorisation is ten years.
- 4.2 For the owner driver's contract the CMPA sees no variation in market or competition conditions occurring until the Owner Driver's Act is varied. Consequently the CMPA submits that the authorisation for the agreement to produce this contract should be for the period the Owner Driver's Act regulates the contract.

5 INTERIM AUTHORISATION

- 5.1 Major contracts are being signed without the protection of a subcontract being provided to the suppliers of quarry products. The CMPA wishes to implement the major contract as soon as practicable. Implementation will require providing instruction to members on the content of the contract and variation to work practices to accommodate the procedures, especially those required by the Security of Payments Act, may be required. Consequently interim authorisation is sought to enable this process to begin. It is not anticipated that any changes the Commission may wish to make to the contract will affect the operational procedures which will have to be implemented.
- 5.2 The Owner Drivers Act requires hirers to have entered into agreements with drivers by 1 May 2007. This limit has been imposed by the Government without consultation and despite their own development procedures being behind schedule. The CMPA would like to have the security of an interim authorisation so that they can meet this deadline. As explained the Owner Drivers act purports to exempt such action from the Trade Practices Act but the association doubts that this exclusion is effective. It is not anticipated that any changes the Commission may wish to make to the contract will affect the operational procedures which will have to be implemented.

CMPA Voting Members

**EXCLUDED FROM
PUBLIC REGISTER**

**GENERAL CONDITIONS OF CONTRACT FOR THE SUPPLY OF
QUARRY MATERIALS FOR MAJOR ROAD, BRIDGE OR
ASSOCIATED CONSTRUCTION WORKS.**

A major contract is a contract to the value of \$80,000 or more. At the discretion of the contractor and supplier the contract may be used for contracts of a lesser value.

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GENERAL CONDITIONS OF CONTRACT FOR THE SUPPLY OF QUARRY MATERIALS FOR MAJOR ROAD, BRIDGE OR ASSOCIATED CONSTRUCTION WORKS.

INTERPRETATION

1. In this contract, except where the context otherwise requires -

'business day' means a day that is not a Saturday or Sunday or a day that is wholly or partly observed as a public holiday throughout Victoria;

'claimed amount' means an amount of progress payment claimed to be due for material delivered as referred to in clause 88;

'class of material' means the materials of a class defined in Annexure E;

'clause' means clause of this 'contract' and 'sub-clause' means the relevant sub-clause of the clause indicated by the context;

'contract' means these terms and conditions;

'contract documents' means the documents listed in Item 15;

'contract sum' means:

- (a) where payment is to be made on a lump sum basis, the sum which is stated in the Item 14 to be payable to the supplier for the supply of material;
- (b) where payment is to be made on a schedule of rates basis, the sum ascertained by calculating the products of the rates and the corresponding quantities set out in the schedule of rates and adding to the sum thereof the total of any lump sums, provisional sums, contingency sums or other sums included in the schedule of rates which sum is stated in Item 14;
- (c) where payment is to be made on a lump sum and a schedule of rates basis, the aggregate of the sums referred to in paragraphs (a) and (b) which sum is stated in item 14;

including any additions and excluding any deductions which may be required to be made pursuant to the contract;

'contractor' means the person who is performing the works for the principal and who requires the supply of the materials listed herein and whose name is stated in Item 3 and whose address is stated in Item 4;

'Contractor's Representative' means the person appointed to the position whose name is stated in Item 9 and whose address is stated in Item 10 or in his absence such other person acting in that position or such other person for the time being or from time to time during the currency of the contract appointed by the contractor and notified in writing to the supplier to act as Contractor's Representative for the purpose of the contract and any person notified to the supplier as a Contractor's Representative's Delegate under clause 20. When no such person has been nominated in Item 9 or such other person appointed by the contractor and notified to the supplier, the Contractor's Representative shall mean the Chief Executive Officer of the contractor or the owner if a firm or individual.

'date for completion of supply' means the date stated in Annexure D or the last day of the period of time stated in Annexure D;

'date of completion of supply' means the date upon which the contractor receives the last of the material required by this contract;

'day' means a calendar day;

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'delivery docket' means the document accompanying each delivery containing the information set out in clause 54;

'delivery driver' refers to any person driving a vehicle delivering the material including employees of the supplier or a sub-contractor, or a sub-contractor's employee, employed by the supplier.

'direction' includes agreement, approval, authorization, certificate, decision, demand, determination, explanation, instruction, notice, order, permission, rejection, request or requirement;

'due date' means the date upon which progress payments are to be made as stated in Item 23;

'excluded amount' means the difference between the claimed amount and the scheduled amount where the scheduled amount is less than the claimed amount.

'Item' means an Item in Annexure B;

'material' means the material to be produced by the supplier in quantities and at prices set out in Annexure C and to the specifications set out in Annexure E;

'overdue money' is any excluded amount that is later determined to be payable to the supplier.

'person' includes a firm or body corporate or unincorporated as well as an individual;

'principal' means any person for whom the work at the site is being performed and whose name is stated in Item 1 and whose address is stated in Item 2;

'progress payment' means a payment to which the supplier is entitled under the Security of Payment Act;

'quantity of materials supplied' means the actual materials delivered to the contractor whether more or less than the original estimated quantity;

'reference date' means a date by reference to which the amount of progress payment is to be calculated in relation to material supplied as set out in Item 20;

'scheduled amount' is the amount of progress payment that the contractor proposes to pay in accordance with clause 89;

'schedule of rates' means the schedule of prices for each class of material set out in Annexure C;

'site' means the location to which the materials are to be delivered as set out in Item 13;

"Superintendent" means the person appointed to the position whose name is stated at Item 7 and whose address is stated in Item 8 or in his absence such other person acting in that position or such other person for the time being or from time to time during the currency of the contract appointed by the principal and notified in writing to the contractor to act as Superintendent for the purpose of the contract. When no such position has been nominated nor such other person appointed by the principal and notified to the contractor "Superintendent" shall mean the Chief Executive Officer of the contractor or the owner if a firm or individual;

'supplier' means the person supplying the materials whose name is stated in Item 5 and whose address appears in Item 6;

'Supplier's Representative' means the person appointed to the position whose name is stated in Item 11 and whose address is stated in Item 12 or in his absence such other person acting in that position or such other person for the time being or from time to time during the currency of the contract appointed by the supplier and notified in writing to the contractor to act as Supplier's Representative for the purpose of the contract and any

person notified to the contractor as a Supplier's Representative's Delegate under clause 22. When no such position has been nominated in Item 11 or such other person appointed by the supplier and notified to the contractor, the Supplier's Representative shall mean the Chief Executive Officer of the supplier or the owner if the supplier is a firm or individual;

'supply' means delivery of material to the site when required under Annexure D 16 of this contract;

'the Security of Payment Act' means the Building and Construction Industry Security of Payment Act 2002 (Vic) as amended from time to time;

'variation period' is eighty (80) business days from the date of signing of this contract;

'VicRoads' means the Roads Corporation established by the Transport Act 1983 (Vic) and includes its successors and assigns;

'written communication' includes a hand written or typed communication, a faxed communication, an emailed communication or any other form of electronic communication that can be recorder and reproduced in a hardcopy readable form.

2. Where the principal is dealing directly with the supplier the word contractor shall be taken to mean the principal and the 'Contractor's Representative' will be the 'Superintendent';
3. The clause headings and sub-clause headings shall not form part of this contract or be used in its interpretation.
4. Words
 - (a) in the singular include the plural and words in the plural include the singular, according to the requirements of the context;
 - (b) in the masculine form include the feminine form where applicable.

NATURE OF CONTRACT

5. The supplier shall supply the material as required under the contract.
6. The contractor shall pay the supplier the contract sum calculated from the base amount set out in Item 14.
7. The contractor shall pay the supplier in accordance with the progress payment provisions set out in this contract. If there is any conflict between those provisions and the Security of Payments Act, the latter shall prevail.
8. The contractor shall provide the supplier with any special clauses included in the head contract that are relevant to the performance by the supplier of its responsibilities under this contract and acknowledges that the clauses in Annexure A are all of those clauses. This contract shall be read as if those special clauses constitute part of this contract. Where there is any conflict between any special clauses and the general clauses of this contract the special clauses shall prevail as far as is legally required.

EVIDENCE OF CONTRACT

9. Until the Formal Instrument of Agreement referred to in the next succeeding sub-clause is executed by the parties, the agreement between the supplier and the contractor to enter into this contract, including any documents or parts of any documents to which reference may properly be made in order to ascertain the rights and obligations of the parties, shall constitute the contract between them.
10. Within ten (10) business days after the date of agreement of the terms of this contract the supplier shall complete and execute two (2) copies of the Formal Instrument of Agreement set out herein and shall return both copies of the contract to the contractor.

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11. On receipt from the supplier of the two copies of the Formal Instrument of Agreement duly executed by the supplier the contractor shall as soon as practicable execute both copies of the Formal Instrument of Agreement, and within ten (10) business days thereafter shall have both copies duly stamped unless an exemption from such requirement applies by any Act of the Victorian Parliament, and shall forward one of the copies of the contract to the supplier.
12. If the supplier or the contractor fails to duly execute the Formal Instrument of Agreement within the time and in the form prescribed in clauses 10 and 11 either party shall be entitled to treat such failure as a default under clause 112.

CONTRACTORS REPRESENTATIVE

13. The contractor shall ensure that at all times there is a Contractor's Representative at the site and that in the exercise of the functions of the Contractor's Representative under the contract ythat Contractor's Representative-
 - (a) acts honestly and fairly,
 - (b) acts within the time prescribed under the contract or where no time is prescribed, within a reasonable time, and
 - (c) arrives at a reasonable measure of quantities or time.
14. The supply of material under the contract shall be executed in accordance with the contract and in accordance with any directions of the Contractor's Representative pursuant to the provisions of the contract or for the safe conduct of work on the site.
15. Any direction that may be or is given to the supplier by the Contractor's Representative pursuant to the provisions of the contract may, unless the contract expressly provides otherwise, be given either orally or in writing. When any such direction is in the first instance given orally the Contractor's Representative shall within five (5) business days after it is so given confirm it in writing addressed to and issued or given to or served upon the Supplier's Representative.
16. In respect of proposals or requests or other matters submitted by the Supplier's Representative to the Contractor's Representative for approval, the granting of any such approval will not relieve the supplier of its responsibilities for satisfactory delivery of material to which such approval relates.
17. In respect of all matters which pursuant to the contract are left to the determination of the Contractor's Representative, including the granting or withholding of certificates, the Contractor's Representative, if required so to do by either party to the contract will give in writing to both parties his determination together with reasons for the determination.
18. Matters within the knowledge of the Contractor's Representative shall be deemed to be within the knowledge of the contractor.
19. The Contractor's Representative may appoint a Contractor's Representative's Delegate to perform all or part of the duties of the Contractor's Representative. The supplier shall be notified in writing of the name of each Contractor's Representative's Delegate and their function relevant to the performance of the contract.

SUPPLIER'S REPRESENTATIVES

20. The supplier shall personally superintend the delivery of material under the contract or have during the currency of the contract a competent Supplier's Representative available at all times during which any activities relating to the supply of material is taking place and if required by the Contractor's Representative at such other times and at such other places at or in which any activities relating to the supply of material is taking place.
21. The Supplier's Representative may appoint a Supplier's Representative's Delegate to perform all or part of the duties of the Supplier's Representative. The contractor shall be notified in writing

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of the name of each Supplier's Representative's Delegate and their function relevant to the performance of the contract.

22. Any direction given under clause 14 shall:
 - (a) if given to the Supplier's Representative on the site in respect of the delivery of material to the site be deemed to be a direction issued or given to or served upon the supplier in respect of the delivery of material to the site; or
 - (b) if given to the Supplier's Representative at any other place in respect to the delivery of material in that place shall be deemed to be a direction issued or given to or served upon the supplier in respect to the delivery of material to that place.
23. Matters within the knowledge of the Supplier's Representative shall be deemed to be within the knowledge of the supplier.

CONTROL OF CONTRACTOR'S EMPLOYEES AND SUBCONTRACTORS

24. The supplier shall employ and ensure that its sub-contractors employ in connection with the delivery of material only such persons as are careful, skilled and experienced in their respective trades and callings.
25. The Contractor's Representative may object to and direct the supplier to remove or have removed from the site or from any activity connected with the delivery of material under the contract within such time as the Contractor's Representative directs any person employed by the supplier or by any subcontractor who, in the opinion of the Contractor's Representative, misconducts himself or is incompetent or negligent in the performance of his duties; and the supplier shall comply with such direction and any such person shall not be employed on the site or on activities connected with delivery of material without the prior approval of the Contractor's Representative.
26. Subject to any indication to the contrary included in other clauses of this contract all employees and sub-contractors of the supplier shall be subject to the control of the Contractor's Representative when on the site.
27. Delivery drivers shall not for any purpose be taken to be representatives of the supplier.

QUANTITIES, CLASS AND PRICES OF MATERIALS REQUIRED

28. The classes, quantities and prices of materials to be supplied under this contract are set out in Annexure C. For all purposes associated with this contract the quantities are accepted as estimates only.
29. Where the specifications for materials required vary from any specification available for inclusion in Annexure E the contractor will provide the supplier with details of all specifications or parts thereof that are relevant to the suppliers' responsibilities in supplying the material and they shall be set out in Annexure E. The contractor certifies that the specifications included in Annexure E are either from the specifications available in this contract or as supplied by the contractor and accord with the specifications set out in the head contract.

CONTRACT DOCUMENTS

30. The contractor shall supply to the supplier the number of copies of the contract documents stated in Item 15.
31. In the event of an ambiguity or discrepancy being discovered in or between the contract documents or documents prepared thereafter for the purpose of executing the work under the contract, and the Supplier's Representative and the Contractor's Representative cannot resolve the ambiguity or discrepancy the Supplier's Representative shall provide the Contractor's Representative with a list of three persons with expert knowledge of the quarrying or

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construction industries or the contract from whom the Contractor's Representative shall choose one to provide an interpretation of the ambiguity or discrepancy.

32. The cost of such interpretation shall be borne equally by each party.
33. Where any such interpretation is not accepted by either party the matter shall be treated as a dispute under clause 131.

PROGRESS AND PROGRAMMING OF DELIVERY

34. Within the time set out in Item 16, the Contractor's Representative shall give to the supplier notice of specified times for delivery of the material in accordance with Annexure D. The Contractor's Representative may vary the times of delivery by notice in writing delivered to the Supplier's Representative.
35. Subject to clause 73 the supplier shall proceed with the delivery of the material under the contract with due expedition and without delay upon receipt of Annexure D from the Contractor's Representative and shall make all endeavours to deliver at the times specified.
36. The date for completion of supply shall be set out in Annexure D and shall be the estimated day on which the last delivery of material under the contract is required, or the period over which the delivery is required, unless the Contractor's Representative provides the supplier with a variation to that date or period, or the day or period is extended in accordance with any other provision of the contract.

DELIVERY

37. Delivery is made on the basis that the delivery site is safe for unloading the material. The delivery driver may refuse to unload if the ground area or environmental conditions, in his opinion, make it unsafe to do so.
38. The Contractor's Representative is responsible for the placement of all materials and any events that transpire as a consequence of that placement.
39. It is the Contractor's Representatives responsibility to ensure that at the site there are no overhanging power lines (spotter to be provided by, and at the expense of, the contractor), the ground is stable, there is ample clearance of trees and scrubs, safe distances from buildings and improvements and adequate space between gates, farm lanes, driveways and other entry points.
40. The methods of loading and unloading shall be such as to minimize segregation.
41. Under no circumstances shall material be tipped or spread in nominated "No Go Zones" as per AS/NZS 3000-2000 or any succeeding standard.
42. Where delivery of material into stockpile is specified clearing and preparation of stockpile sites will be done by the contractor.
43. Where material is to be stockpiled, stockpiles shall not be located under or immediately adjacent to overhead electric power lines or elsewhere where the overhead clearance from the surface for dumping is less than 6 m.
44. All stockpiles shall be constructed in such a way that segregation of the material is minimised.
45. Delivery shall be made in the manner and at the times and rates set out in Appendix D.
46. The supplier shall use vehicles appropriate for the manner of delivery set out in Appendix D.
47. All deliveries of materials must comply with the Road Safety Act 1986 and the Road Safety Regulations 1999 or any succeeding Acts or Regulations.
48. Vehicles used for transport of material to hoppers or pavers or to windrow boxes shall have bodies or discharge equipment which will enable the load to be discharged direct into the hopper or box without spillage and in such a way that segregation will be minimized.

- 49 Vehicles used for transport of plant mixed wet-mix crushed rock and cement treated crushed rock shall be fitted with covers of canvas or other approved material to minimize loss of water during transport.
- 50 Cement treated material shall be delivered within the time set out in Item 17.
- 51 Plant mixed wet-mix crushed rock shall be delivered within two (2) hours of the time of completion of mixing, unless otherwise approved or directed by the Contractor's Representative.
- 52 Material to be delivered direct to the roadbed shall be spread in even layers by running it from the vehicles.
- 53 Unless otherwise agreed in this contract or by the Contractor's Representative and the Supplier's Representative all deliveries shall be accompanied by a delivery docket and
- a. a certificate from an accredited National Association of Testing Authorities testing laboratory certifying that the material is of the class required by the contract;
 - b. a certificate identifying the source from which the relevant delivery has been taken; and
 - c. any other form of quality certification as agreed in Item 18.
- 54 The delivery docket shall set out:
- (i) name of the supplier,
 - (ii) location of the source rock;
 - (iii) docket number;
 - (iv) name of contractor;
 - (v) project name and site (or contract number);
 - (vi) registered number or fleet number of the vehicle;
 - (vii) date and time of loading;
 - (viii) nature and source of material;
 - (ix) empty and loaded masses of the vehicle (where material is scheduled for measurement by mass);
 - (x) loose uncompacted volume in delivery vehicle at the supplier's location of loading (where material is scheduled for measurement by volume).
 - (xi) any other information required by the supplier to effect delivery.
- 55 The delivery docket shall be signed by the Contractor's Representative upon acceptance of the delivery.
- 56 If there is no Contractor's Representative at the site the delivery driver may refuse to unload the material or, at the discretion of the Supplier's Representative may unload it at any location that the Supplier's Representative deems reasonable.

ACCEPTANCE

- 57 The signature of any employee of the Contractor on the delivery docket shall be evidence of the delivery of the material of the class, quality and in the quantity listed thereon.
- 58 Any claim for any alleged deficiency in quantity of material delivered must be made in writing by the Contractor's Representative to the Suppliers Representative within the time after delivery set out in Item 19. The claim shall set out full particulars of the delivery and full details of the alleged deficiency. Unless such a claim is made the supplier will not be liable in respect of any such deficiency.
- 59 Material may only be rejected for any defect in its class where a claim is made in writing by the

Contractor's Representative to the Supplier's Representative within the time after delivery set out in Item 19. The claim shall set out full particulars of the delivery and full details of the alleged defect. Unless such a claim is made the contractor will not be entitled thereafter to reject the product or claim for any alleged defects except where such a claim is allowed by law and for which the liability of the supplier cannot be excluded.

- 60 If the material is delivered to an unattended site, the delivery docket will be forwarded to the Contractor's Representative within the time period set out in Item 19 and, unless queried under clause 61 or clause 62, the material listed on the delivery docket will be accepted as proof of the delivery of material of that class and quantity unless the Contractor's Representative makes a claim to the Supplier's Representative regarding deficiency in quantity or defect in the class of the material in accordance with clauses 61 and 62.
- 61 If the material is delivered to an unattended site, or delivery is ex-bin, any claim for any alleged deficiency in quantity of material delivered must be lodged in writing with the supplier within the period set out in Item 19. Unless so notified the supplier will not be liable in respect of any such deficiency.
- 62 If the material is delivered to an unattended site, or delivery is ex-bin, any claim against the supplier relating to the class or quality of any material delivered must be lodged in writing with the supplier within the period set out in Item 19 except where further time for such a claim is allowed by law and where the supplier cannot limit the time.
- 63 Both parties agree to use their best endeavours to settle any claims but where agreement cannot be reached within one business day the matter shall be sent to the in Superintendent for determination under clause 134 or for arbitration under the disputes settlement procedures. In the settlement of any dispute the parties, the Superintendent or Arbitrator shall give precedence to the certificate issued by the certification authority stated in Item 18.
- 64 The contractor agrees that the performance of the material can be materially affected by the manner in which it is dealt with by the contractor, its employees or other sub-contractors when being stored and when being incorporated into other works or goods. The supplier shall not be liable for the performance of the material after incorporation in any works or goods in which it is used by the contractor, including but not limited to failure to satisfy post compaction tests, unless that performance is shown to be due to the standard or quality of the material at the point and time of delivery.

VARIATIONS

- 65 The Contractor's Representative may direct the Supplier to vary the materials to be supplied under the contract but such variation shall not be beyond the general scope of the contract. The supplier shall not vary the materials supplied under the contract except as directed in writing by the Contractor's Representative pursuant to this clause 65 or as allowed for in Annexure E.
- 66 The Contractor's Representative shall not direct a variation after the date of completion of supply.
- 67 If a change in a legislative requirement necessitates a change to the materials to be supplied under the contract that causes the supplier to incur more or less cost than would otherwise have been incurred, the difference shall be valued pursuant to clauses 68 to 71.
- 68 Unless the Contractor's Representative and the Supplier's Representative agree upon the price for a variation, the variation shall be valued or determined by the Contractor's Representative using reasonable rates and prices. The contractor shall pay or allow the supplier or the supplier shall pay or allow the contractor, as the case may require, the agreed price or, if no price is agreed, the amount valued or determined by the Contractor's Representative.
- 69 In determining any deduction to be made for material taken out of the contract, the deduction shall include a reasonable amount for profit and overheads.

- 70 In determining any increase to be made for material added to the contract, the addition shall include a reasonable amount for profit and overheads.
- 71 If the valuation relates to extra costs incurred by the supplier for delay or disruption, the valuation shall include a reasonable amount for profit and overheads.
- 72 Where the supplier is dissatisfied with a valuation the issue shall be treated as a dispute in accordance with clause 131.

EXTENSION OF TIME FOR DELIVERY

- 73 For such period as it thinks necessary the contractor or the supplier may delay, cancel, or reduce the amount delivered if the contractor is delayed in accepting delivery or the supplier is delayed in delivering the product due to circumstances beyond their reasonable control, including but not limited to: strikes, industrial dispute, union lockout, accidents, war, storm and tempest (including floods), fire, terrorist attack, drought, electrical, water supply or gas failure, breakdowns of plant or machinery, shortage of materials from normal source of supply, act of God, any order or direction of any local, State or Federal Government, Government authority or instrumentality, Court or Tribunal, or inability to meet or obtain licences, transport, labour, materials or equipment for a particular site, any act, default or omission of the principal, the contractor, the Contractor's Representative, the supplier, the Supplier's Representative or an employee, consultant or agent of the principal, the contractor or the supplier.
- 74 Within one (1) business day of such a delay coming to the attention of the contractor or the supplier their representative shall notify the representative of the other party in writing of the cause of the delay and the expected duration thereof.
- 75 The Contractor's Representative shall within five (5) business days of giving or receiving such notification provide the supplier with a written variation of the delivery times required taking into account the estimated delays.

COST ADJUSTMENT

- 76 This section provides for the rise and fall adjustment of the value of materials provided, valued on the basis of the Contract Sum.
- 77 Where there is a cost adjustment provision included in the head contract, the contractor shall advise the supplier of the terms of that provision and that shall be used as the cost adjustment provision for this contract.
- 78 Where there is no provision for cost adjustment in the head contract or the Contractor has not advised the Supplier of that provision the following shall be used to adjust the Contract Sum.
- 79 Notwithstanding anything to the contrary herein, payments made to the supplier in respect of the following items will not be adjusted in accordance with this section:
- (a) any variations ordered by the Contractors Representative pursuant to Clause 65 of this Contract, except where the variations so ordered are valued at rates lodged with the tender;
 - (b) payments made in regard to the return of retention money or security deposit;
 - (c) that portion of any payment which represents charges for the provision of material provided by the supplier;
 - (e) payments made for rise and fall adjustments in accordance with this section.
- 80 The adjustment (A_i) for the progress payment shall be calculated from the following formula:

$$A_i = \frac{\text{Effective Value (EV)}}{\text{Base Construction Index No.}} \times \frac{\text{Current Construction Index No.} - \text{Base Construction Index No.}}{\text{Base Construction Index No.}}$$

- (a) Effective Value (EV)

The effective value in respect of each progress payment or final payment is the value of

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work included in the payment schedule, less:

- the value of any material included therein on the basis of actual cost or current prices;
- the value of any material which is not subject to rise and fall adjustment in accordance with Clause 79;
- the value of any material which is subject to rise and fall adjustment on a different basis from that provided in this section;
- the effective value of previous progress payments; and
- disregarding any previous increase or decrease in costs assessed under this clause.

- (b) The Construction Index No. is the Road and Bridge Construction Index (Reference No. 4121) number as first published (i.e. the preliminary index) in the publication entitled "Output of the General Construction Industry, group and class indexes" Table 16, Catalogue No. 6427.0 by the Australian Bureau of Statistics, Canberra. In respect of index numbers published by the Australian Bureau of Statistics, the first published index number whether or not it is described as "preliminary" shall be used and no re-calculation shall be made on the basis of any subsequent revisions to the index number.

In respect of the above published quarterly index, and for the purpose of calculation of rise and fall payments, the Contractor will adopt a monthly index based on a linear interpolation between quarterly indices. Interpolated indices will be rounded to two decimal places.

The Construction Index Number shall apply across the whole of the month to which it refers.

- (c) The Base Construction Index No. is the Index Number of the month preceding the month in which tenders close.
- (d) The Current Construction Index No. is the Index Number applicable for the month immediately preceding the month during which the work is performed, or the month in which Date of Practical Completion falls.

- 81 In the event that Index Numbers referred to in this clause cease to be published by the Australian Bureau of Statistics, the contractor will determine in consultation with the supplier an appropriate substitute published index for the calculation of cost adjustment payments for the remaining works under the contract.

CERTIFICATE OF FINAL DELIVERY

- 82 Within ten (10) business days of delivery of the final quantity of material required under this contract the supplier may request the Contractor's Representative to issue a Certificate of Final Delivery specifying that all materials have been received and stating the date of completion of supply.
- 83 Within ten (10) business days of the receipt of such a request by the supplier, the Contractor's Representative shall issue such a certificate or give the supplier in writing the reasons for not issuing the Certificate.
- 84 When the Contractor's Representative is of the opinion that the final delivery has been made, the Contractor's Representative may issue a Certificate of Final Delivery whether or not the supplier has made a request for its issue.

PAYMENT

- 85 Within the number of business days stated in Item 21 after each reference date the supplier may serve on the Contractor's Representative, a payment claim stating the amount of progress payment claimed.
- 86 The supplier may serve only one payment claim in respect of a specific progress payment.

- 87 The material subject to the claim shall be valued having regard to:
- (i) the contract price for the material delivered up to that date that have become (or, on payment, will become) the property of the contractor or the principal;
 - (ii) any variation agreed to by the parties to the contract by which the contract price is to be adjusted;
 - (iii) any adjustment required by clause 80; and
 - (iv) if any material is defective, the estimated cost of rectifying the defect.
- 88 Payment claims shall identify the material to which it relates, the amount of progress payment claimed being the value of material delivered up to that date, state that it is made under the Security of Payment Act, state that it is a Tax Invoice and such other information as the Contractor's Representative may reasonably require.
- 89 Within the number of business days stated in Item 22 the Contractor's Representative shall assess the claim and may issue a payment schedule stating the scheduled amount of the payment to be made by the contractor.
- 90 The payment schedule shall identify the payment claim to which it relates and the scheduled amount. Where the scheduled amount is less than the claimed amount the schedule shall indicate why the amount is less and the reasons for withholding the payment.
- 91 If the supplier serves a payment claim on the Contractor's Representative, and the Contractor's Representative does not provide a payment schedule to the supplier within the time set out in Item 22 the contractor becomes liable to pay the claimed amount to the supplier on the due date.
- 92 Where the contractor becomes liable to pay the claimed amount under clause 91 and fails to pay the whole or any part of the claimed amount on or before the due date the supplier may recover the unpaid portion of the claimed amount from the contractor, as a debt due to the supplier, in any court of competent jurisdiction.
- 93 If the supplier serves a payment claim on the Contractor's Representative and the Contractor's Representative provides a payment schedule to the supplier within the time set out in Item 22 and the payment schedule indicates a scheduled amount that the contractor proposes to pay to the supplier and the contractor fails to pay the whole or any part of the scheduled amount to the supplier on or before the due date the supplier may recover the unpaid portion of the scheduled amount from the contractor, as a debt due to the supplier, in any court of competent jurisdiction;
- 94 If the supplier fails to make a payment claim under clause 85, the Contractor's Representative may nevertheless issue a payment schedule marked as a Recipient Created Tax Invoice and the contractor shall pay the amount stated on that schedule on the due date.
- 95 Where there is a dispute as to the amount to be paid the contractor shall pay the undisputed amount and hold the excluded amount in a Trust Account for the supplier.
- 96 Interest shall be paid at the rate stated in Item 24 on any overdue money until payment is made.
- 97 Where the payment schedule indicates an excluded amount, the supplier may apply for adjudication of the progress payment in accordance with Division 2 of Part 3 of the Security of Payment Act and the contractor shall comply with the requirements of that Division and assist the supplier in an action under Division 4 of Part 3 of the Security of Payment Act if the supplier has to resort to such action.
- 98 If delivery cannot be made to the site or the Contractor's Representative does not accept the material delivered for any reason other than failure of the material to conform to specifications, the contractor shall pay the supplier such transport costs as the supplier may specify or if delivery is ex-bin and is rejected by the Contractor's Representative for any reason, the cost of returning the material to the supplier shall be borne by the contractor.
- 99 Within ten (10) business days of the issuing of a Certificate of Final delivery under clauses 83 or

84 the supplier shall provide the Contractor's Representative with a final payment claim and endorse it 'Final Payment Claim'.

- 100 The supplier shall include in the Final Payment Claim all claims for moneys that the supplier considers due from the contractor arising out of the contract or any alleged breach thereof.
- 101 Within ten (10) business days after receipt of the supplier's Final Payment Claim or, where the supplier fails to provide such claim, within ten (10) business days of the issuing of a Certificate of Final Delivery the Contractor's Representative shall issue to the supplier and to the contractor a payment certificate endorsed 'Final Payment Schedule', setting out the amount which, in the Contractor's Representative's opinion, is finally due from one party to the other.
- 102 Unless the supplier not later than ten (10) business days after the issue of the Final Payment Schedule, seeks adjudication under clause 141 or either party gives a notice of dispute under clause 131, the Final Payment Schedule shall be evidence that the materials required under the contract including variations thereto, have been delivered in accordance with the terms of the contract and that all necessary effect has been given to all the terms of the contract which require additions or deductions to be made, except in the case of-
- (a) fraud, dishonesty or fraudulent concealment relating to the work under the contract or any part thereof or to any matter dealt with within the said Schedule;
 - (a) any accidental or erroneous inclusion or exclusion of any work or figures in any computation or any arithmetical error in any computation.

PASSING OF PROPERTY

- 103 The contractor and the supplier agree that property and ownership in the material sold will remain with the supplier until the price for the material is paid in full.
- 104 The risk in the material and all insurance responsibility for theft, damage or otherwise in respect of the material will pass to the contractor upon delivery to the site.

PROTECTION OF PEOPLE AND PROPERTY

- 105 Insofar as compliance with the requirements of the contract permits, the contractor shall-
- (a) provide all things and take all measures necessary and within the contractors reasonable control to protect people employed by the supplier and property of the supplier while on the site or while accessing or leaving the site from or to a public road.;
 - (b) avoid unnecessary interference with the passage of people employed by the supplier and vehicles of the supplier or the supplier's subcontractors while making deliveries.
- 106 All personnel and sub-contractors of the supplier entering onto the site shall wear fluorescent red/orange day/night high visibility traffic jackets properly fastened at all times or such other personal protection equipment as notified in writing to the Supplier's Representative by the Contractor's Representative prior to the commencement of deliveries.

DAMAGE TO PERSONS AND PROPERTY

- 107 From the time when the supplier commences delivery under the contract, the party named in Item 25 shall indemnify the supplier up to the limit of indemnity stated in Item 25 against-
- (a) loss of or damage to property of the supplier while that property is at the site; and
 - (b) claims by any person against the supplier in respect of personal injury or death or loss of or damage to property while at the site,
- arising out of or as a consequence of the carrying out by the supplier of the delivery of material under the contract, but the party's liability to indemnify the supplier shall be reduced

proportionally to the extent that any act or omission of the supplier, the supplier's sub-contractors, employees, or agents contributed to the loss, damage, death or injury.

108 Clause 107 shall not apply to-

- (i) the extent that the liability of the contractor is limited by another provision of the contract;
- (ii) exclude any other right of the supplier to be indemnified by the contractor; and
- (iii) damage that is the unavoidable result of the delivery of material in accordance with the contract.

PUBLIC LIABILITY INSURANCE

109 Before the supplier commences work under the contract, the party named in Item 26 shall effect a public liability policy of insurance that covers the rights and interests of the supplier and its liabilities to third parties.

110 The public liability policy of insurance shall be for an amount in respect of any one occurrence not less than the amount stated in Item 26. The policy shall be maintained until at least the date of issue of the Certificate of Final Delivery.

INSURANCE OF EMPLOYEES

111 Before commencing work under the contract, the supplier shall insure against liability for death of or injury to persons employed by the supplier including liability by statute and at common law. The insurance cover shall be maintained until one business day after the date of completion of supply.

DEFAULT

112 If a party breaches or repudiates the contract or fails to sign the Formal instrument of Agreement in accordance with clauses 11 and 12 the other party may seek to recover damages in a court of competent jurisdiction or exercise any other right and nothing in clauses 113 to 119 shall prejudice those rights.

113 If either party commits a substantial breach of the contract, the other party may give to the party who committed the breach a written notice to show cause. That notice shall-

- (a) state that it is a notice under this clause 113 of these General Conditions of Contract for the Supply of Quarry Materials for Major Road, Bridge and Associated Construction Works;
- (b) specify the alleged substantial breach;
- (c) require the party who committed the breach to show cause in writing why the party giving the notice should not exercise a right referred to in clause 114 or 117, as the case may be;
- (d) specify the time and date by which the party who committed the breach must show cause (which time shall not be less than five (5) business days after the notice is given to that party); and
- (e) specify the place at which cause must be shown.

114 If the supplier fails to show reasonable cause by the time and date specified in a notice to show cause given under clause 113, the contractor may, by written notice to the supplier-

- (a) take out of the hands of the supplier the whole or part of the work remaining to be completed; or
- (b) terminate the contract.

115 If the contractor takes work out of the hands of the supplier under clause 114, the contractor

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shall have that work completed. The contractor shall keep records of the cost of completing the work.

- 116 When the work taken out of the hands of the supplier is completed, the Contractor's Representative shall ascertain all costs incurred by the contractor in completing the work and shall issue a payment schedule pursuant to clause 94 to the contractor and the supplier. Such schedule shall certify the difference between all the costs incurred in arranging for the completion of the work and the completion of the work and the sum that would have been payable had the supplier completed the work, and such difference shall be a debt due to the contractor.
- 117 If the contractor fails to show reasonable cause by the time and date specified in a notice to show cause given under clause 113, the supplier may, by written notice to the contractor, suspend the whole or any part of the work under the contract. The supplier shall lift the suspension if the contractor remedies the breach. If the contractor has not remedied the breach within five (5) business days of being given the notice of suspension, the supplier may by further written notice, terminate the contract.
- 118 The supplier shall be entitled to recover from the contractor any costs including loss of profit incurred by the supplier by reason of the suspension.
- 119 If the contract is terminated pursuant to clauses 114 or 117, the rights and liabilities of the parties shall be the same as they would have been at common law had the defaulting party repudiated the contract and the other party elected to treat the contract as at an end and recover damages.

INSOLVENCY

- 120 If -
- (a) a party informs the other party in writing or creditors generally that the party is insolvent or is financially unable to proceed with the contract;
 - (b) execution is levied against a party by a creditor;
 - (c) a party is an individual person or a partnership including an individual person, and if that person-
 - (i) commits an act of bankruptcy;
 - (ii) has a bankruptcy petition presented against him or her or presents his or her own petition;
 - (iii) is made bankrupt;
 - (iv) makes a proposal for a scheme of arrangement or a composition; or
 - (v) has a deed of assignment or deed of arrangement made, accepts a composition, is required to present a debtor's petition, or has a sequestration order made, under Part X of the Bankruptcy Act 1966 (Cth); or
 - (d) in relation to a party being a corporation-
 - (i) notice is given of a meeting of creditors with a view to the corporation entering a deed of company arrangement;
 - (ii) the party enters a deed of company arrangement with creditors;
 - (iii) a controller or administrator is appointed;
 - (iv) an application is made to a court for the winding-up of the party and not stayed within ten (10) business days;
 - (v) a winding-up order is made in respect of the party;
 - (vi) it resolves by special resolution that it be wound up voluntarily (other than for a members' voluntary winding-up); or

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(vi) a mortgagee of any property of the party takes possession of that property,
then, where the other party is-

- (a) the supplier, the contractor may, without giving a notice to show cause, exercise a right under clause 114 or
- (b) the contractor, the supplier may, without giving a notice to show cause, exercise the right to suspend work under clause 117.

121 The rights given by clause 120 are in addition to any other rights and may be exercised notwithstanding that there has been no breach of Contract.

SUSPENSION OF WORKS.

- 122 If the principal or the contractor suspends the whole or part of the work under any other contract, the Contractor's Representative shall direct the supplier to suspend delivery of the material in whole or in part as the Contractor's Representative thinks necessary.
- 123 If the suspension is due to an act or omission of the principal, the contractor, the Contractor's Representative or an employee, consultant or agent of the principal or the contractor and the suspension causes the supplier to incur more or less cost than would otherwise have been incurred but for the suspension, a variation to the contract sum shall be made in accordance with Clauses 68 to 72 except that the amount to be paid shall be calculated by the Supplier's Representative.
- 124 Where the contractor fails to make a progress payment under clauses 91 or 93 the supplier may serve notice of intention to suspend supplying the material. The notice shall state that it is issued under the Security of Payment Act.
- 125 If at least two business days have passed since the supplier issued a notice in accordance with clause 124, the supplier may suspend delivery of the material and continue to do so until the contractor complies with the requirements of clauses 91 or 93.
- 126 The suspension of delivery in accordance with clause 125 shall not constitute a breach of this contract.

LIABILITY FOR DAMAGES FOR DELAY IN THE DATE FOR COMPLETION OF SUPPLY

- 127 If the supplier fails to reach the date for completion of supply set out in Annexure D or as varied by the Contractor's Representative, for any reason other than set out in clause 73, the supplier's liability to the contractor shall be limited to liquidated damages at the rate stated in Item 27 for every day after the date for completion of supply until the date of completion of supply or the date that the contract is terminated pursuant to clause 114, whichever first occurs.
- 128 Where the supplier has been granted an extension of time under clause 75 for any delay or disruption caused by the principal, the contractor, the Contractor's Representative, or the principal's or contractor's other contractors, sub-contractors, employees, consultants or agents, the contractor shall pay to the supplier extra costs at the rate stated in Item 28 for such extended time.
- 129 Nothing in clauses 127 or 128 shall-
- (a) oblige the contractor or the supplier to pay extra costs for delay or disruption which have already been included in the value of a variation or any other payment under the contract; or
 - (b) limit the contractor's or the supplier's liability for damages for breach of contract.

SETTLEMENT OF DISPUTES

- 130 Notwithstanding the succeeding provisions, the supplier shall, if the delivery of materials has not been completed, at all times (subject as otherwise provided for in the contract) proceed without delay to continue delivery under the contract and perform its obligations under the contract and in so doing shall comply with all directions as defined in clause 14 that are issued or given to or served or made upon the supplier under or pursuant to the provisions of the contract by the Contractor's Representative.
- 131 Where disputes or differences arise out of the contract or concerning the performance or the non-performance by either party of its obligations under the contract, the aggrieved party shall, not later than ten (10) business days after the dispute or difference arises, submit the matter at issue in writing, specifying with detailed particulars the matter at issue, to the other party and to the Contractor's Representative for decision by the Contractor's Representative
- 132 The Contractor's Representative shall, as soon as practicable thereafter but no later than ten (10) business days, give his decision in writing to both parties.
- 133 If either party is dissatisfied with the decision given by the Contractor's Representative, it may, not later than ten (10) business days after the decision of the Contractor's Representative is given to it, submit the matter at issue in writing, specifying with detailed particulars the matter at issue, to the other party and to the Superintendent for decision.
- 134 The Superintendent shall, as soon as practicable thereafter but no later than ten (10) business days, except in the case of claims made under clauses 58, 59, 61 and 62 where the decision must be made within one (1) business of the claim being made, give his decision in writing to both parties.
- 135 If either party is dissatisfied with the decision given by the Superintendent, it may, not later than ten (10) business days after the decision is given to it, give notice in writing to the other party requiring that the matter at issue be referred to arbitration and specifying with detailed particulars the matter at issue, and thereupon the matter at issue shall be determined by arbitration.
- 136 If either party does not, within the period of ten (10) business days stated in clause 135, give a notice requiring that the matter at issue be referred to arbitration, the decision given by the Superintendent shall not be subject to arbitration.
- 137 Where the Superintendent is the same person as the Contractor's Representative clauses 133 and 134 shall be of no effect and the word Superintendent in clauses 135 and 136 shall be read as the Contractor's Representative.
- 138 Where a notice is given by either party pursuant to clause 135 requiring that the matter at issue be referred to arbitration no proceedings in respect of that matter at issue shall be instituted by either the contractor or the supplier in any court unless and until the arbitrator has made his award in respect of that matter at issue.
- 139 Arbitration shall be effected:
- (i) by an arbitrator agreed upon in writing by the parties within ten (10) business days after the said notice is received by the contractor; or
 - (ii) in the absence of that agreement, by one of at least three persons, none of whom shall be an employee of either party or have had any association with the work under the contract, whose names are submitted in writing by the contractor for selection by the supplier within a further period of ten (10) business after expiry of that last mentioned period, being the person whose selection as arbitrator is notified in writing by the supplier to the contractor within ten (10) business days after the names are so submitted; or
 - (iii) in the absence of that selection, by an arbitrator appointed in accordance with the provisions of the laws relating to arbitration in force in the State of Victoria.

- 140 A reference to arbitration under this clause shall be deemed to be a reference to arbitration within the meaning of the laws relating to arbitration in force in the State of Victoria and the arbitration proceedings shall be conducted in Victoria. The arbitrator shall have all the powers conferred by those laws and it shall be competent for him to enter upon the reference without any further or more formal submission than is contained in this clause.
- 141 Any dispute concerning moneys that constitute an excluded amount in respect of progress payment for materials delivered under the contract shall not be subject to dispute under clause 131 but shall be subject to adjudication under Division 2 and if necessary Division 4 of the Security of Payment Act.

SERVICE OF NOTICES

- 142 A notice shall be deemed to have been given when it is received by the person to whom it is addressed or is delivered to the address of that person stated in the contract or last communicated in writing by that person to the person giving the notice, whichever is the earlier.
- 143 The contractor, the Contractor's Representative, the supplier and the Supplier's Representative shall each notify the others of a change of address.
- 144 Without limiting the generality of 'notice', it includes a document and except for clause 124, a facsimile, a computer transferred communication and an email but does not include a telephone call or other oral communication.

EFFECT OF SCHEDULES AND CERTIFICATES

- 145 The issue of a payment schedule other than a Final Payment Schedule and the issue of any certificates other than a Certificate of Final Delivery shall not constitute approval of the material nor shall it prejudice any claim by the supplier or the contractor in accordance with the provisions of this contract.

WAIVER

- 146 The non-exercise of or delay in exercising any power or right of a party does not operate as a waiver of that power or right, nor does any single exercise of a power or right preclude any other or further exercise of it or the exercise of any other power or right. A power or right may only be waived in writing, signed by the party to be bound by the waiver.

AMENDMENT

- 147 Except for any direction allowed by this contract to be given by the Contractor's Representative, the contract may only be amended or supplemented in writing signed by the parties.

SEVERABILITY

- 148 Any provision of this agreement which is invalid or unenforceable in any jurisdiction is to be read down for the purposes of that jurisdiction, if possible, so as to be valid and enforceable, and is otherwise capable of being severed to the extent of the invalidity or unenforceability, without affecting the remaining provisions of this contract or affecting the validity or unenforceability of that provision in any other jurisdiction.

GOVERNING LAW

- 149 The parties accept the law of the State of Victoria as the proper law of contract and both parties submit to the non-exclusive jurisdiction of the Courts of that State and any Courts hearing appeals from those Courts.

FORMAL INSTRUMENT OF AGREEMENT

It is agreed that the documents listed in Item 15 and any directions issued under this contract by the Contractor's Representative shall comprise the contract between the persons listed in Item 3 and Item 5, or where material is being supplied directly to a principal, Item 1 and Item 5.

Signed by (print name).....
(print position).....
on behalf of the principal/contractor on this day of, 20....

Signature

The Common seal of (insert the name of the principal/contractor)
.....
was affixed hereto in the presence of (insert name).....
(print position).....
on thisday of, 20....

Signature of Witness.

Common seal of the Principal/Contractor

Signed by (print name).....
(print position).....
on behalf of the supplier on this day of, 20....

Signature

The Common seal of (insert the name of the supplier).....
.....
was affixed hereto in the presence of (insert name).....
(print position).....
on thisday of, 20....

Signature of Witness.

Common seal of the Supplier

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**ANNEXURE A Special Clauses from the Head Contract that
Affect the Responsibilities of the Supplier Under this Contract.**

Where no Special Clauses are required this page shall state:

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ANNEXURE B Definition of Items.

This Annexure shall be completed and issued as part of the contract documents and shall be read as part of the Contract.

Item	Item Description	Clause	Information
1	The principal	1	..... ..... ACN and ABN (if applicable).....
2	The address of the principal	1	..... ..... Phone:..... Fax :..... email :.....
3	The contractor	1	..... ..... ACN and ABN (if applicable).....
4	The address of the contractor	1	..... ..... Phone:..... Fax :..... email :.....
5	The supplier	1	..... ..... ACN and ABN (if applicable).....
6	The address of the supplier	1	..... ..... Phone:..... Fax :..... email :.....
7	The Superintendent	1	..... ..... ABN and ACN (if applicable).....
8	The address of the Superintendent	1	..... ..... Phone :..... Mobile:..... Fax :..... email :.....

Item	Item Description	Clause	Information
9	The Contractor's Representative	1 and 13	..... ..... ACN and ABN (if applicable).....
10	The address of the Contractor's Representative	1	..... ..... Phone :..... Mobile:..... Fax :..... email :.....
11	The Supplier's Representative	1 and 20	..... ..... ACN and ABN (if applicable) ..//.....
12	The address of the Supplier's Representative	1	..... ..... Phone :..... Mobile:..... Fax :..... email :.....
13	The location of the site	1	..........
14	Contract Sum is:	1 and 6	Lump Sum(\$.....) Rates Sum(\$.....) Total(\$.....) Each is to include any additions or deductions made pursuant to this contract. The sum: 1. includes delivery by the supplier 2. is based on ex-bin prices with delivery by the contractor. Where 1 or 2 is not specified delivery shall be by the supplier or the suppliers contractor

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Item	Item Description	Clause	Information	
15	The contract documents comprise:	1 and 30	<u>Document</u> (i) Contract for the supply of Quarry materials for Major Construction Works including Annexure/s (ii) (iii) (iv) (v)	<u>No of copies to be provided</u>
16	Time for provision of Annexures C and D	34	.....( ) business days after the signing of this contract	
17	Time for delivery of cement material	50	..... minutes from the time of completion of mixing. (if nothing is stated 75 minutes)	
18	Name of NATA accredited laboratory to issue certification Form of quality certification required to be attached to the delivery docket if a certificate from a NATA accredited authority is not required. Name of authority providing certification.	53		
19	Delivery docket to be forwarded to the Contractor's Representative within Any claim for deficiency in quantity or defect in quality of material must be made within	60 to 62() business days or if no period is stated two (2) business days from the date of delivery. ().business days or if no period is stated two (2) business days of delivery of the delivery docket to the Contractor's Representative.	

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Item	Item Description	Clause	Information
20	The reference date is	1	/ / and() business days thereafter until final payment. If no date and period is inserted the date shall be the date occurring twenty (20) business days after material was first supplied under the contract and every twenty (20) business days thereafter.
21	Claims for payment shall be delivered within	85	.....( ) business days of the reference date or if no period is stated five (5) business days.
22	Payment schedules shall be delivered	89	() business days after the payment claim is made or within ten (10) business days after the payment claim is made whichever time expires first. (NB the default limitation is set by the Security of Payment Act and cannot be exceeded)
23	The due date is	1 and 91 to 94	() business days after the payment claim is made or, if no time is stated within ten (10) business days after a payment claim is made. (NB the default limitation is set by the Security of Payment Act)
24	The rate of interest on overdue payments shall be	96	.....% or if no percentage is stated the interest rate for the time being fixed under section 2 of the Penalty Interest Rates Act 1983 on the overdue payment calculated from the date of the Payment Schedule stating the scheduled amount from which the overdue payment can be calculated to the date of payment.
25	Person to indemnify the supplier Limit of indemnity	107	The Principal/The Contractor (delete whichever is inapplicable. If neither is deleted the Contractor shall provide the indemnity.) \$..... (if nothing is stated \$10,000,000)
26	Person to effect public liability insurance Amount of cover	109 and 110	The Principal/The Contractor (delete whichever is inapplicable. If neither is deleted the Contractor shall effect the insurance). \$..... (if nothing is stated \$10,000,000)
27	Liquidated damages to the contractor	127	\$.....per day. (if nothing is stated \$10,000)
28	Liquidated damages to the supplier	128	\$.....per day. (if nothing is stated \$10,000)
29	Waiting time for delays in unloading caused by the contractors	Annex. C	\$.....per hour or part thereof where the time exceeds 30 minutes. (if nothing is stated \$50.00)

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GRAVEL, SAND AND SOFT OR RIPPED ROCK FOR BASE AND SUB-BASE PAVEMENT

Table 2 - Properties and Gradings

Type of Material and Use (Base or Subbase)	All Passing Sieve Size AS (mm)	Liquid Limit (%/max)	Plasticity Index		Texas Ball Mill (max)	Plasticity Index x % passing 0.425 mm (max)	California Bearing Ratio * (%/min)
			(min)	(max)			
##:							

* Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 98% of maximum dry density as determined by test using Modified compactive effort, but then soaked for 4 days prior to the CBR test.

Table 3 - Grading Requirements (percentage passing by mass)

Type of Material And Use (Base or Subbase)	Sieve Size - AS Sieve (mm)										
	150	75	37.5	26.5	19.0	13.2	9.50	4.75	2.36	0.425	0.075
##:											

+ Contractor shall supply to the supplier grading figures to indicate the average grading of material needed for supply.

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CRUSHED ROCK AND PLANT MIXED WET-MIX CRUSHED ROCK FOR BASE AND SUB-BASE PAVEMENT

The crushed rock shall comply with the relevant permeability requirements of Table 4.

Table 4 - Permeability Requirements

Test	Test Value			
	Base		Subbase	
	Class 1	Class 2	Class 3	Class 4
Permeability (cm/sec) (max) *	-	##:	-	* ##:
* Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 98% of maximum dry density as determined by test using Modified compactive effort.				

ANNEXURE D Delivery schedule.

This Annexure shall be completed and issued as part of the contract documents and shall be read as part of the Contract.

1. Transport of material shall commence on theday of....., 20:.....
2. The date for completion of supply is theday of, 20....
3. Unless otherwise specified, material shall be delivered to the site within the following times:

Monday		am	to		pm
Tuesday		am	to		pm
Wednesday		am	to		pm
Thursday		am	to		pm
Friday		am	to		pm
Saturday		am	to		pm
Sunday		am	to		pm

4. Unless otherwise specified, delivery shall be made: (strikeout inapplicable alternatives below):
 - (i) to the roadbed, as and where directed by the Superintendent
 - (ii) dumped by the roadside, as and where directed by the Superintendent
 - (iii) into stockpile;
 - (iv) into hoppers of pavers or windrow boxes.

5. Material shall be delivered: (strikeout inapplicable alternatives below):
 - (i) each working day at about constant rates;
 - (iii) each working day at rates as ordered;
 - (iv) intermittently at rates as ordered.

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ANNEXURE E Definitions of classes of materials.

Delete any sections not relevant to the contract. This Annexure shall be completed where and if required and issued as part of the contract documents and shall be read as part of the Contract. Where required by the head contract other definitions may be included to reflect the requirements of the head contract.

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SECTION 1 SOURCE ROCK FOR THE PRODUCTION OF CRUSHED ROCK AND AGGREGATES

(See VicRoads Specifications Section 801)

1.01 DESCRIPTION

This section covers the durability, hardness and, where applicable, the polished stone value requirements of igneous, metamorphic and sedimentary source rock used for the production of crushed rock and aggregates for engineering use. The requirements for pyroclastic rocks (scoria) are covered in Section 5 and for recycled crushed concrete in Section 6.

Additional source rock requirements relevant to specific applications are covered in the appropriate product Standard Specification Sections.

1.02 DEFINITIONS

Rock Type

Rock is classified as igneous, metamorphic or sedimentary on the basis of the classification scheme detailed in Code of Practice RC/MTD 500.00, Code of Practice for Quarry Investigations.

Source Rock

The insitu rock mass located in a quarry which is used or proposed to be used in the production of crushed rock or aggregate.

Material Type

Material from a particular quarry and which is distinguishable on the basis of colour, texture, hardness, the degree of weathering and test properties.

Rock Durability Classification

The classification of a material in terms of the durability requirements of Clause 1.03.

Unsound Rock

Unsound rock is that material, whether in the source or as spalls or as crushed particles, which:

- (e) is soft, friable, or composed of clay or weathered rock, or which contains matter which breaks up when alternately wetted and dried; or
- (f) in the case of igneous (except basic igneous) and metamorphic rock, has a Degradation Factor - Source Rock less than the minimum value for marginal rock specified in Table 1.2; or
- (g) in the case of basic igneous rock, has a Secondary Mineral Content greater than the maximum value or an Accelerated Soundness Index value less than the minimum value for marginal rock specified in Table 1.2; or
- (h) in the case of sedimentary rock, has a Texas Ball Mill value greater than the maximum value for marginal rock specified in Table 1.2.

Assigned Los Angeles Value

The assigned Los Angeles Value is a hardness rating derived from Los Angeles Value test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Assigned Polished Stone Value

The Assigned Polished Stone Value is a friction rating derived from Polished Stone Value test results and is assigned to each source (where applicable) by VicRoads in accordance with Code of Practice RC/MTD 500.00, Code of Practice for Quarry Investigations.

YD

1.03 SOURCE ROCK

(a) General

Prior to the commencement of work, the supplier shall confirm the source from which the crushed rock and aggregate will be obtained.

VicRoads will investigate and classify source rock in accordance with Code of Practice RC/MTD 500.00, Code of Practice for Quarry Investigations.

The Contractor's Representative's approval shall be obtained prior to changing the source of material. If at any time the supplier proposes to obtain material from a source other than the confirmed source, the Contractor's Representative shall be notified in sufficient time so that investigations, as may be required, can be carried out before approval is given.

If the supplier proposes to use a source rock type other than those listed in Tables 1.1 and 1.2 the Contractor's Representative will determine whether the rock type is acceptable and will set appropriate test values.

(b) Durability

Source rock shall be considered sound or marginal in accordance with the provisions of Tables 1.1 and 1.2.

(c) Hardness

The hardness of the source rock shall be measured by a Los Angeles Value test on the product and the assigned Los Angeles Value shall comply with the test values shown for the different engineering applications in Table 1.3.

(d) Friction Rating

The Polished Stone Value of the source rock shall be measured by a Polished Stone Value test on the product and the assigned Polished Stone Value shall comply with the test value shown for the different surfacing applications in Table 1.4.

Source rock which does not comply with the specified durability and hardness requirements but from which crushed rock and aggregates of proven satisfactory performance have been produced may be accepted for use subject to the written approval of the Superintendent.

1.04 MINIMUM TESTING REQUIREMENTS

VicRoads will carry out all inspections, investigations and testing of rock sources and source rock material types as per Code of Practice RC/MTD 500.00, Code of Practice for Quarry Investigations, and provide rock type and durability classifications and reference materials as is deemed necessary for the performance of test method RC372.01, Coarse Aggregate Quality by Visual Assessment.

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Table 1.1 - Sound Rock

Rock Type	Test Value			
	Degradation Factor Source Rock (min)	Secondary Mineral Content (%) (max)	Accelerated Soundness Index (min)	Texas Ball Mill Value (max)
ACID IGNEOUS				
Granitic Rocks	50	-	-	-
Other Acid Igneous	45	-	-	-
INTERMEDIATE IGNEOUS				
Trachyte	50	-	-	-
Other Intermediate Igneous	45	-	-	-
BASIC IGNEOUS	-	25	94	-
METAMORPHIC				
Hornfels	40	-	-	-
Other metamorphic	45	-	-	-
SEDIMENTARY				
Argillaceous Sediments	-	-	-	30
Arenaceous Sediments	-	-	-	45

Table 1.2 - Marginal Rock

Rock Type	Test Value			
	Degradation Factor Source Rock (range)	Secondary Mineral Content (%) (range)	Accelerated Soundness Index (range)	Texas Ball Mill Value (range)
ACID IGNEOUS				
Granitic Rocks	35-49	-	-	-
Other Acid Igneous	35-44	-	-	-
INTERMEDIATE IGNEOUS				
Trachyte	30-49	-	-	-
Other Intermediate Igneous	35-44	-	-	-
BASIC IGNEOUS	-	26-30	90-93	-
METAMORPHIC				
Hornfels	20-39	-	-	-
Other metamorphic	30-44	-	-	-
SEDIMENTARY				
Argillaceous Sediments	-	-	-	31-35
Arenaceous Sediments	-	-	-	46-55

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Table 1.3 - Hardness

Rock Type	Los Angeles Value (max)									
	Standard Specification Sections									
	407	501	702	423	812		815	831		
	417	520		802	Base	Subbase	Subbase	Class A	Class B	Class C
ACID IGNEOUS										
Granitic Rocks	30	35	40	35	35	40	40	(a)	35	40
Other Acid Igneous	25	35	35	30	30	35	35	20	25	30
INTERMEDIATE IGNEOUS	5	35	35	30	30	35	35	20	25	30
BASIC IGNEOUS	25	35	35	30	30	35	35	20	25	30
METAMORPHIC	25	35	35	30	30	35	35	20	25	30
SEDIMENTARY										
Argillaceous Sediments	(a)	(b)	35	25	##:	25	25	(a)	25	30
Arenaceous Sediments	(a)	(b)	35	25	##:	40	40	(a)	25	30
River Gravel	(a)	35	35	(a)	##:	35	35	(a)	30	35
Calcrete	(a)	(a)	(a)	(a)	##:	35	35	(a)	30	30
PYROCLASTIC										
Scoria	(a)	(a)	35	(a)	Refer Section 818		(a)	(b)	(b)	35

Notes: (a) Not permitted for this use
 (b) Not permitted for use unless otherwise specified
 Specification Sections 619 and 701 currently reference AS 2758.1 - 1985

Table 1.4 - Polished Stone Value

Specification Section	Application	Polished Stone Value (min)
407 Hot Mix Asphalt	Type T wearing course, Type H or V	48
417 Open Graded Friction Course Asphalt	Type H wearing course	48
423 Lean Mix Asphalt	Specified Use	No Requirement
427 Bituminous Slurry Surfacing	Where specified in Clause 427.24 or wearing course where traffic volume per lane exceeds 3000 vpd	48
831 Aggregate for Sprayed Bituminous Surfacing	Class A	48

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SECTION 2 GRAVEL, SAND AND SOFT OR RIPPED ROCK FOR BASE AND SUB-BASE PAVEMENT

(See VicRoads Specifications Section 811)

2.01 DESCRIPTION

This section covers the requirements for gravel, sand and soft or ripped rock, including mixtures thereof and materials to be broken to size on the roadbed.

2.02 DEFINITIONS

Gravel

Gravel is a naturally occurring mixture of angular or rounded rock fragments substantially retained on a 4.75 mm AS sieve, with or without some finer material, and all passing a 75 mm AS sieve.

Sand

Sand is a product of rock weathering substantially passing a 4.75 mm AS sieve, and is generally siliceous and free from appreciable quantities of clay and silt.

Soft or Ripped Rock

Soft or ripped rock is rock extracted from a deposit without blasting and not requiring processing through a crushing plant for reduction of size.

2.03 MATERIAL SOURCE

Prior to the commencement of work, the supplier shall confirm the source from which the material will be obtained.

2.04 PHYSICAL PROPERTIES AND GRADINGS

The material shall meet the relevant requirements of Tables 2 and 3 of Annexure B and shall be free from vegetable matter and lumps or balls of clay or other deleterious matter.

When specified by means of a cross (+) in Table 2 of Annexure B the supplier shall supply to the Contractor's Representative for approval, grading figures to indicate the average grading of the material proposed for supply.

The approved average grading shall become the target grading for material to be supplied. The permitted range of grading about the target is specified in Table 2.1.

All material supplied shall comply with the grading limits.

Table 2.1 - Permitted Range of Grading

Sieve Size AS (mm)	Permitted Range of Grading \pm (% by mass)
150, 75, 37.5	20
26.5, 19.0, 13.2, 9.50, 4.75, 2.36	15
0.425	10
0.075	5

2.05 WATER

Where it is specified that water shall be added to the material prior to delivery, such water shall be clear and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances.

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SECTION 3 CRUSHED ROCK AND PLANT MIXED WET-MIX CRUSHED ROCK FOR BASE AND SUB-BASE PAVEMENT

(See VicRoads specifications section 812)

3.01 DESCRIPTION

This section covers the requirements of crushed rock and plant mixed wet-mix crushed rock for Classes 1 and 2 base of 20 mm nominal size, Class 3 sub-base of 20 mm and 40 mm nominal size and for Class 4 crushed rock sub-base. Source rock types from which crushed rock base and sub-base may be produced are specified in Section 1 - Source Rock for the Production of Crushed Rock and Aggregates. The requirements for pyroclastic rocks (scoria) are covered in Section 5 - Crushed Scoria for Base and Sub-base Pavement, and for recycled concrete in Section 6 - Crushed Concrete for Pavement Sub-base.

The material class, pavement course use and nominal sizes shall be as specified in the special clauses and/or the drawings and/or the schedule.

3.02 DEFINITIONS

Crushed Rock

Crushed rock is composed of crushed rock fragments with or without sands and with or without filler, produced in a controlled manner to close tolerances of grading.

Plant Mixed Wet-Mix Crushed Rock (PMWMCR)

Plant mixed wet-mix crushed rock is a mixture of crushed rock and water, produced at a controlled mixing plant to close tolerances of grading and moisture content based on the modified optimum moisture content of the material.

Assigned Los Angeles Value

The assigned Los Angeles Value is a hardness rating derived from Los Angeles Value test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

3.03 SOURCE ROCK

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

3.04 COMPONENTS

- (a) Crushed rock fragments shall consist of clean, hard, durable, angular rock fragments of uniform quality.

The use of crusher fines produced from a quarry, or a location within a quarry, different from that used for production of that fraction of the crushed rock retained on a 4.75 mm AS sieve shall be subject to approval in writing by the Contractor's Representative to the proposed source and nature of these materials and the proposed amounts to be added.

Crusher fines produced from any igneous or metamorphic rock but which have been produced from a quarry, or a location within a quarry, different from that used for production of that fraction of the crushed rock retained on a 4.75 mm AS sieve shall have a Degradation Factor - Crusher Fines not less than 60.

- (b) The use of sands and/or filler shall be subject to approval in writing by the Superintendent to the proposed source and nature of such materials, the proposed amounts to be added and the proposed method of incorporating such materials in the product.

Where the Contractor elects to use an additive component with the crushed rock, the additive shall:

- (i) be derived from sound and durable material;
- (ii) not be cementitious in nature;
- (iii) be free of vegetable matter, lumps and balls of clay and oversize particles of rock;
- (iv) be sized such that it can be effectively and uniformly distributed throughout the crushed rock;
- (v) be kept dry to ensure that a free-flowing additive is incorporated into the mixture;
- (vi) be blended in the base and subbase finished products and shall not be greater than 15% by mass, unless approved otherwise in writing by the Superintendent.

3.05 PRODUCT

- (a) The crushed rock shall be free from vegetable matter and lumps or balls of clay and shall comply with the relevant requirements of Table 3.1.

Table 3.1 - Properties of Class 1, 2, 3 and 4 Aggregate.

Test	Test Value			
	Base		Subbase	
	Class 1	Class 2	Class 3	Class 4
Liquid Limit % (max)	30	30	35	40
Plasticity Index (max or range)	6	2 - 6	10	20
California Bearing Ratio (%) (min) (+)	-	-	-	15
PI x % passing 0.425 mm AS Sieve (max)	-	-	-	600
Sand Equivalent (min) (++)	45	45	-	-
Flakiness Index (%) (max)	35	35	-	-
Crushed Particles (%) (min) (+++)	60	60	50	-
(+)	Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 98% of maximum dry density as determined by test using Modified compactive effort, but then soaked for 4 days prior to the CBR test.			
(++)	The Superintendent may specify other values of sand equivalent on the basis of tests carried out on crushed rock which complies with the specified requirements for grading and plasticity.			
(+++)	Applicable to crushed river gravels.			

- (b) The crushed rock shall comply with the relevant permeability requirements of Table 4 in Appendix B.
- (c) Unsound and marginal rock in that fraction of the product retained on a 4.75 mm AS sieve shall not exceed the percentages specified in Table 3.2. Where two or more aggregates are combined to produce the crushed rock and no facilities exist in the mixing plant to sample the mixture, unsound and marginal rock in that fraction of each aggregate retained on a 4.75 mm AS sieve shall not exceed the percentages specified in Table 3.2.

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Table 3.2 - Unsound and Marginal Rock Allowance.

Class	Total of Marginal and Unsound Rock % (max)	Unsound Rock % (max)
1	10	5
2	10	5
3	20	10
4	-	-

(d) For PMWMCR, the aggregates and water shall be mixed at a mixing plant by continuous or batch mixing.

(e) Sulphide Mineralisation

Unless otherwise approved by the Contractor's Representative, crushed rock produced from any source shall not be permitted if that fraction of the crushed rock product passing the 2.36 mm AS sieve, when prepared as per AS 1289.1 Clause 4.6, fails to comply with the requirements of Table 3.3.

Table 3.3 - Sulphide Mineralisation

Test	Test Value	Soil to Water Ratio
pH (units)	6.0 (min)	1:2.5
Conductivity (µS/cm)	1500 (max)	1:1

Materials which do not comply with the specified requirements of Table 3.3 may however be accepted for use subject to the written approval of the Contractor's Representative, but only after the Contractor specifies the method and amount of hydrated or quick lime to be combined with the product so that the requirement of Table 3.4 is ensured.

Table 3.4 - pH Test

Test	Test Value
pH (units)	10.0 (minimum)

Where it is intended to stockpile base or subbase crushed rock which contains sulphide mineralisation and which exceeds the test values contained in Table 3.3, the lime stabilising agent shall be added at the time of production of the crushed rock and before stockpiling.

3.06 WATER

Where it is specified that water shall be added to the crushed rock prior to delivery, such water shall be clear and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances.

3.07 GRADING OF UNCOMPACTED CRUSHED ROCK AND PMWMCR BASE

After completion of production, but before compaction, crushed rock and PMWMCR base shall comply with the relevant grading requirements of Tables 3.5 to 3.10 corresponding to the assigned Los Angeles Value and the nominal size of the material.

The supplier shall aim to produce the crushed rock and PMWMCR in such a way that the grading coincides with the relevant target grading specified in Tables 3.5 to 3.10.

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Grading Requirements for Class 1, 20 mm Base (by mass)

Table 3.5 Igneous (other than granitic) and metamorphic source rock. Assigned Los Angeles Value: 25 or less.

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 20
2.36	39	30 - 48	14 - 28
0.425	18	14 - 22	6 - 13
0.075	8	6 - 10	

Table 3.6 Igneous (other than granitic) and metamorphic source rock. Assigned Los Angeles Value: 26 or greater.

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 21
2.36	38	29 - 47	15 - 29
0.425	16	12 - 20	9 - 15
0.075	4	2 - 6	

Table 3.7 Granitic Source Rock

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 20
2.36	39	30 - 48	15 - 29
0.425	17	13 - 21	7 - 14
0.075	7	5 - 9	

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Grading Requirements for Class 2, 20 mm Base (by mass)

Table 3.8 Igneous (other than granitic) and metamorphic source rock. Assigned Los Angeles Value: 25 or less.

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 20
2.36	39	30 - 48	14 - 28
0.425	18	14 - 22	6 - 13
0.075	9	7 - 11	

Table 3.9 Igneous (other than granitic) and metamorphic source rock and all sedimentary source rock (where permitted for use). Assigned Los Angeles Value: 26 or greater.

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 20
2.36	39	30 - 48	15 - 29
0.425	17	13 - 21	7 - 14
0.075	7	5 - 9	

Table 3.10 Granitic Source Rock

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 20
2.36	39	30 - 48	15 - 29
0.425	17	13 - 21	7 - 14
0.075	7	5 - 9	

The Contractor's Representative may revise the target grading requirements for the 2.36 mm, 0.425 mm and 0.075 mm sieves specified in Tables 3.5 to 3.10. The magnitude of the range of the limits of grading shall remain unchanged for the revised target grading and the range shall remain centred on the target grading. No additional payment will be made unless the change made to the target grading exceeds two percentage units for the 2.36 mm and 0.425 mm sieves or one percentage unit for the 0.075 mm sieve.

3.08 GRADING OF UNCOMPACTED CRUSHED ROCK AND PMWMCR SUBBASE

(a) Class 3 Subbase

After completion of production, but before compaction, Class 3 crushed rock and PMWMCR subbase shall comply with the relevant grading requirements of Tables 3.11 to 3.14 corresponding to the assigned Los Angeles Value and the nominal size of the material.

The supplier shall aim to produce the crushed rock in such a way that the grading coincides with the relevant target grading specified in Tables 3.11 to 3.14.

The crushed rock shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

Grading Requirements for Class 3, 20 mm Subbase (by mass)

Table 3.11 Igneous (other than granite) and metamorphic source rock. Assigned Los Angeles Value 25 or less,

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction - Limits of Grading (% Passing)
26.5	100	100
19.0	100	95 - 100
13.2	85	75 - 95
9.5	75	60 - 90
4.75	59	42 - 76
2.36	44	28 - 60
0.425	21	14 - 28
0.075	10	6 - 13

Table 3.12 Igneous and metamorphic source rock and all sedimentary and granitic source rock. Assigned Los Angeles Value 26 or greater

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction - Limits of Grading (% Passing)
26.5	100	100
19.0	100	95 - 100
13.2	85	75 - 95
9.5	75	60 - 90
4.75	59	42 - 76
2.36	44	28 - 60
0.425	19	10 - 28
0.075	8	2 - 10

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Grading Requirements for Class 3, 40 mm Subbase (by mass)

Table 3.13 Igneous (other than granite) and metamorphic source rock. Assigned Los Angeles Abrasion Loss 25 or less.

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction - Limits of Grading (% Passing)
53.0	100	100
37.5	100	95 - 100
26.5	85	75 - 95
19.0	77	64 - 90
9.5	60	42 - 78
4.75	46	27 - 64
2.36	35	20 - 50
0.425	17	10 - 23
0.075	9	6 - 12

Table 3.14 Igneous and metamorphic source rock and all sedimentary and granitic source rock. Assigned Los Angeles Abrasion Loss 26 or greater.

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction - Limits of Grading (% Passing)
53.0	100	100
37.5	100	95 - 100
26.5	85	75 - 95
19.0	77	64 - 90
9.5	60	42 - 78
4.75	46	28 - 64
2.36	35	20 - 50
0.425	15	7 - 23
0.075	6	2 - 9

The Contractor's Representative may revise the target grading requirements for the 2.36 mm, 0.425 mm and 0.075 mm sieves specified in Tables 3.11 and 3.14. The magnitude of the range of the limits of grading shall remain unchanged for the revised target grading and the range shall remain centred on the target grading. No additional payment will be made unless the change made to the target grading exceeds two percentage units for the 2.36 mm and 0.425 mm sieves or one percentage unit for the 0.075 mm sieve.

(b) Class 4 Subbase

After completion of production, but before compaction, Class 4 crushed rock subbase shall comply with the relevant grading requirements of Table 3.15. The crushed rock shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

Class 4 sub-base crushed rock of nominal size differing from that specified may be accepted by the Superintendent provided it meets the grading requirements of Table 3.15 corresponding to a nominal size adjacent to that specified.

Table 3.15 - Grading Requirements for Class 4 Crushed Rock (by mass)

Sieve Size AS (mm)	Test Value before Compaction - Limits of Grading (% Passing)						
	Nominal Size (mm)						
	50	40	30	25	20	14	10
75.0	100						
53.0		100					
37.5			100	100			
26.5					100		
19.0	54-75	64-90				100	100
9.5			48-70	54-75			
4.75					42-76	54-75	64-84
2.36							
0.425	7-21	7-23	9-24	10-26	10-28	15-32	18-35
0.075	2-10	2-12	2-12	2-13	2-14	6-17	7-18

3.09 MOISTURE CONTENT

(a) Crushed Rock

Where payment is to be made on a mass basis, the average moisture content of crushed rock at the plant shall not exceed 3.5% by mass unless otherwise specified or unless the Contractor has, at the time of tendering, nominated an upper limit of average moisture content greater than 3.5%. In the latter case the difference between the nominated value and the specified value will be taken into account when tenders are being considered. The average moisture content of crushed rock supplied on any one day will be determined from three samples taken at random from that day's supply. If the average moisture content is greater than that specified or nominated, the material may be rejected. If at the discretion of the Contractor's Representative the material is accepted, payment will be made for the mass determined by deducting the calculated mass of excess moisture from the net mass shown on the delivery dockets.

(b) PMWMCRC

Where the work of the contract includes supply and delivery only, the moisture content of the mixture at the point of delivery, expressed as a percentage by mass, shall be within plus 0.5 to minus 1.0 of the target nominated from time to time by the Contractor's Representative.

3.10 STOCKPILING PRIOR TO DELIVERY

Material may be stockpiled prior to delivery provided the following requirements are fulfilled:

- (a) the product, after recovery from the stockpile, complies with this specification;
- (b) the stockpile site is clean, adequately paved, and well drained;
- (c) if a stockpile is constructed in more than one layer, each layer is fully contained within the area occupied by the upper surface of the preceding layer.

3.11 HANDLING OF MATERIALS

Handling of materials, including the loading of trucks and stockpiling, shall be effected in such a manner as to minimise segregation.

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SECTION 4 CEMENTITIOUSLY TREATED CRUSHED ROCK FOR SUB-BASE PAVEMENT

(See VicRoads specification Section 815)

4.01 DESCRIPTION

This section covers the requirements for 20 mm nominal size crushed rock subbase produced from source rock of any type and treated with cementitious binder to produce a modified or bound material. The requirements relate to properties of the product.

Construction of Cementitiously Treated Subbase Pavement is covered by Section 306.

Supply of Cementitiously Treated Crushed Concrete for Sub-base Pavement is covered by Section 7.

4.02 DEFINITIONS

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Cementitious Binder

A cementing agent that binds the particles of a granular pavement material together to increase its strength. Cementitious binders include Portland cement Type GP or blended cement Type GB, hydrated lime, quicklime, or a blend of ground granulated blast furnace slag (GGBFS), hydrated lime, fly ash, alkali activated slag or other pozzolanic material supplied in accordance with this specification.

Cementitiously Treated Crushed Rock

Cementitiously treated crushed rock is a mixture of crushed rock fragments, cement and water or crushed rock and sand fragments, cement and water produced at a controlled mixing plant to close tolerances of grading, moisture content and binder content.

Fine Aggregates

The portion of the crushed rock mixture passing the 4.75 sieve

Fly Ash

A fine powder of pozzolanic material extracted from the flue emissions produced from the burning of black coal complying with the requirements of AS 3582.1.

Pozzolan

A very fine graded siliceous or alumino-siliceous material that can be mixed with lime or Portland cement to form a cementitious material.

Slag (Ground Granulated Blast Furnace Slag)

Ground Granulated Blast Furnace Slag (GGBFS) complying with the requirements of AS 3582.2 is a pozzolan produced by fine grinding of slag produced as a by product from the smelting of iron ore.

4.03 SOURCE ROCK

Source rock shall comply with the requirements for a Class 3 crushed rock as specified in Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

4.04 COMPONENTS

(a) Coarse Aggregates

Unless otherwise approved by the Contractor's Representative, coarse aggregates shall consist of clean, hard, durable, angular rock fragments of uniform quality from an igneous or metamorphic source complying with soundness requirements specified in clause 4.03.

(b) Fine Aggregates

Unless otherwise approved by the Contractor's Representative, fine aggregates shall consist of clean, hard, durable, angular rock fragments of uniform quality from an igneous or metamorphic source.

If all or part of the fine aggregates are to be supplied from a different source or location within the source, the supplier shall first obtain approval of the Contractor's Representative prior to use. The supplier shall provide details of the exact location of the source and nature of the fine aggregates and the proposed percentage by mass to be added to the crushed rock mixture.

All fine aggregates produced from a different source or location within the source to that of the coarse aggregates shall have a Degradation Factor of not less than 60.

(c) Sands and Filler

The use of sands and/or filler shall be subject to approval by the Contractor's Representative to the proposed source and nature of such materials, and the proposed amounts to be added.

(d) Blending of Course Aggregates

Two or more crushed products from different sources or rock types shall not be combined together without prior approval of the Contractor's Representative. Any proposal to blend coarse aggregates from different sources or rock types shall clearly state the proportions by mass retained on each sieve for each rock type that will be used in the blend.

Blending of coarse aggregates shall be subject to the following conditions being met:

- (a) all rock types in the blend shall individually comply with the relevant requirements of Section 1 of this specification for each rock type;
- (b) all material to be blended shall be fully crushed and screened to the maximum aggregate size permitted in the product prior to blending;
- (c) once a suitable blend has been developed, the total proportions by mass of each rock type in the blend shall not be varied by more than 5% by mass without the approval of the Contractor's Representative.

4.05 PRODUCT

- (a) The cementitiously treated crushed rock shall be free from vegetable matter and lumps or balls of clay and shall comply with the relevant requirements of Table 4.1.

Table 4.1 - Unsound and Marginal Rock Content

Total of Marginal and Unsound Rock % (max)	Unsound Rock % (max)
20	10

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(b) The mixture before the addition of cementitious binder shall comply with the requirements of Table 4.2.

Table 4.2 - Test Properties

Test	Test Value
Liquid Limit % (max)	35
Plasticity Index (max)	10

4.06 CEMENTITIOUS BINDER

(a) Cement

Cement shall be Type GP or GB and comply with the requirements of AS 3972-1991 - Portland and Blended Cements. It shall be stored in weatherproof structures, and any cement damaged by moisture shall not be used.

If Type GB cement is proposed, only the following blends are permitted:

- Cement/Slag Blend (50% to 60% cement content)
- Cement/Fly ash blend (70% to 80% cement content)
- Cement/Slag/Fly ash blend (55% to 65% cement content).

(b) Slag/Lime Blends

Slag and hydrated lime may be used in blended combination as a slow setting cementitious binder. The requirements for hydrated lime shall be:

Quicklime

Quicklime shall be supplied in accordance with AS 1672.1 – 1997.

All quicklime supplied to the job shall be provided with evidence showing the manufacturers batch number. A test certificate shall be produced on request. The certificate shall clearly show compliance with AS1672.1 - 1997 and the percentage of Available Lime in the product.

The residue of quicklime after slaking shall not exceed 30%.

Hydrated Lime

Hydrated Lime shall be supplied in accordance with AS 1672.1 – 1997.

All hydrated lime supplied to the job shall be provided with evidence showing the manufacturer's batch number. A test certificate shall be produced on request. The certificate shall clearly show compliance with AS1672.1 - 1997 and the percentage of Available Lime in the product.

Bulk hydrated lime shall be dry and shall have been produced not more than 14 days before delivery unless testing on the material shows that the equivalent calcium oxide content meets specified requirements.

Slag used shall be Ground Granulated Blast Furnace Slag (GGBFS) meeting the requirements of AS 3582.2. The Contractor shall nominate the type, brand and source of the GGBFS to be used.

Slag/lime shall be blended uniformly in the ratio of 85% slag to 15% hydrated lime unless

laboratory testing indicates that superior strength of the cementitious treated crushed rock is achieved by using a different ratio. If the blend is to be varied, the proportion of lime shall not be less than 10%. The Contractor shall provide evidence that the blend ratio has been met for all material supplied to the job. Slag/lime blend shall have a mortar bar 7 day compressive strength of 10 MPa and 28 day mortar bar compressive strength of 16 MPa. The test shall be the same test specified in AS 3972 except that the cement to water ratio shall be adjusted to match the consistency of mortar produced for the compressive strength test for GB cement in accordance with the relevant Australian Standard Test Method.

(c) **Slow Cementitious Blends Incorporating Alkali-activated Slag or Fly Ash**

Special blends of slow setting cementitious stabilising agents incorporating alkali-activated slag or fly ash which do not meet mortar bar strength requirement specified in AS 3972 may be used subject to the blend satisfying the mortar bar test requirement specified in clause 4.06(b). The maximum binder working time shall be determined in accordance with the VicRoads Test Method to confirm that the binder is a slow setting binder as specified in Standard Specification Section 306.

Fly ash shall be supplied to meet the requirements of AS 3582.1.

4.07 WATER

Where water is added to the product during mixing it shall be clear and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances. Water supplied from sources where dissolved salts are known or likely to be present shall be tested for electrical conductivity prior to use. The electrical conductivity, shall not be more than 3500 $\mu\text{S}/\text{cm}$.

4.08 MIXING

The crushed rock, sand (if any), cementitious binder and water shall be mixed by continuous or batch mixing.

The mixing period and the time of addition of water shall be such as to produce a uniform mixture of the components.

4.09 GRADING OF CRUSHED ROCK WITHOUT CEMENTITIOUS BINDER

The crushed rock, just prior to the addition of cementitious binder, shall comply with the relevant grading requirements of Tables 4.3 and 4.4 corresponding to the Los Angeles Abrasion Loss and the nominal size of the material.

The mixture shall not be graded from near the coarse limit in one sieve to the fine limit on the following sieve or vice versa.

Initially the target grading shall be at the centre of the grading envelope but the Contractor may vary the target grading within the specified grading limits to optimise the cementitious binder content required to satisfy the Unconfined Compression Strength (UCS) requirements specified in Table 4.5. Regardless of the target grading selected, the production grading shall not extend outside the specified grading limits unless approved by the Superintendent.

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Table 4.3 Grading Limits for all Rock Types (except granite rocks) with an Assigned Los Angeles Abrasion Loss of 26 or less

Sieve Size AS (mm)	Test Value before Compaction Limits of Grading (% Passing)
26.5	100
19.0	95 - 100
13.2	75 - 95
9.5	60 - 90
4.75	42 - 76
2.36	28 - 60
0.425	14 - 28
0.075	6 - 13

Table 4.4 Grading Limits for all Rock Types with an Assigned Los Angeles Abrasion Loss 25 or more and all Granite Source Rocks

Sieve Size AS (mm)	Test Value before Compaction Limits of Grading (% Passing)
26.5	100
19.0	95 - 100
13.2	75 - 95
9.5	60 - 90
4.75	42 - 76
2.36	28 - 60
0.425	10 - 28
0.075	2 - 10

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4.10 CEMENTITIOUS BINDER CONTENT AND UNCONFINED COMPRESSION STRENGTH (UCS) REQUIREMENTS

(a) Cementitious Binder Content

The Contractor shall determine the content of cementitious binder required to meet the minimum 7 day UCS specified in Table 4.5 using modified compaction. The cementitious binder content may be further increased to allow for the effects of production variability. The binder content so determined shall become the Design Cementitious Binder Content which shall not be less than the minimum cementitious binder content specified in Table 4.5.

Cementitious binder shall be added and mixed into the crushed rock in such a manner as to produce a uniform binder content.

After mixing, the cementitious binder content of the mixture, expressed as a percentage by mass of the dry crushed rock, shall be within $\pm 0.3\%$ of the Design Cementitious Binder Content.

(b) Unconfined Compression Test

The contractor shall carry out UCS Testing in accordance with the test frequency agreed with the principal and specified in Table 4.6. The UCS test result shall be the mean UCS determined from a pair of specimens in accordance with the Australian Standard Test Method and compacted using modified compactive effort.

For the purposes of UCS testing, one representative sample of fully mixed cementitiously treated material shall be taken either from the plant or at the point of delivery in accordance with the relevant Test Method and compacted in the mould within two hours of mixing.

The UCS during production shall be assessed on a "rolling average" basis where the average of the most recent three UCS test results shall not be less than the minimum value specified in Table 4.5.

Table 4.5 - Cementitious Binder Content and Unconfined Compression Strength

Minimum Design Cementitious Binder Content (% by mass)	Minimum 7 day Mean UCS * (MPa)		
	Rapid Setting (GP Cement)	Medium Setting (GB Cement)**	Slow Setting (Supplementary Cementitious Blends)
3	5	3.5	3

Notes on Table 4.5

* The UCS values specified in this table do not apply to cementitiously treated subbase with a pavement design modulus in excess of 3500 MPa. Higher Mean UCS values shall apply in this instance either as specified elsewhere or as directed by the Superintendent.

** The following blends of Type GB Cement shall be permitted as medium setting binders:

- Cement/Slag Blend (50% to 60% cement content)
- Cement/Fly ash blend (70% to 80% cement content)
- Cement/Slag/Fly ash blend (55% to 65% cement content)

4.11 MOISTURE CONTENT

If the contract is only for supply and delivery of material directly to VicRoads, the moisture content of the mixture at the point of delivery, expressed as a percentage by mass, shall be within plus 0.5 to

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minus 1.0 of any target value nominated by the Superintendent.

4.12 STOCKPILING OF MIXTURE

Cementitiously treated crushed rock shall not be stockpiled.

4.13 HANDLING OF MIXTURE

Handling of the mixture, including discharging from mixing plant and loading of trucks shall be effected in such a manner as to minimise segregation.

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SECTION 5 CRUSHED SCORIA FOR BASE AND SUB-BASE PAVEMENT

(See VicRoads specifications Section 818)

5.01 DESCRIPTION

This section covers the requirements for crushed scoria base and upper subbase of 20 mm and 40 mm nominal size and crushed scoria lower subbase. The requirements relate to quality of source rock and properties of the product. The nominal sizes shall be as specified in the special clauses and/or drawings and/or the schedule.

5.02 DEFINITIONS

Scoria

Scoria is ejected pyroclastic rock, usually of basic composition, characterised by marked vesicularity.

Crushed Scoria

Crushed scoria is composed of crushed fragments of scoria produced in a controlled manner to close tolerances of grading.

Unsound Material

Unsound material is that material, whether in the source or as spalls or as crushed particles, which is soft, friable, or composed of clay or weathered rock, or which contains matter which breaks up when alternately wetted and dried.

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained by testing products.

5.03 SOURCE ROCK

Prior to the commencement of work, the supplier shall confirm the source from which the material will be obtained.

VicRoads will investigate quarries in accordance with Code of Practice 500.00.

The scoria quarry shall have an assigned Los Angeles Abrasion test value not exceeding that specified in Table 5.1.

Table 5.1 - Los Angeles Abrasion Test Value

Pavement Course/Layer	Assigned Los Angeles Abrasion Loss Value (maximum)
Base	30
Upper Subbase	35
Lower Subbase	-

If at any time the supplier proposes to obtain scoria from a source other than the confirmed source the Contractor's Representative shall be notified in sufficient time to allow investigation as may be required.

The Contractor's Representative's approval shall be obtained prior to changing the source of material.

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5.4 PRODUCT

- (a) The crushed scoria shall be free from vegetable matter and lumps or balls of clay and shall comply with the relevant requirements of Table 5.2.

Table 5.2 - Product Specifications

Test	Test Value		
	Pavement Course/Layer		
	Base	Upper Subbase	Lower Subbase
Liquid Limit % (max)	30	35	40
Plasticity Index (max)	6	10	20
California bearing Ratio (%) (min) *	120	30	15
PI x % passing 0.425 mm AS Sieve (max)	-	-	600
* Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 95% of maximum dry density as determined by test using Modified compactive effort, but then soaked for 4 days prior to the CBR test.			

- (b) Unsound material in that fraction of the product retained on a 4.75 mm AS sieve shall not exceed the percentages specified in Table 5.3.

Table 5.3 - Unsound Material Allowance

Pavement Course/Layer	Unsound Material % (max)
Base	5
Upper Subbase	10
Lower Subbase	-

5.5 WATER

Where it is specified that water shall be added to the crushed scoria prior to delivery, such water shall be clear and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances.

5.6 GRADING OF UNCOMPACTED CRUSHED SCORIA BASE

Crushed scoria base shall comply with the relevant grading requirements of Tables 5.4 and 5.5.

The supplier shall aim to produce the crushed scoria in such a way that the grading coincides with the relevant target grading specified in Tables 5.4 to 5.5. The permitted ranges of grading in these tables provide for random fluctuations in the production process.

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Table 5.4 - Grading Requirements for 20 mm Crushed Scoria Base (by mass)

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value Before Compaction	
		Limits of Grading (% Passing)	% Retained Between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	11 - 21
2.36	38	29 - 47	15 - 29
0.425	16	12 - 20	9 - 15
0.075	4	2 - 6	

Table 5.5 - Grading Requirements for 40 mm Crushed Scoria Base (by mass)

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value Before Compaction	
		Limits of Grading (% Passing)	% Retained Between Sieves
53.0	100	100	0 - 5
37.0	100	95 - 100	9 - 16
26.5	85	80 - 90	7 - 15
19.0	74	62 - 82	17 - 23
9.5	54	44 - 64	10 - 20
4.75	39	29 - 49	15 - 17
2.36	28	22 - 35	13 - 22
0.425	11	8 - 13	5 - 10
0.075	3	2 - 5	

5.7 GRADING OF UNCOMPACTED CRUSHED SCORIA SUBBASE

(a) Upper Subbase

After completion of production, but before compaction, crushed scoria upper subbase shall comply with the relevant grading requirements of Tables 5.6 and 5.7.

The crushed scoria shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

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Table 5.6 - Grading Requirements for 20 mm Crushed Scoria Upper Subbase (by mass)

Sieve Size AS (mm)	Test Value Before Compaction Limit of Grading (% passing)
26.5	100
19.0	95 - 100
13.2	75 - 95
9.5	60 - 90
4.75	42 - 76
2.36	28 - 60
0.425	10 - 28
0.075	2 - 10

Table 5.7 - Grading Requirements for 40 mm Crushed Scoria Upper Subbase (by mass)

Sieve Size AS (mm)	Test Value Before Compaction Limit of Grading (% passing)
53.0	100
37.5	95 - 100
26.5	75 - 95
19.0	64 - 90
9.5	42 - 78
4.75	28 - 64
2.36	20 - 50
0.425	7 - 23
0.075	2 - 9

(b) Lower Subbase

After completion of production, but before compaction, crushed scoria lower subbase shall comply with the relevant grading requirements of Table 5.8. The crushed scoria shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

Crushed scoria of nominal size differing from that specified may be accepted by the Contractor's Representative provided it meets the grading requirements of Table 5.8 corresponding to a nominal size adjacent to that specified.

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Table 5.8 - Grading Requirements for Crushed Scoria Lower Subbase (by mass)

Sieve Size AS (mm)	Test Value Before Compaction - Limits of Grading (% Passing)							
	Nominal Size (mm)							
	50	40	30	25	20	14	10	5
75.0	100							
53.0		100						
37.5			100					
26.5				100	100			
19.0	54-75	64-90				100	100	
9.50			48-70	54-75				100
4.75					42-76	54-75	64-84	
2.36								65-84
0.425	7-21	7-23	9-24	10-26	10-28	15-32	18-35	26-45
0.075	2-10	2-12	2-12	2-13	2-14	6-17	7-18	10-23

5.8 MOISTURE CONTENT

Where payment is to be made on a mass basis, the average moisture content of crushed scoria at the plant shall not exceed 5.0% by mass unless otherwise specified or unless the Contractor has, at the time of signing this contract, nominated an upper limit of average moisture content greater than 5.0%. The average moisture content of crushed scoria supplied on any one day will be determined from three samples taken at random from that day's supply. If the average moisture content is greater than that specified or nominated, the material may be rejected. If at the discretion of the Contractor's Representative the material is accepted, payment will be made for the mass determined by deducting the calculated mass of excess moisture from the net mass shown on the delivery docket.

5.9 STOCKPILING OF CRUSHED SCORIA

Crushed scoria may be stockpiled prior to delivery provided the following requirements are fulfilled:

- (a) The product, after recovery from the stockpile, complies with this specification.
- (b) The stockpile site is clean, adequately paved, and well drained.
- (c) If a stockpile is constructed in more than one layer, each layer is fully contained within the area occupied by the upper surface of the preceding layer.

5.10 HANDLING OF CRUSHED SCORIA

Handling of crushed scoria, including the loading of trucks and stockpiling, shall be effected in such a manner as to minimise segregation.

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SECTION 6 RECYCLED CRUSHED CONCRETE FOR PAVEMENT SUB-BASE AND LIGHT DUTY BASE

(See VicRoads Specifications Section 820)

6.1 DESCRIPTION

This section covers the requirements of 20 mm nominal size, recycled crushed concrete and plant mixed wet-mix crushed concrete for Class CC3 subbase, and Class CC4 subbase of various nominal sizes and 20 mm nominal size Class CC2 light duty base.

The requirements relate to the properties of the product.

The material class, pavement course use and nominal sizes shall be as specified in the special clauses and/or the drawings and/or the schedule.

6.2 DEFINITIONS

Crushed concrete

Crushed concrete is composed of rock fragments coated with cement with or without sands and/or filler, produced in a controlled manner to close tolerances of grading and minimum foreign material content.

Light Duty Base Pavement

Light duty base pavement is the layer directly beneath the bituminous surfacing on lightly trafficked roads with a Design Traffic Loading of up to 1×10^6 Equivalent Standard Axles.

Plant Mixed Wet-Mix Crushed Concrete (PMWMCC)

Plant mixed wet-mix crushed concrete is a mixture of recycled crushed concrete, any granular additives and water, produced at a controlled mixing plant to close tolerances of grading and moisture content based on the modified optimum moisture content of the material.

6.3 COMPONENTS

- (a) Crushed concrete fragments shall consist of clean, hard, durable, angular fragments of concrete.

The use of crusher fines passing the 4.75 sieve which are not produced from crushing concrete, shall be subject to approval in writing by the Contractor's Representative to the proposed source and nature of these materials and the proposed amounts to be added. Unless otherwise specified, crusher fines which have been produced from an igneous or metamorphic rock source shall have a Degradation Factor - Crusher Fines of not less than 60.

- (b) The use of sands and/or filler shall be subject to approval in writing by the Superintendent to the proposed source and nature of such materials, the proposed amounts to be added and the proposed method of incorporating such materials in the product.

Where the Contractor elects to use an additive component with the crushed concrete, the additive shall:

- (i) be derived from sound and durable material;
- (ii) not be cementitious in nature;
- (iii) be free of vegetable matter, lumps and balls of clay and oversize particles of rock;
- (iv) be sized such that it can be effectively and uniformly distributed throughout the crushed concrete;
- (v) be kept dry to ensure that a free-flowing additive is incorporated into the mixture;
- (vi) be blended in the base and subbase finished products and shall not be greater than 15% by

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mass, unless approved otherwise in writing by the Superintendent.

6.4 PRODUCT

(a) The crushed concrete shall comply with the relevant requirements of Table 6.1.

Table 6.1 - Physical Properties

Test Value			
Test	Class CC2	Class CC3	Class CC4
Liquid Limit % (max)	35	35	40
Plasticity Index (max)	6	10	20
California Bearing Ratio (%) (min) ⁽¹⁾	-	-	15
Los Angeles Abrasion Loss (max) ⁽²⁾	30	35	40
Flakiness Index	35	-	-

Notes: (1) Value applicable to material passing 19.0 mm sieve: initially at optimum moisture content and 98% of maximum dry density as determined by test using Modified compactive effort, but then soaked for 4 days prior to the CBR test.

(2) Material used for the Los Angeles test shall be washed in solution of three parts water to one part hydrochloric acid for 10 minutes to remove cement paste from the aggregates and then washed again in water prior to the test.

(b) Foreign materials in that fraction of the product retained on a 4.75 mm sieve shall not exceed the percentages by mass specified in Table 6.2. In no circumstances shall the product contain any asbestos or asbestos fibre.

Table 6.2 - Foreign Material

Foreign Material Type	Class CC2	Class CC3	Class CC4
High density materials such as metal, glass, brick, and asphalt	2	3	5
Low density materials such as plastic, rubber, plaster, clay lumps and other friable material	0.5	1	3
Wood and other vegetable or decomposable matter	0.1	0.2	0.5

(c) For PMWMCC, the aggregates and water shall be mixed at a mixing plant by continuous or batch mixing.

6.5 WATER

Where it is specified that water shall be added to the crushed concrete prior to delivery, such water shall be clear and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances.

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6.6 GRADING OF UNCOMPACTED CRUSHED CONCRETE AND PMWMCC LIGHT DUTY BASE

After completion of production, but before compaction, crushed concrete and PMWMCC light duty base shall comply with the relevant grading requirements of Table 6.3.

The supplier shall aim to produce the crushed concrete and PMWMCC in such a way that the grading coincides with the relevant target grading specified in Table 6.3.

Table 6.3 - Grading Requirements for Class CC2, 20 mm Light Duty Base

Sieve Size AS (mm)	Target Grading (% Passing)	Test Value before Compaction	
		Limits of Grading (% Passing)	% Retained between Sieves
26.5	100	100	0 - 5
19.0	100	95 - 100	7 - 18
13.2	85	78 - 92	10 - 16
9.5	73	63 - 83	14 - 24
4.75	54	44 - 64	10 - 20
2.36	39	30 - 48	15 - 29
0.425	17	13 - 21	7 - 14
0.075	7	5 - 9	

The Contractor's Representative may revise the target grading requirements for the 2.36 mm, 0.425 mm and 0.075 mm sieves specified in Tables 6.3. The magnitude of the range of the limits of grading shall remain unchanged for the revised target grading and the range shall remain centred on the target grading. No additional payment will be made unless the change made to the target grading exceeds two percentage units for the 2.36 mm and 0.425 mm sieves or one percentage unit for the 0.075 mm sieve.

6.7 GRADING OF UNCOMPACTED CRUSHED CONCRETE SUB-BASE

(a) Class CC3 Crushed Concrete

After completion of production, but before compaction, Class CC3 crushed concrete and PMWMCC shall comply with the grading requirements of Table 6.4.

The supplier shall aim to produce the crushed concrete in such a way that the grading coincides with the relevant target grading specified in Table 6.4. The permitted ranges of grading in these tables provide for random fluctuations in the production process.

The crushed concrete shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

Table 6.4 - Grading Requirements for 20 mm Class CC3 Crushed Concrete

Sieve Size AS (mm)	Target Grading (% Passing)	Limits of Grading Test Value before Compaction (% Passing)
26.5	100	100
19.0	100	95 - 100
13.2	85	75 - 95
9.5	75	60 - 90
4.75	59	42 - 76
2.36	44	28 - 60
0.425	19	10 - 28
0.075	6	2 - 10

The Contractor's Representative may change the target grading requirements pertaining to the 2.36 mm, 0.425 mm and 0.075 mm sieves specified in Table 6.4. Notwithstanding any change made to the target grading, the magnitude of the range of the limits of grading will remain unchanged and the range will remain centred on the target grading. No additional payment will be made unless the change from the specified requirements exceeds two percentage units for the 2.36 mm and 0.425 mm sieves or one percentage unit for the 0.075 mm sieve.

(b) Class CC4 Crushed Concrete

After completion of production, but before compaction, Class CC4 crushed concrete shall comply with the relevant grading requirements of Table 6.5. The crushed concrete shall not be graded from near the coarse limit on one sieve to near the fine limit on the following sieve or vice versa.

Class CC4 crushed concrete of nominal size differing from that specified may be accepted by the Contractor's Representative provided it meets the grading requirement of Table 6.5 corresponding to a nominal size adjacent to that specified.

Table 6.5 - Grading Requirements for Class CC4 Crushed Concrete

Sieve Size AS (mm)	Limits of Grading - Test Value before Compaction (% Passing)					
	Nominal Size (mm)					
	50	40	30	25	20	14
75.0	100					
53.0		100				
37.5			100	100		
26.5					100	
19.0	54 - 75	64 - 90				100
9.50			48 - 70	54 - 75		
4.75					42 - 76	54 - 75
0.425	7 - 21	7 - 23	9 - 24	10 - 26	10 - 28	15 - 32
0.075	2 - 10	2 - 12	2 - 12	2 - 13	2 - 14	6 - 17

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6.8 MOISTURE CONTENT

(a) Crushed Concrete

Where payment is to be made on a mass basis, the average moisture content of crushed concrete at the plant shall not exceed 8.5% by mass unless otherwise specified or unless the contractor has, at the time of signing this contract, nominated an upper limit of average moisture content greater than 8.5. The average moisture content of crushed concrete supplied on any one day will be determined from three samples taken at random from that days supply. If the average moisture content is greater than that specified or nominated, the material may be rejected. If at the discretion of the Contractor's Representative the material is accepted, payment will be made for the mass determined by deducting the calculated mass of excess moisture from the net mass shown on the delivery dockets.

(b) PMWMCC

Where the work of the contract includes supply and delivery only, the moisture content of the mixture at the point of delivery, expressed as a percentage by mass, shall be within plus 0.5 to minus 1.0 of the target nominated from time to time by the Contractor's Representative.

6.9 STOCKPILING PRIOR TO DELIVERY

Crushed concrete may be stockpiled prior to delivery provided the following requirements are fulfilled:

- (a) the product, after recovery from the stockpile, complies with this specification;
- (b) the stockpile site is clean, adequately paved, and well drained;
- (c) if a stockpile is constructed in more than one layer, each layer is fully contained within the area occupied by the upper surface of the preceding layer;
- (d) no cementitious filler is used.

6.10 HANDLING OF CRUSHED CONCRETE

Handling of crushed concrete, including the loading of trucks and stockpiling, shall be effected in such a manner as to minimise segregation.

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SECTION 7 CEMENTITIOUSLY TREATED CRUSHED CONCRETE FOR PAVEMENT SUB-BASE

(See VicRoads Specifications Section 821)

7.1 DESCRIPTION

This section covers the requirements of 20 mm nominal size crushed recycled concrete or crushed rock/crushed concrete blends for pavement subbase and treated with cementitious binder to produce bound material.

Cementitiously Treated Crushed Rock for Subbase Pavement is covered by Section 4.

7.2 DEFINITIONS

Cementitious Binder

A cementing agent that binds the particles of a granular pavement material together to increase its strength. Cementitious binders include Portland cement Type GP or blended cement Type GB, hydrated lime, quicklime, or a blend of ground granulated blast furnace slag (GGBFS), hydrated lime, fly ash, alkali activated slag or other pozzolanic material supplied in accordance with this specification.

Crushed Concrete

Crushed concrete is composed of rock and sand fragments coated with cement with or without filler, produced in a controlled manner to close tolerances of grading.

Fly Ash

A fine powder of pozzolanic material extracted from the flue emissions produced from the burning of black coal complying with the requirements of AS 3582.1.

Pozzolan

A very fine graded siliceous or alumino-siliceous material that can be mixed with lime or Portland cement to form a cementitious material.

Slag (Ground Granulated Blast Furnace Slag)

Ground Granulated Blast Furnace Slag (GGBFS) complying with the requirements of AS 3582.2 is a pozzolan produced by fine grinding of slag produced as a by product from the smelting of iron ore.

7.3 COMPONENTS

(a) Coarse Aggregates

Unless otherwise approved by the Contractor's Representative, coarse crushed concrete aggregates shall consist of clean, hard, durable, angular rock, concrete and sand fragments of uniform quality complying with soundness requirements specified in Clause 7.4.

(b) Fine Aggregates

Unless otherwise approved by the Contractor's Representative, fine aggregates shall consist of clean, hard, durable, angular rock, concrete and sand fragments of uniform quality.

If all or part of the fine aggregates are to be supplied from a different source, the supplier shall first obtain approval of the Contractor's Representative prior to use. The supplier shall provide details of the exact location of the source and nature of the fine aggregates and the proposed percentage by mass to be added to the crushed concrete mixture.

All fine aggregates produced from an igneous or metamorphic rock source other than crushed concrete shall have a Degradation Factor of not less than 60.

(c) Sands and Filler

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The use of sands and/or filler shall be subject to approval by the Contractor's Representative. Information in regard to the proposed source and nature of sand or filler, and the proposed amounts to be added shall be made available to the Contractor's Representative on request.

(d) Blending of Crushed Concrete Aggregates with Crushed Rock Aggregates

Crushed rock aggregates imported from different sources or rock types shall not be combined with crushed concrete aggregates without prior approval from the Contractor's Representative. Any proposal to blend aggregates from different sources or rock types shall clearly state the proportions by mass retained on each sieve for each rock type that will be used in the blend.

Blending of crushed rock with crushed concrete may be permitted subject to the following conditions being met:

- (i) All coarse crushed rock aggregates other than crushed concrete aggregates, in the blend shall individually comply with the relevant requirements of Sections 801 of this specification for a crushed rock subbase of the relevant rock type. The crushed rock to be added shall meet the soundness requirements of Table 7.1.
- (ii) All material to be blended shall be fully crushed and screened to the maximum aggregate size permitted in the product prior to blending.
- (iii) All crushed rock fine aggregates added to the blend shall comply with the requirements of Clause 7.3(b).
- (iv) Once a suitable blend has been developed, the total proportions by mass of crushed rock and crushed concrete in the blend shall not be varied by more than 5% by mass without the approval of the Contractor's Representative.
- (v) Prior to addition of cement, the crushed concrete/crushed rock blend shall comply with the all the requirements specified in Clause 7.4.

Table 7.1 – Soundness of Crushed Rock Course Aggregates

Total of Marginal and Unsound Rock % (max)	Unsound Rock % (max)
20	10

7.4 PRODUCT

- (a) The crushed concrete shall comply with the relevant requirements of Table 7.2.

Table 7.2 - Atterberg and Hardness Limits Test Properties

Test	Test Value
Liquid Limit % (max)	35
Plasticity Index (max)	10
Los Angeles Abrasion Loss (max)	35

- (b) In no case shall the product contain any asbestos cement or asbestos fibre.
- (c) Foreign materials in that fraction of the product retained on a 4.75 mm sieve shall not exceed the percentages by mass specified in Table 7.3.

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Table 7.3 - Foreign Material

Foreign Material Type	% Retained
High density materials such as metal, glass, brick, asphalt, stone, ceramics and slag	3
Low density materials such as plastic, rubber, plaster, clay lumps and other friable material	1
Wood and other vegetable matter	0.5

7.5 CEMENTITIOUS BINDER

(a) Cement

Cement shall be Type GP or GB and comply with the requirements of AS 3972-1991 - Portland and Blended Cements. It shall be stored in weatherproof structures, and any cement damaged by moisture shall not be used.

If Type GB cement is proposed, only the following blends are permitted:

- Cement/Slag Blend (50% to 60% cement content)
- Cement/Fly ash blend (70% to 80% cement content)
- Cement/Slag/Fly ash blend (55% to 65% cement content)

(b) Slag/Lime Blend

Slag and hydrated lime may be used in blended combination as a slow setting cementitious binder. The requirements for hydrated lime shall be:

Quicklime

Quicklime shall be supplied in accordance with AS 1672.1 – 1997.

All quicklime supplied to the job shall be provided with evidence showing the manufacturers batch number. A test certificate shall be produced on request. The certificate shall clearly show compliance with AS1672.1 - 1997 and the percentage of Available Lime in the product.

The residue of quicklime after slaking shall not exceed 30%.

Hydrated Lime

Hydrated Lime shall be supplied in accordance with AS 1672.1 – 1997.

All hydrated lime supplied to the job shall be provided with evidence showing the manufacturer's batch number. A test certificate shall be produced on request. The certificate shall clearly show compliance with AS1672.1 - 1997 and the percentage of Available Lime in the product.

Bulk hydrated lime shall be dry and shall have been produced not more than 14 days before delivery unless testing on the material shows that the equivalent calcium oxide content meets specified requirements.

Slag used shall be Ground Granulated Blast Furnace Slag (GGBFS) meeting the requirements of AS 3582.2. The Contractor shall nominate the type, brand and source of the GGBFS to be used.

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Slag/lime shall be blended uniformly in the ratio of 85% slag to 15% hydrated lime unless laboratory testing indicates that superior strength of the cementitiously treated material is achieved by using a different ratio. If the blend is to be varied, the proportion of lime shall not be less than 10%. The supplier shall provide evidence that the blend ratio has been met for all material supplied to the job. Slag/lime blend shall have a mortar bar 7 day compressive strength of 10 MPa and 28 day mortar bar compressive strength of 16 MPa. The test shall be the same test specified in AS 3972 except that the cement to water ratio shall be adjusted to match the consistency of mortar produced for the compressive strength test for GB cement in accordance with the relevant Australian Standard Test Method.

(c) **Slow Cementitious Blends Incorporating Alkali-activated Slag or Fly Ash**

Special blends of slow setting cementitious stabilising agents incorporating alkali-activated slag or fly ash which do not meet mortar bar strength requirement specified in AS 3972 may be used subject to the blend satisfying the mortar bar test requirement specified in Clause 7.5(b). The maximum binder working time shall be determined in accordance with the VicRoads Test Method to confirm that the binder is a slow setting binder as specified in Section 306.

Fly ash shall be supplied to meet the requirements of AS 3582.1.

7.6 WATER

Where water is added to the product during mixing it shall be clear and substantially free from detrimental impurities such as oils, salts, acids, alkalis and vegetable substances. Water supplied from sources where dissolved salts are known or likely to be present shall be tested for electrical conductivity prior to use. The electrical conductivity, shall not be more than 3500 $\mu\text{S}/\text{cm}$.

7.7 GRADING OF CRUSHED CONCRETE WITHOUT CEMENTITIOUS BINDER

After completion of production, but before compaction, crushed concrete shall comply with the relevant grading requirements of Table 7.4 corresponding to the nominal size of the material.

The crushed concrete or blended material shall not be graded from near the coarse limit on one sieve the fine limit on the following sieve or vice versa.

Initially the target grading shall be at the centre of the grading envelope but the supplier may vary the target grading within the specified grading limits to optimise the cementitious binder content required to satisfy the Unconfined Compression Strength (UCS) requirements specified in Table 7.5. Regardless of the target grading selected, the production grading shall not extend outside the specified grading limits unless approved by the Contractor's Representative.

Table 7.4 - Grading Requirements

Sieve Size AS (mm)	Limits of Grading Test Value before Compaction (% Passing)
26.5	100
19.0	95 - 100
13.2	75 - 95
9.5	60 - 90
4.75	42 - 76
2.36	28 - 60
0.425	10 - 28
0.075	2 - 10

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7.8 CEMENTITIOUS BINDER CONTENT AND UNCONFINED COMPRESSION STRENGTH (UCS) REQUIREMENTS

(a) Cementitious Binder Content

The Contractor shall determine the content of cementitious binder required to meet the minimum 7 day UCS specified in Table 7.5 using modified compaction. The cementitious binder content may be further increased to allow for the effects of production variability. The binder content so determined shall become the Design Cementitious Binder Content and shall not be less than the minimum cementitious binder content specified in Table 7.5.

Cementitious binder shall be added and mixed into the crushed rock in such a manner as to produce a uniform binder content.

After mixing, the cementitious binder content of the mixture, expressed as a percentage by mass of the dry crushed rock, shall be within $\pm 0.3\%$ of the Design Cementitious Binder Content.

(b) Unconfined Compression Test

The Contractor shall carry out UCS Testing in accordance with the test frequency agreed with the principal and specified in Table 7.6. The UCS test result shall be the mean UCS determined from a pair of specimens in accordance with the Australian Standard Test Method and compacted using modified compactive effort.

For the purposes of UCS testing, one representative sample of fully mixed cementitiously treated material shall be taken either from the plant or at the point of delivery in accordance with the relevant Test Method and compacted in the mould within two hours of mixing.

Assessment of the UCS during production shall be on a "rolling average" basis where the average of the most recent three UCS test results shall not be less than the minimum value specified in Table 7.6.

Table 7.5 - Cementitious Binder Content and Unconfined Compression Strength

Minimum Design Cementitious Binder Content (% by mass)	Minimum 7 day Mean UCS* (MPa)		
	Rapid Setting (GP Cement)	Medium Setting (GB Cement) **	Slow Setting (Supplementary Cementitious Blends)
3	5	3.5	3

Notes on Table 7.5

* The UCS values specified in this table do not apply to cementitiously treated subbase with a pavement design modulus in excess of 3500 MPa. Higher Mean UCS values shall apply in this instance either as specified elsewhere or as directed by the Superintendent.

** The following blends of Type GB Cement shall be permitted as medium setting binders:

- Cement/Slag Blend (50% to 60% cement content)
- Cement/Fly ash blend (70% to 80% cement content)
- Cement/Slag/Fly ash blend (55% to 65% cement content)

7.9 MOISTURE CONTENT

If the contract is only for supply and delivery of material directly to VicRoads, the moisture content of the mixture at the point of delivery, expressed as a percentage by mass, shall be within plus 0.5 to

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minus 1.0 of any target value nominated by the Superintendent.

7.10 STOCKPILING OF MIXTURE

Cementitiously treated crushed concrete shall not be stockpiled.

7.11 HANDLING OF MIXED MATERIAL

Handling of mixed crushed concrete, including discharging from the mixing plant and the loading of trucks shall be effected in such a manner as to minimise segregation.

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SECTION 8 AGGREGATE FOR SPRAYED BITUMINOUS SURFACING

(See VicRoads Specifications Section 831)

8.1 DESCRIPTION

This section covers the requirements for Classes A, B and C aggregate produced by crushing and screening for use in sprayed bituminous surfacing. The requirements relate to quality of rock, aggregate properties, and supply, delivery and stacking to template.

The classes and sizes of aggregate to be supplied shall be as specified in the schedule and/or the Aggregate Order.

8.2 DEFINITIONS

Aggregate

Aggregate consists of substantially one-sized mineral particles used as a cover material applied to a thin film of bituminous material.

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Assigned Polished Stone Value

The assigned Polished Stone Value is a friction rating derived from Polished Stone Value test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Crushed Aggregate

An aggregate produced by crushing and screening of quarry spalls into angular fragments.

Partly Crushed Aggregate

An aggregate produced by washing, crushing and screening of a gravel material where a minimum of 75% by mass of aggregate particles have two or more faces produced by crushing.

8.3 SOURCE ROCK

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

Class A aggregate shall be produced from a source having an assigned Polished Stone Value not less than 48.

8.4 PRECOATING OF AGGREGATE

Where specified or shown on the Aggregate Order, aggregate shall be precoated with cutback bitumen precoating material.

Prior to precoating, aggregate shall be tested for compliance with the requirements of Clause 8.5 (a) to (f).

The precoating material shall have a viscosity in the range 0.003 to 0.020 Pa.s at 60°C and contain a bitumen residue of between 25% and 40% by mass and 1% by volume of an adhesion agent at normal concentration. The type of adhesion agent used shall be subject to approval by the Contractor's Representative.

Aggregate shall be pre-coated such that each particle is uniformly coated to the satisfaction of the Contractor's Representative.

The use of alternative pre-coating materials will be considered. Specific proposals shall be submitted to the Contractor's Representative for approval prior to supply.

8.5 TESTING AND ACCEPTANCE OF AGGREGATE

(a) General Requirements

- (i) Crushed aggregate shall consist of clean, hard, durable, angular fragments of igneous, metamorphic or sedimentary rock and shall be free from clay, organic matter and elongated particles. Granitic rocks, river gravel, and calcrete and other sedimentary rocks shall not be used for the production of Class A aggregate.
- (ii) Partly crushed aggregate shall be produced by crushing clean, hard, durable particles of gravel and shall be free from clay, organic matter and elongated particles.

At least 75% by mass of the particles of crushed or partly crushed aggregate shall have two or more faces produced by crushing.

The use of aggregate produced without crushing may be considered for use as a Class C aggregate subject to approval by the Contractor's Representative.

(b) Testing of Aggregate

Unless otherwise specified, testing of aggregate shall be based on lot testing. A lot shall consist of not more than 200 m³ of aggregate of the same class and size, and which is uniform in appearance and has been produced under essentially uniform conditions. Each lot shall be assigned a unique identification number. Three samples shall be taken essentially at random from each lot prior to delivery to stack sites. The samples shall be taken not more than 30 days prior to delivery of material in the lot and tested for compliance with the specified requirements in accordance with both the individual test results and the mean of the individual test results for each lot. Any aggregate which appears not to comply with the specification shall be excluded from the lot before sampling commences and where necessary shall be tested separately. The Superintendent may agree to lot sizes up to 500 m³ for sources of consistent material based on a history of satisfactory test results.

(c) Unsound and Marginal Rock

The percentage by mass of unsound and marginal rock in that fraction of a sample retained on a 4.75 mm AS sieve shall not exceed the values specified in Table 8.1. Notwithstanding the requirements of Clause 8.5(b) regarding lot size, where daily production of the same class of aggregate exceeds 200 m³ per day, the lot testing for unsound and marginal stone may be reduced to one lot per day.

Table 8.1 - Unsound and Marginal Rock

Class of Aggregate	Total of Marginal and Unsound Rock (max % by mass)		Unsound Rock (max % by mass)
	Individual Test	Mean of Lot	Individual Test
A	12	10	5
B	18	15	7
C	24	20	10

The Contractor's Representative will provide reference specimens necessary for use with Test Methods RC 372.01.

(d) Flakiness Index

- (i) For all sources (except granitic sources) with an assigned Los Angeles Abrasion Loss

value of 25 or less, the flakiness index of aggregate shall not exceed the values specified in Table 8.2.

Table 8.2 - Flakiness Index for sources with a Los Angeles Value of less than 25

Class of Aggregate	Flakiness Index (max % by mass)	
	Individual Test	Mean of Lot
A	30	25
B	35	30
C	40	35

- (ii) For all sources with an assigned Los Angeles Abrasion Loss value of more than 25 and for all granitic sources the flakiness index of aggregate shall not exceed the values in Table 8.3.

Table 8.3 - Flakiness Index for sources with a Los Angeles value of more than 25

Class of Aggregate	Flakiness Index (max % by mass)	
	Individual Test	Mean of Lot
B	25	20
C	30	25

Aggregate which does not comply with Tables 8.2 and 8.3 but has a proven satisfactory performance may be accepted for use subject to approval by the Contractor's Representative.

- (e) Grading

The grading by mass of one sized aggregate shall conform to the relevant requirements of Tables 8.4, 8.5 and 8.6.

Table 8.4 - Specified Size

Size	Passing AS Sieve	Retained AS Sieve	Min % (by mass)	
			Individual Test	Mean of Lot
20	19.0	13.2	60	65
14	13.2	9.50	55	60
10	9.50	6.70	60	65
7	6.70	3.35	60	65
5	4.75	2.36	55	60

Table 8.5 - Tolerance on Oversize

Size	Passing AS Sieve	Min % (by mass) Individual Test	Retained AS Sieve	Max % (by mass)	
				Individual Test	Mean of Lot
20	26.5	100	19.00	20	15
14	19.0	100	13.20	20	15
10	13.2	100	9.50	20	15
7	9.5	100	6.70	20	15
5	6.7	100	4.75	20	15

Table 8.6 - Tolerance on Undersize

Size	Passing AS Sieve	Max % (by mass)		Passing AS Sieve	Max % (by mass)	
		Individual Test	Mean of Lot		Individual Test	Mean of Lot
20	9.50	10	7	2.36	2.0	1.0
14	6.70	10	7	2.36	2.0	1.0
10	4.75	15	10	2.36	3.0	2.0
7	2.36	15	10	0.600	3.0	2.0
5	1.70	15	10	0.600	3.0	2.0

(f) Acceptance of Aggregate

- (i) If all of the individual test results and, where appropriate, the mean of the individual results for each lot comply with the relevant requirements of Table 8.1 to Table 8.6 the aggregate represented by the lot will be accepted at the relevant scheduled rates.
- (ii) If all of the individual test results comply with the relevant requirements of this Clause but one or more of the mean of the individual results for each lot fail to comply with the relevant requirements the aggregate represented by the lot will either be rejected or accepted on the basis of a variation being made to the contract in accordance with the following formula:

$$\text{Reduced Rate} = S \times \frac{100 - (d_1 + d_2 + d_3 + d_4 + d_5 + 10d_6)}{100}$$

Where: S is the total of the relevant scheduled rate(s) for supply, delivery and stacking of aggregate.

Where: d₁ is related to the marginal and unsound rock content test (Table 8.1)

d₂ is related to the flakiness index (Table 8.2 and 8.3)

d₃ is related to the specified size (Table 8.4)

d₄ is related to the "Retained" tolerance on oversize (Table 8.5)

d₅ and d₆ are related to the coarser and finer tolerances respectively on undersize (Table 8.6)

For d₁ to d₅ the respective d is the whole number of percentage points by which the mean test result exceeds or falls short of, as appropriate, the relevant limits specified and d₆ is the percentage expressed to the first decimal point by which the mean test result exceeds the limit for the finer sieve.

Aggregate which is subject to the application of this formula shall not be supplied or delivered without the approval of the Contractor's Representative.

Where the contract is a Lump Sum Contract the relevant scheduled rate will be that shown in the Schedule of prices accompanying the lump sum tender for variations. If no such rate is provided, a variation will be considered in accordance with Clause 50 of this contract.

- (iii) If any of the individual test results do not comply with the relevant requirements of this clause the aggregate in the lot will be rejected.

8.6 AVERAGE LEAST DIMENSION

For Size 10 aggregate and larger the supplier shall determine the average least dimension of aggregate in each lot and shall give the Contractor's Representative written notification of the values prior to

delivery.

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DELIVERY

Delivery shall be made to stack sites as specified and shall be completed for each site by the date specified for that site or by the date shown on the order as appropriate. The Contractor shall give the Superintendent written notification of the lot identification number for each stack. Where aggregate from more than one lot is delivered to the same stack site, separate stacks shall be made for aggregate from each lot.

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SECTION 9 SANDS FOR SPRAYED BITUMINOUS SURFACING

(See VicRoads specifications Section 832)

9.1 DESCRIPTION

This section covers the requirements relating to quality and supply of Classes 1 and 2 sands for use in sprayed bituminous surfacing.

The classes of sands to be supplied shall be as specified in the special clauses and/or the drawings and/or the schedule and/or the order.

9.2 DEFINITION

Sand

Sand is a product of rock weathering, substantially passing a 4.75 mm sieve, is generally siliceous, and is free from appreciable quantities of clay and silt. Sands used as cover material applied to a layer of bituminous binder consist mainly of particles between 5 mm and 0.075 mm in size.

9.3 MATERIALS SOURCE

Prior to commencement of work, the supplier shall confirm the source from which the material will be obtained.

The Contractor's Representative approval shall be obtained prior to changing the source of material.

Source material which does not comply with specified requirements but from which sands of proven satisfactory performance have been produced may be accepted for use subject to the written approval of the Contractor's Representative.

9.4 TESTING AND ACCEPTANCE OF SANDS

(a) General

Unless otherwise specified, testing of sands shall be based on lot testing. One sample shall be taken at random from each lot prior to delivery to stack sites. A lot shall consist of not more than 100 m² of sand which is uniform in appearance and is from the one source. Each lot shall be assigned a unique identification. The samples shall be taken not more than 30 days prior to delivery of material in the lot and tested for compliance with the specified requirements in Clause 9.4(b).

(b) Quality of Sands

- (i) Sands shall consist of hard, durable particles and shall be free from mica, clay lumps and organic matter.
- (ii) Sands shall have a Sand Equivalent value of not less than 80.
- (iii) Sands shall conform to the relevant grading requirements of Table 9.1.

Table 9.1 - Grading Requirements for Sands (by mass)

Class	Percentage Passing						
	Sieve Size AS (mm)						
	9.50	4.75	2.36	1.18	0.600	0.15	0.075
1	100	85-100	55-80	25-50	0-20	0-5	0-2
2	100	85-100	70-95	50-85	20-50	0-10	0-2

9.5 DELIVERY

Delivery shall be made to stack sites as specified and shall be completed for each site by the date specified for that site, or by the date shown on the order, as appropriate. The Contractor shall give the Superintendent written notification of the identity of the lot from which delivery is made for each stack.

9.6 STACKING TO TEMPLATE

Unless otherwise directed or approved by the Contractor's Representative, sand shall be stacked to one of the following templates.

Bed width 4.0 m, top width 1.0 m, vertical height 0.8 m (nominally 2.0 m² per metre run).

Bed width 5.0 m, top width 2.0 m, vertical height 1.0 m (nominally 3.5 m² per metre run).

9.7 MINIMUM TESTING REQUIREMENTS

The Contractor shall test the sands at a frequency agreed with the principal which is sufficient to ensure that all materials supplied under the contract complies with the specified requirements but which is not less than that shown in Table 9.2.

Table 9.2 - Testing Frequency

Test	Minimum Frequency of Testing
Grading	One per 1000 tonnes or part thereof
Sand Equivalent	At monthly intervals

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SECTION 10 MISCELLANEOUS REQUIREMENTS FOR AGGREGATE

10A HOT MIX ASPHALT

(See VicRoads specifications Section 407)

10A.1 DESCRIPTION

This section covers the requirements for materials used in the manufacture and placing of asphalt of Types T, V, H, N, L and R and of Sizes 7, 10, 14, 20 and 28.

10A.2 DEFINITIONS

Coarse Aggregates

Coarse aggregates are aggregates retained on a 4.75 mm AS sieve.

Fine Aggregates

Fine aggregates are aggregates passing a 4.75 mm AS sieve.

Mineral Matter

Mineral matter includes coarse and fine aggregates, plus filler.

Assigned Polished Stone Value

The assigned Polished Stone Value is a friction rating derived from Polished Stone Value test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

10A.3 AGGREGATES

(a) General

The combined aggregate mixture shall consist of crushed rock or a mixture of crushed rock and sand.

Aggregates shall consist of clean, hard, durable, angular rock fragments of uniform quality.

Sand aggregates shall consist of clean, hard, durable grains free from lumps, clay, mica and foreign matter.

(b) Source Rock

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(c) Crushed Aggregate Products

(i) The Flakiness Index of each separate sized coarse aggregate, with a nominal size of 10 mm or larger, shall comply with Table 10A.1.

(ii) Unsound rock and marginal rock in that fraction of the combined mixture retained on a 4.75 mm AS sieve shall not exceed the relevant percentages specified in Table 10A.1. If no facilities exist at the mixing plant to sample the combined mixture, the unsound rock and marginal rock in that fraction of each aggregate retained on a 4.75 mm AS sieve shall not exceed the relevant percentages specified in Table 10A.1.

Table 10A.1 - Unsound and Marginal Rock

Type of Asphalt	Flakiness Index (%) max	Total of Marginal and Unsound Rock (% by mass) max	Unsound Rock (% by mass) max
V and H	35	8	3
T, N, L and R	35	10	5

(d) **Crusher Fines**

Crusher fines shall:

- (i) consist of a uniformly graded product of separate particles from the crushing of rock which complies with the requirements of Clause 10A.3(b) appropriate to the asphalt type being produced;
- (ii) be free from lumps and aggregations;
- (iii) comply with the grading limits specified in Table 10A.2.

Table 10A.2 - Grading Limits

Sieve Size AS (mm)	Percentage Passing (by mass)
6.70	100
4.75	70 - 100
0.600	20 - 55
0.075	5 - 20

- (iv) comply with the relevant requirements specified in Table 10A.3.

Table 10A.3 - Test Value

Test Value	
Degradation Factor - Crusher Fines min	Plasticity Index max
60	3

(e) **Aggregates for Asphalt Used as Wearing Course**

- (i) Coarse aggregates shall be a mixture of separate one-sized aggregates.
- (ii) Coarse aggregates for Type T, H or V asphalt shall have a minimum assigned polished stone value of 48.
- (iii) Fine aggregates shall be a mixture of one or more natural sands and crusher fines such that the fraction of the job mix passing a 4.75 mm AS sieve shall contain not less than 20% and not more than 65% by mass of natural sands unless otherwise approved by the Superintendent.

(f) **Aggregates for Asphalt Used as Intermediate or Base Course**

The combined aggregates shall consist either wholly of crushed material or of a mixture of crushed material and natural sands provided that the fraction of the mix passing the 4.75 mm AS sieve shall contain not more than 50% by mass of natural sands unless otherwise approved by the Superintendent.

10B OPEN GRADED ASPHALT

(See VicRoads specifications Section 417)

10B 1 DESCRIPTION

This section shall be read in conjunction with Section 10A - Asphalt, and covers special requirements for Size 10 open graded asphalt surfacing that are in addition to, or override, the requirements for Section 10A.

Open Graded Asphalt (OGA) is an asphalt manufactured essentially from a Size 10 one-sized aggregate to produce a mix with high air voids.

10B.2 DEFINITIONS

Unless otherwise specified, properties of the aggregates used in OGA shall comply with the requirements for asphalt Type H as specified in Clause 10A.3.

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10C BITUMEN CRUMB RUBBER ASPHALT

(See VicRoads specifications Section 421)

10C1 DESCRIPTION

This section is a supplement to Section 10A - Asphalt and covers special requirements for Bitumen Crumb Rubber Asphalt that are in addition to, or override the requirements of Section 10A.

Bitumen Crumb Rubber Asphalt is asphalt which contains crumb rubber obtained from tyre shredding to improve flexural and elastic recovery properties of an asphalt layer.

10C.2 AGGREGATES

Unless otherwise specified, properties of the aggregates used in Bitumen Crumb Rubber Asphalt shall comply with the requirements specified in Clause 10A.3.

ND

10D LEAN MIX ASPHALT

(See VicRoads specifications Section 423)

10D.1 DESCRIPTION

This section is a supplement to Section 10A - Asphalt and covers special requirements for lean mix asphalt that are in addition to, or override the requirements of Section 10A.

Lean mix asphalt is a size 20 asphalt for use in locations where a lower quality asphalt is acceptable or for use as an alternative to unbound granular pavement material to provide a temporary all weather surface during construction.

10D.2 AGGREGATES

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

Crushed aggregate products shall comply with the requirements specified in Table 10D.1.

Table 10D.1 - Test Requirements

Test	Requirement
Flakiness Index	40% (max)
Total Marginal and Unsound Rock Content	15% by Mass (max)
Unsound Rock Content	7% by Mass (max)
Plasticity Index	6% (max)

10E BITUMINOUS SLURRY SURFACING

(See VicRoads specifications Section 427)

10E.1 DESCRIPTION

This section covers the requirements for manufacture and placing sizes 3, 5, 7 and 10 mm bituminous slurry surfacing. Bituminous Slurry is a mixture of fine graded aggregate, bitumen emulsion and water of sufficient fluidity to be capable of being screeded over a road surface in a very thin layer without the need for heating or use of mechanical compaction equipment.

10E.2 DEFINITIONS

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Assigned Polished Stone Value

The assigned Polished Stone Value is a friction rating derived from Polished Stone Value test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Aggregates

(a) General

The combined aggregate mixture shall consist of crushed rock or a mixture of crushed rock and sand.

Aggregates shall consist of clean, hard, durable, angular rock fragments of uniform quality.

Sand aggregates shall consist of clean, hard, durable grains free from lumps, clay, mica and foreign matter.

(b) Source Rock

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(c) Crushed Aggregate Products

The minimum sand equivalent of the crushed product shall be 60.

10E.3 AGGREGATE GRADING

The grading of the aggregates shall conform to the following grading limits for dense graded Size 3, Size 5, Size 7 and Size 10 nominal size mixes as shown in Table 10E.1.

Table 10E.1 - Aggregate Grading

Sieve Size (mm)	Size 3 (% Passing)	Size 5 (% Passing)	Size 7 (% Passing)	Size 10 (% Passing)
13.2	100	100	100	100
9.5	100	100	100	95-100
6.7	100	100	80-100	75-95
4.75	100	90-100	70-90	60-85
2.36	90-100	60-85	45-70	40-60
1.18	65-90	40-65	28-50	28-45
0.600	40-65	25-45	19-34	19-34
0.300	25-42	15-30	12-25	12-25
0.150	15-25	10-20	7-18	7-18
0.075	10-15	5-15	5-12	4-8

Dense graded aggregate which does not comply with Table 10E.1 but has a proven satisfactory performance may be accepted for use subject to review by the Superintendent.

10F MATERIALS FOR CONCRETE BASE AND SUB-BASE PAVEMENT COURSES

(See VicRoads specifications Section 501)

10F.1 DESCRIPTION

This section covers the requirements for materials for the construction of Concrete Base and Sub-base Pavement Courses.

10F.2 DEFINITIONS

Fine Aggregates

Fine aggregates are aggregates passing a 4.75 mm AS sieve.

Coarse Aggregates

Coarse aggregates are aggregates retained on a 4.75 mm AS sieve.

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

10F.3 AGGREGATES

Fine aggregates shall conform to the following requirements:

(i) Description

Fine aggregates shall consist of clean, hard, durable particles and shall be free from clay, clay lumps, soft or flaky particles, shale, salt, alkali, organic matter, soil or other substances detrimental to concrete or steel.

(ii) Impurities

Fine aggregate shall be tested for impurities in accordance with AS 1141. The combined fine aggregate shall have a sand equivalent of not less than 80 as determined by the appropriate test method, unless it can be shown to produce satisfactory concrete by a trial mix or proven past performance.

(iii) Grading

The fine aggregate shall be uniformly graded from coarse to fine sizes by combination of various sizes where necessary and when tested with standard sieves shall comply with the limits in Table 10F.1.

Table 10F.1 - Aggregate Grading

Sieve Size AS (mm)	Percentage Passing (by mass)
9.5	100
4.75	90 - 100
2.36	75 - 100
1.18	50 - 90
0.6	30 - 70
0.3	10 - 35
0.15	2 - 10
0.075	0 - 3

Note: Fine aggregates outside these limits may be approved if it can be shown that they have a satisfactory service record or that trial mixes using these aggregates produce acceptable results.

(iv) Uniformity

The grading of fine aggregate shall not deviate from the submitted combined grading by more than 5%.

(f) Source Rock

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(g) Coarse Aggregate shall conform to the following requirements:

(i) Description

Coarse aggregate shall consist of clean, hard, durable, angular rock fragments of uniform quality. It shall be free from clay, clay lumps, salt, organic matter or other substances detrimental to concrete or steel.

(ii) Crushed aggregate product

1. Flakiness Index

The Flakiness Index of each separate sized coarse aggregate shall not exceed 35%.

2. Unsound and Marginal Rock

Unsound rock and marginal rock in that portion of the combined mixture retained on a 4.75 mm AS sieve shall not exceed the relevant percentages specified in Table 10F.2.

Table 10F.2 - Marginal and Unsound Rock Percentages

Total of Marginal and Unsound Rock % (by mass) (max)	Unsound Rock % (by mass) (max)
10	5

3. Grading

The coarse aggregate shall be uniformly graded from an effective maximum size of 20 mm to an effective minimum size of 10 mm.

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10G MATERIALS FOR ROLLER COMPACTED CONCRETE PAVEMENT COURSES

(See VicRoads specifications Section 520)

10G.1 DESCRIPTION

This section covers the requirements for materials for the construction of roller compacted concrete courses. Concrete for roller compaction is a mixture of crushed rock fragments, sand, cementitious materials and water produced at a controlled mixing plant for spreading and compaction on site to produce roller compacted concrete.

10G.2 DEFINITIONS

Fine Aggregates

Fine aggregates are aggregates passing a 4.75 mm AS sieve.

Coarse Aggregates

Coarse aggregates are aggregates retained on a 4.75 mm AS sieve.

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

10G.3 AGGREGATES

(a) Source Rock

Source rock shall comply with the requirements of Section 801 - Source Rock for the Production of Crushed Rock and Aggregates.

(b) Coarse Aggregate

Coarse aggregate shall consist of clean, hard, durable angular rock fragments of uniform quality. It shall be free from clay, clay lumps, salt, organic matter or other substances detrimental to concrete.

(c) Fine Aggregates

Fine aggregates shall consist of clean, hard, durable, crusher fines and/or naturally occurring sands, and shall be free from clay, clay lumps, soft or flaky particles, shale, salt, alkali, organic matter, soil or other substances detrimental to concrete. Where necessary to meet the specified grading, fly ash may be added as fine aggregate.

Crusher fines shall have a minimum degradation factor of 60.

10G.4 AGGREGATE PRODUCT

(a) The coarse aggregate used in the product shall comply with the requirements of Table 10G.1.

Table 10G.1 - Marginal and Unsound Rock Percentages

Total of Marginal and Unsound Rock % (max)	Unsound Rock % (max)
10	5

(b) The Flakiness Index of each separate sized coarse aggregate shall not exceed 35%.

(c) Before the addition of cement the aggregate product shall comply with the requirements of Table 10G.2.

Table 10G.2 - Test Values

Test	Test Value
Liquid Limit % (max)	25
Plasticity Index (max)	3

(d) The grading of the combined coarse and fine aggregates shall lie within the limits specified in Table 10G.3.

Table 10G.3 - Grading

Sieve Size AS (mm)	Percentage Passing (by mass)
26.5	100
19.0	83 - 100
13.2	72 - 93
9.5	66 - 85
4.75	51 - 69
2.36	38 - 56
1.18	28 - 46
0.600	18 - 36
0.300	11 - 27
0.150	6 - 18
0.075	2 - 8

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10H STRUCTURAL CONCRETE

(See VicRoads specifications Section 610)

10H.1 DESCRIPTION

This section specifies the requirements for materials for structural concrete.

10H.2 DEFINITIONS

(a) General

Fine and coarse aggregate for concrete shall comply with the requirements of AS 2758.1 unless otherwise specified.

(b) Fine Aggregate

(i) Description

The fine aggregate shall consist of clean, hard, durable, naturally occurring grains, or a combination of naturally occurring grains and crusher fines, and shall be free from clay, dust, lumps, soft or flaky particles, shale, salt, alkali, organic matter, soil or other deleterious substances. Crusher fines produced from any igneous or metamorphic rock shall have a Degradation Factor - Crusher Fines of not less than 60.

A maximum of 20% of crushed fine aggregate from a source approved by the Contractor's Representative will be permitted.

(ii) Testing for Impurities

Fine aggregate shall be tested for impurities in accordance with AS 1141.

(iii) Grading of Fine Aggregate

Fine aggregate shall be uniformly graded and shall comply with the limits in Table 10H.1 when tested with standard sieves.

If required fine aggregates can be combined in such proportions that the resulting fine aggregate mix shall comply with the grading requirements.

Table 10.H1 - Grading

Sieve Size AS (mm)	Percentage Passing (by mass)
9.5	100
4.75	90 - 100
2.36	75 - 100
1.18	50 - 90
0.6	30 - 70
0.3	10 - 35
0.15	2 - 10
0.075	0 - 3

(iv) Consistency of Grading

The grading of fine aggregate shall not deviate from the submitted grading by more than $\pm 5\%$.

(c) Source Rock

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(d) Coarse Aggregate

(i) Description

Coarse aggregate shall consist of clean, hard, durable angular rock fragments of uniform quality. It shall be free from clay, clay lumps, salt, organic matter or other substances deleterious to concrete or steel.

(ii) Testing Requirements for Coarse Aggregate.

Coarse aggregate shall not contain:

- (1) more than 5% by mass of unsound rock; or
- (2) more than 10% total by mass of unsound rock plus marginal rock.

The flakiness index of the coarse aggregate shall not exceed 35%.

(iii) Grading of Coarse Aggregate

Coarse aggregate size ranges, when tested by means of standard sieves, shall have a maximum nominal size between 10 and 20 mm and shall comply with the requirements of Tables 1 and 2 of AS 2758.1.

(iv) Effective Size of Coarse Aggregate

Concrete in various parts of the structure shall contain coarse aggregate with the following effective maximum sizes:

Joint and pedestal concrete	14 mm
Precast concrete	14 mm for minimum cover of 25 mm 20 mm for minimum cover greater than 25 mm
All other concrete	20 mm

The effective minimum size will be 10 mm for crushed material and 5 mm for rounded materials.

(e) Alkali Aggregate Reactivity

Unless otherwise approved by the Contractor's Representative, all aggregates shall be assessed and tested for alkali reactivity as follows:

(i) Petrographic Examination

Aggregates shall be assessed for any unstable silica minerals by petrographic examination in accordance with ASTM Test Method C295; and

(ii) Potential Alkali Silica Reactivity

The potential alkali silica reactivity of the coarse and fine aggregates shall be determined in accordance with VicRoads test methods as described in Code of Practice RC 500.16.

Coarse and fine aggregates shall be deemed to be non-reactive if the average expansion of the mortar bars made with the proposed aggregates and General Purpose portland cement Type GP does not exceed 0.1% at 21 days in the case of coarse aggregates and 0.15% at 21 days in the case of fine aggregates. Individual results shall not differ from the mean by more than 15%.

Should the average expansion of the mortar bars exceed 0.1% at 21 days in the case of

coarse aggregates and 0.15% at 21 days in the case of fine aggregates, the aggregates will be classed as reactive and either new aggregates shall be proposed for use and re-tested for compliance, or if it is proposed to use aggregates that have been classed as reactive, all of the following requirements shall be satisfied:

- (1) the concrete mix be designed such that the alkali content does not exceed 2.8 kg/m³ (Na₂O equivalent);
- (2) a blended cement be used to take account of the reactivity of the aggregates;
- (3) the average expansion of mortar bars incorporating the proposed blended cement tested in accordance with VicRoads test methods does not exceed 0.1% at 21 days in the case of coarse aggregates and 0.15% at 21 days in the case of fine aggregates.

10I MATERIALS FOR PRECAST REINFORCED CONCRETE BOX CULVERTS

(See VicRoads specifications Section 619)

10I.1 DESCRIPTION

This section covers the supply of materials for the manufacture of precast reinforced concrete box culverts.

10I.2 DEFINITIONS

(a) Source Rock

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(b) Aggregate shall conform to the requirements listed in Table 10I.1.

Table 10I.1 - Quality Requirements

Property	Relevant Standard and Clauses	Test Limits for Product Acceptance
General Requirements		
1. Particle density	AS 2758 1-8.1	Greater than 2100 kg/m ³
2. Bulk density	AS 2758 1-8.2	Greater than 1200 kg/m ³
3. Water absorption	AS 2758 1-8.3	Less than 2.5% for Coarse Less than 1.0% for Fine
Dimensions		
1. Grading	AS 2758 1-9.1 Table 1,2,3	Single-sized aggregate Coarse and fine
Material finer than 75 microns	AS 2758 1-9.2.1	Coarse 2% max., Fine 5% max.
2. Particle shape	AS 2758 1-9.3	10% max. at 3:1 ratio for misshapen, flat and elongated
Durability		
1. Los Angeles Value	AS 1141.23	35% maximum
2. Unsound Stone Content	AS 1141.30	Unsound stone content: 5% maximum Total of unsound stone and marginal stone: 10% maximum
Impurities		
1. Organic impurities	AS 2758 1-14.1	Not darker than the Standard Reference Colour No.3
2. Sugar	AS 2758 1-14.2	Less than 1 part in 10,000
3. Alkali-Reactivity	AS 2758 1-14.3.1 AS 2758 1-12.3.1	a. Satisfy hand petro. exam. b. Plot as non deleterious c. .05% Expansion/3 months
4. Soluble salts (% to cement mass)	AS 2758 1-14.4 BS 812.4	5.0% max. Sulphate salts (* 0.1% max. Chloride salts, British Standard) Australian Standard available mid 1996

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10J MATERIALS FOR UNDERGROUND STORMWATER DRAINS

(See VicRoads specifications Section 701)

10J.1 DESCRIPTION

This section covers the requirements for materials for the construction of and installation of underground stormwater drains together with the construction of inlet and outlet structures (endwalls, catchpits, stilling basins, etc.).

10J.2 DEFINITIONS

(a) Aggregates for Precast Reinforced Concrete Pipes

Aggregates for RC pipes shall comply with the requirements in Table 10J.1

Table 10J.1 - Quality Requirements (Aggregate)

Property	Relevant Standard and Clauses	Test Limits for Product Acceptance
General Requirements		
1 Particle density	AS 2758 1-8.1	Greater than 2100 kg/m ³
2 Bulk density	AS 2758 1-8.2	Greater than 1200 kg/m ³
3 Water absorption	AS 2758 1-8.3	Less than 2.5% for Coarse Less than 1.0% for Fine
Dimensions		
1 Grading	AS 2758 1-9.1 Tables 1, 2 and 3	Single-sized aggregate Coarse and fine
Material finer than 75 microns	AS 2758 1-9.2.1	Coarse 2% max., Fine 5% max.
2 Particle shape	AS 2758 1-9.3	10% max. at 3:1 ratio for misshapen, flat and elongated
Durability		
1 Los Angeles Value	AS 1141.23	35% maximum
2 Unsound Stone Content	AS 1141.30	Unsound stone content: 5% maximum Total of unsound stone and marginal stone: 10% maximum
Impurities		
1 Organic impurities	AS 2758 1-14.1 Colour No. 3	Not darker than the Standard Reference Colour No.3
2 Sugar	AS 2758 1-14.2	Less than 1 part in 10,000
3 Alkali-Reactivity	AS 2758 1-14.3.1	a. Satisfy hand petro. exam. b. Plot as non deleterious
	AS 2758 1-12.3.1	c. .05% Expansion/3 months
4 Soluble salts (% to cement mass)	AS 2758 1-14.4 BS 812.4	5.0% max. Sulphate salts 0.1% max. Chloride salts, British Standard

RK

(b) Bedding and Backfill Materials

Unless otherwise specified materials used for bedding and selected backfill shall be free from perishable matter and lumps or balls of clay or other deleterious matter and shall consistently conform with the appropriate requirements of Table 10J.2 and Table 10J.3 below.

Ordinary backfill shall be free from perishable matter and shall conform with the requirements of Table 10J.1.

Table 10J.2 - Quality Requirements (Bedding and Backfill)

Material	Sieve Size - AS (mm)				
	75.0	37.5	19.0	2.36	0.075
	Percentage Passing (by mass)				
Bedding	-	-	100	-	5-40
Selected Backfill	-	100	-	-	5-40
Ordinary backfill	100	-	-	40-100	-

Table 10J.3 - Test Value

Test	Test Value
Plasticity Index (Max)	20

XJ

10K MATERIALS FOR SUBSURFACE DRAINAGE

(See VicRoads specifications Section 702)

10K.1 DESCRIPTION

This section covers the requirements for materials installation of subsurface drainage pipes and prefabricated drains.

10K.2 DEFINITIONS

(a) Granular filter materials

General

Granular filter material shall consist of hard, durable and clean sand, gravel or crushed rock, free from clay balls and organic matter, and shall have a pH value greater than 4.0.

The portion of granular filter material passing a 4.75 mm AS sieve shall have a Sand Equivalent value not less than 80.

The grading of granular filter material shall comply with the requirements of Table 10K.1 relevant to the granular filter type specified.

Table 10K.1 - Grading Requirements for Granular Filter Material

Sieve Size AS (mm)	Limits of Grading (% passing) (by mass)									
	Single and First Stage Filters						Second Stage Filters			
	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4
37.5	-	-	-	-	-	100	-	-	-	-
26.5	-	-	-	-	-	-	-	-	-	100
19.0	-	-	-	-	100	85-100	-	100	100	70-100
13.2	-	-	-	-	90-100	-	-	90-100	90-100	0-30
9.50	-	100	100	100	70-100	65-100	100	70-100	40-70	0-10
4.75	-	90-100	90-100	70-100	28-100	48-82	70-100	28-100	0-15	-
2.36	100	75-100	70-100	0-50	0-28	30-60	0-50	0-28	0-5	0-5
1.18	95-100	50-98	40-65	0-10	0-8	15-40	0-10	0-8	-	-
0.600	70-98	30-80	12-40	-	-	5-25	-	-	-	-
0.300	30-60	10-40	0-16	0-5	0-5	0-10	0-5	0-5	-	-
0.150	0-12	0-7	0-4	-	-	0-5	-	-	-	-
0.075	0	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-3

(b) Source Rock

Source rock for crushed rock components of granular filter material shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(c) Crushed Rock Components

The percentage by mass of unsound and marginal rock in that fraction of an aggregate retained on a 4.75 mm AS sieve shall not exceed the values specified in Table 10K.2.

Table 10K.2 - Marginal and Unsound Rock Percentages

Total of Marginal and Unsound Rock % (by mass) (max)	Unsound Rock % (by mass) (max)
10	5

JK

10L MATERIALS FOR BITUMINOUS COLD AND WARM MIXES

(See VicRoads specifications Section 802)

10L.1 DESCRIPTION

This section covers the requirements relating to the quality of aggregates for the manufacture of Sizes 7, 10, 14 and 20 dense graded and open graded bituminous cold and warm mixes.

10L.2 DEFINITIONS

Assigned Los Angeles Abrasion Loss

The assigned Los Angeles Abrasion Loss is a hardness rating derived from Los Angeles Abrasion Loss test results and is assigned to each source by VicRoads on the basis of past test data obtained from testing products.

Coarse Aggregates

Coarse aggregates are aggregates retained on a 4.75 mm AS sieve.

Fine Aggregates

Fine aggregates are aggregates passing a 4.75 mm AS sieve.

10L.3 AGGREGATES

(a) General

The combined aggregate mixture shall consist of crushed rock or crushed gravel, or a mixture of crushed rock and sand or crushed gravel and sand.

When aggregates are crushed rock, they shall consist of clean, hard, durable angular rock fragments of uniform quality.

When aggregates are crushed gravel, not less than 75% by mass of all particles shall have two or more faces produced by crushing.

Sand aggregates shall consist of clean, hard durable grains free from lumps, clay, mica and foreign matter.

(b) Source Rock

Source rock shall comply with the requirements of Section 1 - Source Rock for the Production of Crushed Rock and Aggregates.

(c) Crushed Aggregate Products

- (i) The Flakiness Index of each separate sized coarse aggregate shall be as specified in Table 10L.1.
- (ii) Unsound rock and marginal rock in that fraction of the combined mixture retained on a 4.75 mm AS sieve shall not exceed the percentages specified in Table 10L.1. If no facilities exist at the mixing plant to sample the combined mixture, the unsound rock and marginal rock in that fraction of each aggregate retained on a 4.75 mm AS sieve shall not exceed the percentages specified in Table 10L.1.

Table 10L.1 - Marginal and Unsound rock Percentages and Flakiness Index

Test	Test Value
Flakiness Index % (max)	35
Total of Marginal and Unsound Rock % (by mass) (max)	10
Unsound Rock % (by mass) (max)	5

(d) **Crusher Fines**

Crusher fines shall:

- (i) consist of a uniformly graded product of separate particles from the crushing of rock which complies with the requirements of Clause 10L.3(b);
- (ii) be free from lumps and aggregations;
- (iii) comply with the relevant requirements of Table 10L.2..

Table 10L.2 - Test Values

Test	Test Value
Degradation Factor - Crusher Fines (min)	60
Plasticity Index (max)	3

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CONDITIONS OF CONTRACT FOR THE HIRING OF CARTAGE CONTRACTORS TO TRANSPORT QUARRY MATERIALS

This document is for a contract that is for a period of at least 30 days

CONDITIONS OF CONTRACT FOR THE HIRING OF CARTAGE CONTRACTORS TO TRANSPORT QUARRY MATERIALS

Interpretation

1. In this contract, except where the context otherwise requires:

'business day' means a day that is not a Saturday or Sunday or a day that is wholly or partly observed as a public holiday throughout Victoria.

'cartage contractor' means the person who is providing vehicles to transport the material from the place of loading to a site whose name is stated in Item 3 and whose address appears in Item 4.

'claimed amount' means an amount of progress payment claimed to be due for services provided as referred to in clause 99.

'clause' means clause of this 'contract' and 'sub-clause' means the relevant sub-clause of the clause indicated by the context.

'code of practice' means a mandatory code of practice that applies to the performance of the work required by this contract and includes a code made under Part 3; of the Owner Drivers Act.

'contract' means these terms and conditions including the Annexures and Schedules.

'contract documents' means the documents listed in Item 7.

'contractor' means the person who is performing the works for the principal and who requires the supply of the materials to a site.

'Contractor's Representative' means the person appointed to the position by the contractor or a delegate of that person.

'court' includes any relevant tribunal.

'day' means a calendar day.

'delivery docket' means the document accompanying each delivery as supplied by the Supplier's Representative to a delivery driver.

'delivery driver' refers to any person driving a vehicle delivering material and includes the cartage contractor, any employees of the cartage contractor or any sub-contractor employed by the cartage contractor or employees of that sub-contractor and whose names are listed in Schedule A.

'direction' includes agreement, approval, authorization, certificate, decision, demand, determination, explanation, instruction, notice, order, permission, rejection, request or requirement.

'due date' means the date upon which progress payments are to be made as stated in Item 17;

'excluded amount' means the difference between the claimed amount and the scheduled amount where the scheduled amount is less than the claimed amount.

'information Booklet' means the booklet required by section 10 of the Owner Driver's Act to be provided to the cartage contractor.

'Item' means an Item in Annexure B.

'material' means the material to be delivered from the place of loading to a site including but not limited to hard rock, gravel, sand, masonry, clay, lime, soil, gypsum or recycled concrete or asphalt.

'notice' means a written document and does not include a telephone call or other oral communication.

'overdue money' is any excluded amount that is later determined to be payable to the cartage contractor.

'person' includes a firm or body corporate or unincorporated as well as an individual;

'place of loading' is the quarry or other place where the cartage contractor is to load materials onto vehicles.

'principal' means the person for whom the contractor is performing work at the site.

'progress payment' means a payment to which the cartage contractor is entitled for work performed.

'promotional material' means any painting, decals, painted sides, logos, posters, stickers or other material promoting or identifying the supplier that the supplier requires under clause 61 to be applied to vehicles.

'quantity of materials supplied' means the actual materials delivered to the contractor whether more or less than the original estimated quantity.

'rates and costs schedule' means a schedule published as required by section 15 of the Owner Drivers Act.

'reference date' means a date set out in Item 17 by reference to which the amount of progress payment is to be calculated in relation to material supplied.

'scheduled amount' is the amount of progress payment that the contractor proposes to pay in accordance with clause 104.

'services' means the work the cartage contractor is required to perform under this contract using the delivery drivers and vehicles as set out in Schedules A and B.

'site' means a location to which the materials are to be delivered as noted on the delivery docket.

'Small Business Commissioner' means Small Business Commissioner appointed under the *Small Business Commissioner Act 2003* of Victoria.

'superintendent' means the person, or any delegate of that person, appointed to the position by the principal under a Head Contract.

'supplier' means the person supplying the materials whose name is stated in Item 1 and whose address appears in Item 2.

'Supplier's Representative' means the person appointed under clause 26 to the position whose name is stated in Item 5 and whose address is stated in Item 6 or in his absence such other person acting in that position or such other person for the time being or from time to time during the currency of the contract appointed by the supplier and notified in writing to the cartage contractor to act as Supplier's Representative for the purpose of the contract and any person notified to the cartage contractor as a Supplier's Representative's Delegate under clause 29. When no one has been nominated in Item 5 or such other person appointed by the supplier and notified to the cartage contractor, the Supplier's Representative shall mean the Chief Executive Officer of the supplier or the owner if the supplier is a firm or individual.

'supply' means delivery of material to a site when required under clause 5 of this contract;

'The Owner Drivers Act' means the *Owner Drivers and Forestry Contractors Act 2005* of the State of Victoria as amended from time to time.

'written communication' includes a hand written or typed document, a faxed document, an email or any other form of electronic communication that can be recorder and reproduced in a hardcopy readable form.

'vehicle' means any vehicle supplied by the cartage contractor to transport material or any other vehicle that in accordance with this contract is used to perform the services and whose description and registration number is listed in Schedule B.

2. The clause headings and sub-clause headings shall not form part of this contract or be used in its interpretation.
3. Words:
 - (a) in the singular include the plural and words in the plural include the singular, according to the requirements of the context;
 - (b) in the masculine form include the feminine form where applicable; and
 - (c) in the personal form shall include a corporation, firm, partnership or other business entity according to the requirements of the context.

Nature of Contract

4. This contract replaces any previous contract between the supplier and the cartage contractor.
5. The cartage contractor shall provide vehicles and delivery drivers to transport materials as required under this contract on each day required by the supplier's representative at times and to sites as directed by the supplier.
6. The supplier shall pay the cartage contractor at the rate set out in Item 8. If the termination date is greater than 365 days from the date on which the supplier signs the Formal Instrument of Agreement the rates shall be reviewed at the time stated in Item 8. In exceptional circumstances either the supplier or the cartage contractor may request a review of the rates and the other party shall not unreasonably refuse that request.

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7. The supplier will provide the cartage contractor with work for the minimum number of hours of work specified in Item 8 or pay the cartage contractor the minimum amount specified in Item 8 whether or not the cartage contractor has not been required to perform any services provided the cartage contractor has been available to perform the services. Where work is performed of greater value than the amount stated in Item 8 this clause is of no effect.
8. The supplier shall pay the cartage contractor in accordance with the progress payment provisions set out in this contract.
9. The supplier shall provide the cartage contractor with any special clauses included in any head contract or any sub-contract that are relevant to the performance by the cartage contractor of his responsibilities under this contract and acknowledges that the clauses in Annexure A are all of those clauses. If any new contract is entered into between the supplier and a contractor additional special clauses contained in that contract will be supplied to the cartage contractor before delivery under that contract commences. This contract shall be read as if those special clauses constitute part of this contract. Where there is any conflict between any special clauses and the general clauses of this contract the special clauses shall prevail as far as is legally required.
10. The parties agree and acknowledge that the cartage contractor:
 - (a) is an independent operator and not an employee of the supplier, and must not represent to be an employee of the supplier;
 - (b) shall not at any time bind or purport to bind the supplier to any other contract agreement or transaction;
 - (c) shall not make any arrangement that purports to provide credit by the supplier to any person;
 - (d) shall not permit the creation of any lien over any property of the supplier which may be in the possession or under the control of the cartage contractor; and
 - (e) shall not be entitled to assign his rights and obligations under this contract to another person.
11. The supplier and cartage contractor agree to abide by any code of practice applicable to the services provided under this contract.
12. The supplier will give the cartage contractor three months notice of its intention to seek to renew the contract or not to do so.

Termination of Contract

13. Unless terminated earlier under other provisions of this contract, this contract shall terminate on the cessation of work on the date set out in Item 9.
14. Either the supplier or the cartage contractor may terminate the contract at an earlier date by giving written notice to the other party:
 - (a) for a vehicle of over four and a half (4.5) tonnes gross vehicle mass 3 months before the termination date proposed; or
 - (b) for any other vehicle one (1) month before the termination date proposed; or
 - (c) in lieu of giving notice the supplier may pay the cartage contractor an amount, calculated in accordance with Schedule D.
15. The requirement of sub-clause 14 may be waived if the cartage contractor obtains a certificate from the Small Business Commissioner in accordance with section 21 of the Owner Drivers Act prior to this contract being entered, during the contract or after the cartage contractor indicates its intention to terminate the contract and provides the supplier with a written notice of the waiver.

Evidence of Contract

16. Until the Formal Instrument of Agreement referred to in the clauses 17 and 18 is executed by the parties, the agreement between the supplier and the cartage contractor to enter into this contract, including any documents or parts of any documents to which reference may properly be made in order to ascertain the rights and obligations of the parties, shall constitute the contract between them.
17. Within ten (10) business days after the date of agreement of the terms of this contract the cartage contractor shall complete and execute two (2) copies of the Formal Instrument of Agreement set out herein and shall return both copies to the supplier.
18. On receipt from the cartage contractor of the two copies of the Formal Instrument of Agreement duly executed the supplier shall as soon as practicable execute both copies, and within ten (10) business days thereafter shall have both copies duly stamped unless an exemption from such requirement applies by any Act of the Victorian Parliament, and shall forward one of the copies to the cartage contractor.

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19. If the cartage contractor or the supplier fails to execute the Formal Instrument of Agreement within the time and in the form prescribed in clauses 17 and 18 either party shall be entitled to treat such failure as a default under clause 123.

Contract Documents

20. The supplier shall supply to the cartage contractor the number of copies of the contract documents stated in Item 7.
21. In the event of an ambiguity or discrepancy being discovered in or between the contract documents or documents prepared thereafter for the purpose of executing the work under the contract, and the Supplier's Representative and the cartage contractor cannot resolve the ambiguity or discrepancy the Supplier's Representative shall provide the cartage contractor with a list of three persons with expert knowledge of the transport of materials, the construction industry or the contract from whom the cartage contractor shall choose one to provide an interpretation of the ambiguity or discrepancy.
22. The cost of such interpretation shall be borne equally by each party.
23. Where any such interpretation is not accepted by either party the matter shall be treated as a dispute under clause 133.
24. For the purpose of the Owner Driver's Act the cartage contractor shall, at least three days before he signs the Formal Instrument of Agreement, be supplied with the documents specified in Item 7. Revised Rates and Cost Schedules must be provided by the supplier to the cartage contractor during the period of the contract.

Principal's Representative and Contractor's Representative

25. The supplier shall advise the cartage contractor and each delivery driver of the name of the Superintendent and the Contractor's Representative where delivery to a site requires the delivery driver to be aware of this.

Supplier's Representative

26. The supplier shall ensure that at all times there is a Supplier's Representative available at the place of loading of the material and that in the exercise of the functions of the Supplier's Representative under the contract, the Supplier's Representative:
- (a) acts honestly and fairly;
 - (b) acts within the time prescribed under the contract or where no time is prescribed, within a reasonable time; and
 - (c) where required to assess quantities or time arrives at a reasonable measure.
27. In respect of proposals or requests or other matters submitted by the cartage contractor to the Supplier's Representative for approval, the request for any such approval will not relieve the cartage contractor of his responsibilities for satisfactory delivery of material to which such approval relates.
28. Matters within the knowledge of the Supplier's Representative shall be deemed to be within the knowledge of the supplier.
29. The Supplier's Representative may appoint a Supplier's Representative's Delegate to perform all or part of the duties of the Supplier's Representative. The cartage contractor shall be notified in writing of the name of each Supplier's Representative's Delegate and their function relevant to the performance of the contract and the cartage contractor shall inform his delivery drivers of these names.

Cartage Contractor's Representatives

30. The cartage contractor shall personally superintend the performance of services under this contract and be available at all times during which any activities relating to the supply of material is taking place and if required by the Supplier's Representative at such other times and at such other places at or in which any activities relating to the supply of material is taking place.
31. Any direction in respect of the transport of material to a site given under clause 79 (c) if given to a delivery driver at the place of loading, on a site or at any other place, shall be deemed to be a direction issued or given to or served upon the cartage contractor in respect of the transport of material to a site.
32. Matters within the knowledge of a delivery driver shall be deemed to be within the knowledge of the cartage contractor.

Control of Cartage Contractor, Cartage Contractor's Employees & Sub-Contractors

33. Any direction that may be or is given to the cartage contractor or a delivery driver by a relevant representative pursuant to the provisions of this contract or the contract between the supplier and the contractor may, unless the contract expressly provides otherwise, be given orally.

34. The Supplier's Representative may direct the cartage contractor to remove himself or any person employed by him or any subcontractor, from the place of loading or a site or from any activity connected with this contract within such time as the Supplier's Representative directs, if, in the opinion of the Supplier's Representative, the cartage contractor or other person misconducts himself or is incompetent or negligent in the performance of his duties, is under the influence of drugs or alcohol or acts contrary to clause 47 or 48 of this contract and the cartage contractor shall comply with such direction and neither he, nor that other person, shall again be employed at the place of loading or on a site on activities connected with this contract without the prior approval of the Supplier's Representative.
35. If the removal of the cartage contractor or other person under clause 34 means that the cartage contractor cannot provide the services required by this contract the supplier shall be entitled to take the action provided by clause 126 without complying with the procedures of clause 124.
36. Subject to any indication to the contrary included in other clauses of this contract all employees and sub-contractors of the cartage contractor shall be subject to the control of the supplier's representative when at the place of loading and be subject to the control of the Supplier's Representative, the Contractor's Representative or the Superintendent on a site.
37. Before a delivery driver commences to make deliveries he shall undergo any induction program required by the Supplier's Representative relating to occupational health and safety and operational procedures at the place of loading and on any specified site.

Delivery Drivers

38. The cartage contractor shall:
 - (a) employ, and ensure that any sub-contractors employ, in connection with the transport of material only such persons as are careful, skilled and experienced in their respective trades and callings;
 - (b) hold at all times, and ensure that all delivery drivers or sub-contractors employed hold at all times, a current driver's licence appropriately endorsed in respect of the vehicle (and load carried) and in the event of such licence being cancelled or suspended, immediately inform the supplier of such cancellation or suspension;
 - (c) ensure the he and all delivery drivers or sub-contractors employed hold any other certification required by law relevant to the performance of this contract; and
 - (d) list in Schedule A the details of each delivery driver proposed to be used to perform this contract and notify the supplier of any change ten (10) working days prior to a change taking effect. The change will not take effect unless approved by the supplier.
39. The cartage contractor shall promptly advise the supplier of an anticipated inability to perform or of any anticipated delay in the performance of his obligations.
40. The cartage contractor and any delivery driver may elect not to be available to provide the services for the period set out in Schedule A for each 365 days after the signing by the supplier of the Formal Instrument of Agreement. Any untaken part of this period is not transferable to any subsequent contract into which the supplier and cartage contractor may enter or to any time after the expiration of the 365 days. During that period the cartage contractor may provide the service by using a substitute driver. Unless a substitute driver is provided the cartage contractor will not be entitled to any payment for any of the period taken.
41. The timing of taking any such absence will be by agreement wherever possible. The cartage contractor or delivery driver shall give the supplier four week's notice of his intention to take such absence but in cases of an urgent request the supplier will not unreasonable withhold consent. The supplier may refuse the request if the absence would cause significant disruption to the supplier's business. The Supplier may also direct the cartage contractor to take such absence if business conditions require it.
42. The supplier does not require the cartage contractor to perform the services on the days specified in Item 10.
43. If the cartage contractor, or any delivery driver or subcontractor employed by him, is prevented by sickness, disability or other urgent cause from driving the vehicle the cartage contractor shall give notice thereof to the supplier and the supplier shall permit during the period for which the cartage contractor, delivery driver or subcontractor shall be prevented from driving the vehicle the substitution of such other qualified and competent driver as the supplier shall approve.
44. The cartage contractor, or any delivery driver or sub-contractor employed by him who does not perform work under clause 43 shall not be entitled to payment for the period involved.

45. Unless otherwise specified in Item 10 the cartage contractor will not provide services on any day declared in the State of Victoria to be a public holiday.
46. A delivery driver must notify the supplier's representative in person, by radio or by telephone if the delivery driver intends to cease providing services on any day prior to any agreed or scheduled time. The delivery driver must not cease providing services earlier than the agreed time without reasonable excuse.
47. The supplier shall not bully, harass or intimidate the delivery driver in the performance of their duties and the delivery driver shall not bully, harass or intimidate the supplier or any employee of the supplier or of the contractor during the performance of his work.
48. Neither the cartage contractor nor a delivery driver shall organise or participate in the mounting of picket lines at the premises of any contractor or at any site to which deliveries are to be made under this contract.
49. The cartage contractor will comply with any obligations under the *Accident Compensation Act 1985* (Vic) to take out a worker's compensation policy for himself and any employees or agents.
50. The cartage contractor will comply with any obligations to make superannuation payments to a complying fund for himself and any employees if obliged to do so under the *Superannuation (Guarantee) Administration Act 1992* (Cth).
51. The cartage contractor will, and will ensure that all delivery drivers employed by him will, comply with all applicable laws concerning fatigue management, rest breaks and record keeping applicable to the provision of the services. Where a delivery driver is obliged to take mandatory rest or meal breaks under a law, such rest breaks will not be paid for as time worked.
52. Where a delivery driver is not obliged to take rest breaks under a law, then the delivery driver may take a meal break and rest breaks as specified in Item 11. The delivery driver is entitled to refuse to perform any work during a meal or rest break that is not paid.
53. The supplier shall not arrange a delivery schedule that prevents or hinders the delivery driver from complying with the requirements of clause 51 or clause 52.
54. The cartage contractor, his employees or sub-contractors entering a place of loading or a site shall wear fluorescent red/orange day/night high visibility traffic jackets properly fastened at all times and/or such other personal protection equipment as set out in Item 12, or as required by any law or as notified in writing to the cartage contractor by the Supplier's Representative from time to time. The cartage contractor will supply this equipment at his expense.
55. Apart from safety equipment if required by the supplier the drivers shall wear other apparel set out in Item 12 which shall be provided at the expense of the supplier.
56. If the vehicle is not fitted with a radio or other communication device by either the cartage contractor or the supplier the delivery driver shall at his expense provide a mobile phone for use.

Vehicles

57. The cartage contractor shall supply vehicles of the nature and size and of the configuration set out in Item 13.
58. The cartage contractor shall list the details of each vehicle proposed to be used in Schedule B.
59. In relation to any vehicle provided by the cartage contractor directly or through a sub-contractor the cartage contractor shall ensure:
 - (a) that the vehicle is in a mechanically sound, properly painted and clean condition fit for the purpose of providing the services;
 - (b) that all or any Acts, Ordinances, Regulations or By-Laws relating to the Registration of the vehicle, Third Party Insurance and the general operation of the vehicle are observed;
 - (c) that the vehicle is at all times covered for its current market value by a Comprehensive Motor Vehicle Insurance Policy issued by a recognised insurer. The policy must include Third Party Property Damage cover for a sum of not less than the amount set out in Item 18. A Certificate of Currency is to be made available to the supplier upon request;
 - (d) that the supplier is promptly advised if the vehicle is involved in any accident or suffers any damage; and
 - (e) that the supplier is provided with a roadworthy certificate no older than 2 months prior to signing the Formal Instrument of Agreement and where the contract extends beyond 365 days provide to the supplier a copy of a new certificate at the interval set out in Item 13.
60. If a vehicle by reason of breakdown or accident is unable to be used by the cartage contractor the supplier shall permit the cartage contractor to substitute such other vehicle as the supplier may approve.

61. The supplier may, at its cost, install in any vehicle provided by the cartage contractors the communications and/or monitoring equipment specified in Item 14.
62. Any communications equipment provided by the supplier will remain the supplier's property and may be removed by the supplier at any time at the supplier's expense.
63. Delivery drivers will use communications equipment in the manner directed by the supplier and the cartage contractor will indemnify the supplier for the cost of repair or replacement of communications equipment damaged by the cartage contractor, an employee or any sub-contractor.
64. The supplier may apply, at its cost, promotional material specified in Item 14 to any vehicle provided by the cartage contractor.
65. Any promotional material provided by the supplier that can be removed in a usable form will remain the supplier's property, and may be removed by the supplier at any time at the supplier's expense.
66. The cartage contractor will care for the promotional material in the manner directed by the supplier and will indemnify the supplier for any cost of repair or replacement of the promotional material damaged by the cartage contractor, an employees or a sub-contractor.
67. The supplier has the right:
 - (a) to stand down any vehicle in the event of inspection by an enforcement officer from any responsible authority deeming the vehicle to be unroadworthy;
 - (b) to stand down any vehicle immediately where the condition of the vehicle is not in a safe or functional condition; and
 - (c) after two weeks notice of intention to do so, stand down any vehicle in the event of the vehicle does not meet the requirements of appearance until such time as the vehicle is brought up to the required standard.
68. The rights under clause 67 exist whether or not their enforcement means that the cartage contractor can continue to perform his responsibilities under this contract and for as long as the vehicle is stood down the cartage contractor will pay the supplier the damages set out in Item 15. Any such amount to be paid may be deducted from monies owed to the cartage contractor, provided that it is properly accounted for.
69. If this contract terminates under clause 13 and is not replaced by a similar contract the cartage contractor will, within seven (7) days of the termination remove from his vehicle any communication equipment that is the property of the supplier at the expense of the supplier and return it to the supplier.
70. If this contract is terminated other than under clause 13 the cartage contractor will, at his expense, within seven (7) days of termination remove from his vehicle any communication equipment that is the property of the supplier and return it to the supplier.
71. Where the termination occurs other than under clause 13 within nine (9) months of installation of such equipment, the cartage contractor will refund to the supplier the costs of labour and incidental parts for installing the equipment. Such cost may be deducted from monies owed to the cartage contractor, provided that it is properly accounted for.
72. If this contract terminates under clause 13 and is not replaced by a similar contract the supplier will arrange for the removal of any promotional material at the supplier's expense as soon as reasonably practicable at a time agreed with the cartage contractor and will ensure that the arrangements do not unduly prevent the Contractor from earning income.
73. If this contract is terminated other than under clause 13 the cartage contractor will, at his expense, within seven (7) days of termination remove from his vehicle (or obliterate) all promotional material supplied by the supplier and where able return the material to the supplier.
74. Where the termination occurs other than under clause 13 within nine (9) months of installation of such promotional material the cartage contractor will refund to the supplier 50 percent of the costs of the labour and of incidental materials (such as paint and decals but excluding costs of any materials which can be recovered and re-used) for installing the promotional material. Such cost may be deducted from monies owed to the cartage contractor, provided that it is properly accounted for.

Progress and Programming of Delivery

75. Where an annexure setting out the progress and programming of deliveries is provided to the supplier by a contractor under any contract for the supply of quarry materials for major road, bridge or associated construction works the Supplier's Representative shall provide the cartage contractor with a copy of the schedule of deliveries required the number of days in advance of commencement of deliveries as specified in Item 16.
76. The Supplier's Representative shall provide the cartage contractor with any variation to the annexure as soon as practicable after being advised by the Contractor's Representative.

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77. Subject to clauses 92 and 97 the cartage contractor shall proceed with the delivery of the material under the contract with due expedition and without delay upon receipt of the annexure from the Suppliers Representative and shall make all endeavours to deliver at the times specified.
78. Where no schedule of deliveries required is provided under another contract the supplier shall notify the cartage contractor of the anticipated use of vehicles as accurately as possible within the time stated in Item 16 before deliveries are required.

Delivery

79. The transport of material to the site shall be executed in accordance with:
 - (a) the laws of the State in which material is transported;
 - (b) this contract; and
 - (c) any directions by a relevant representative pursuant to the provisions of this contract or the contract between the supplier and the contractor for the safe conduct of work at the place of loading or on a site.
80. The Supervisor or the Contractor's Representative is responsible for the placement of all materials on a site and any events that transpire as a consequence of that placement and the delivery driver shall comply with directions given by the Supervisor or the Contractor's Representative as to placement.
81. The delivery driver may at any time refuse to perform any act if in the genuine opinion of the delivery driver, if the act were performed it may be negligent, unsafe or in breach of any law.
82. The delivery driver will advise the supplier of any such refusal and the reasons for the refusal as soon as practicable and both parties will make all efforts to resolve the issue. Where the issue cannot be resolved the driver will if possible be provided with other work and the matter shall be treated as a dispute under clause 133.
83. A refusal to work under clause 81 does not constitute a breach of any term of this contract.
84. Where the following provisions have not been followed appropriately in the opinion of the delivery driver, he may stop delivery while he seeks advice from the Suppliers Representative but shall comply with any direction given by the Supplier's Representative to resolve the issue.
 - (a) Delivery is made on the basis that the delivery site is safe for entry and for the unloading the material. In particular he may refuse to unload if access to the site, local roads width and slope, and turnaround facilities are not safe or the ground area or environmental conditions in his opinion make it unsafe to do so.
 - (b) It is the contractors responsibility to ensure that at the site there are no overhanging power lines (spotter to be provided by the contractor), the ground is stable, there is ample clearance of trees and scrubs, safe distances from buildings and improvements and adequate space between gates, farm lanes, driveways and other entry points.
 - (c) Where delivery of material into stockpile is specified, clearing and preparation of stockpile sites will be done by the contractor.
 - (d) Where material is to be stockpiled, stockpiles shall not be located under or immediately adjacent to overhead electric power lines or elsewhere where the overhead clearance from the surface for dumping is less than 6 metres.
 - (e) All stockpiles shall be constructed in such a way that segregation of the material is minimised.
 - (f) Under no circumstances shall material be tipped or spread in nominated "No Go Zones" as per AS/NZS 3000-2000 or any succeeding standard.
 - (g) All deliveries of materials must comply with the *Road Safety Act 1986* and the *Road Safety Regulations 1999* or any succeeding Acts or Regulations.
 - (h) If there is no Contractor's Representative at the site the delivery driver may refuse to unload the material or, at the discretion of the Supplier's Representative may unload it at any location that the Supplier's Representative deems reasonable.
85. For each site the delivery driver shall be advised by the supplier of the route for delivery, the method of entry to the site and the name of the Contractor's Representative or Contractor's Representative Delegate to whom they should report.
86. For each delivery the Supplier Representative shall provide the delivery driver with a delivery docket.
87. At the completion of each delivery the delivery driver shall obtain the signature of the Contractor's Representative on the delivery docket.
88. Cement treated material shall be delivered within the time set out in Item 16.
89. Plant mixed wet-mix crushed rock shall be delivered within two (2) hours of the time of completion of mixing, unless otherwise approved or directed by the Contractor's Representative.

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90. Material to be delivered direct to the roadbed shall be spread in even layers by running it from the vehicles.
91. The method of unloading shall be such as to minimise segregation.

Suspension of Works

92. If the principal or the contractor suspends the whole or part of the work under any other contract, and the Contractor's Representative directs the supplier to suspend delivery of the material in whole or in part as the Contractor's Representative thinks necessary the supplier shall notify the cartage contractor of this.
93. In such circumstances where possible the supplier shall engage the cartage contractor on other deliveries but, where this is not possible the supplier may suspend this contract for as long as is imposed by the principal or the contractor.
94. Where the supplier fails to make a progress payment under clauses 107, 108 or 109 the cartage contractor may serve notice of intention to suspend supplying vehicles and delivery drivers.
95. If at least two business days have passed since the cartage contractor issued a notice in accordance with clause 94, the cartage contractor may suspend provision of vehicles and drivers and continue to do so until the supplier complies with the requirements of clauses 107 or 108.
96. The suspension of provision of vehicles and drivers in accordance with clause 95 shall not constitute a breach of this contract.

Extension of Time for Delivery

97. For such period as it thinks necessary the contractor or the supplier may delay, cancel, or reduce the amount delivered if the contractor is delayed in accepting delivery or the supplier is delayed in delivering the product due to circumstances beyond their reasonable control, including but not limited to: strikes, industrial dispute, union lockout, accidents, war, storm and tempest (including floods), fire, terrorist attack, drought, electrical, water supply or gas failure, breakdowns of plant or machinery, shortage of materials from normal source of supply, act of God, any order or direction of any local, State or Federal Government, Government authority or instrumentality, Court or Tribunal, or inability to meet or obtain licences, transport, labour, materials or equipment for a particular site, any act, default or omission of the principal, the contractor, the Contractor's Representative, the supplier, the Supplier's Representative or an employee, consultant or agent of the principal, the contractor or the supplier.
98. The cartage contractor shall be advised if any extension is sought by either the contractor or the supplier and shall comply with directions of the Supplier's Representative as to variations of delivery.

Payment

99. Within the number of business days stated in Item 17 after each reference date the cartage contractor may serve on the Supplier's Representative, a payment claim stating the amount of payment claimed.
100. Except as provided in clause 101 the cartage contractor may serve only one payment claim between each reference date.
101. Within the number of business days stated in Item 17 after the termination of this contract under any clause the cartage contractor may provide the Supplier's Representative with a final payment claim and endorse it 'Final Payment Claim'. The cartage contractor shall include in the final payment claim all claims for moneys that the cartage contractor considers due from the supplier arising out of the contract or any alleged breach thereof.
102. The work subject to a claim shall be valued in accordance with the method agreed in Item 9.
103. Payment claims shall:
 - (a) identify the period to which it relates;
 - (b) state and the amount of progress payment claimed;
 - (c) state that it is a Tax Invoice; and
 - (d) contain such other information as the Supplier's Representative may reasonably require.
104. Within the number of business days stated in Item 17 the Supplier's Representative shall assess the claim and may issue a payment schedule stating the scheduled amount of the payment to be made by the supplier.
105. Within the time set out in Item 17 after receipt of the cartage contractor's final payment claim or, where the cartage contractor fails to provide such claim, within the time set out in Item 17 after the cessation of this contract the Supplier's Representative shall issue to the cartage contractor a payment schedule endorsed 'Final Payment Schedule', setting out the amount which, in the Supplier's Representative's opinion, is finally due from one party to the other.

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106. A payment schedule shall identify the payment claim to which it relates and the scheduled amount. Where the scheduled amount is less than the claimed amount the schedule shall indicate why the amount is less and the reasons for withholding the payment.
107. If the cartage contractor serves a payment claim or final payment claim on the Supplier's Representative, and the Supplier's Representative does not provide a payment schedule or final payment schedule to the cartage contractor within the time set out in Item 17 the supplier becomes liable to pay the claimed amount to the cartage contractor on or before the due date.
108. If the cartage contractor serves a payment claim or final payment claim on the Supplier's Representative and the Supplier's Representative provides a payment schedule or a final payment schedule to the cartage contractor within the time set out in Item 17 and the payment schedule indicates a scheduled amount that the supplier proposes to pay to the cartage contractor the supplier becomes liable to pay the scheduled amount to the cartage contractor on or before the due date.
109. If the cartage contractor fails to make a payment claim under clause 99 or a final payment claim under clause 101 the Supplier's Representative may nevertheless issue a payment schedule or final payment schedule endorsed as a "Recipient Created Tax Invoice" and the supplier shall pay the amount stated on that schedule on or before the due date.
110. The final payment schedule shall, unless the cartage contractor gives a notice of dispute under clause 133, be evidence that the services being paid for have been provided in accordance with the terms of the contract and that all necessary effect has been given to all the terms of the contract which require additions or deductions to be made, except in the case of:
 - (a) fraud, dishonesty or fraudulent concealment relating to the work under the contract or any part thereof or to any matter dealt with within the said Schedule; and
 - (b) any accidental or erroneous inclusion or exclusion of any work or figures in any computation or any arithmetical error in any computation.
111. If the supplier fails to pay to the cartage contractor on or before the due date the claimed amount under clause 107 or the scheduled amount under clause 108 or clause 109 the cartage contractor may recover the unpaid portion of the scheduled amount from the supplier, as a debt due to the cartage contractor, in any court of competent jurisdiction and may suspend the provision of services under clause 94.
112. Where the payment schedule indicates an excluded amount and the cartage contractor disputes the amount, the cartage contractor shall treat the matter as a dispute under clause 133.
113. Where there is a dispute as to the excluded amount the supplier shall pay the undisputed amount and hold the excluded amount in a Trust Account for the cartage contractor.
114. Interest shall be paid at the rate stated in Item 17 on any overdue money until payment is made.

Damage to Persons and Property

115. Cartage contractors carrying dangerous goods must have their Motor Vehicle Insurance policy specifically endorsed to cover Third Party Property Damage resulting from the carriage of dangerous goods. This Third Party Property Damage cover is in addition to the cover provided under clause 59(c) above. This additional cover must be for a minimum of the amount specified in Item 18. This cover is in respect of loss or damage that arises and costs of clean-up or removal incurred by or on behalf of a Public Authority as a result of a fire, explosion, leakage or spillage of dangerous goods in or on or from the road vehicle. The insurance policy required by this clause is in addition to any other policy required by law to be held.
116. Cartage contractors must take out and keep current a Public Risk Insurance Policy with a recognised insurer. This policy shall provide an indemnity amount specified in Item 18 in respect of liability as a result of any act or default of the cartage contractor, his servants or agents.
117. The cartage contractor will pay the first amount set out in Item 18 of any claim made against the supplier for loss of, or damage to materials in transit on the cartage contractors' vehicle or trailer being towed by the cartage contractor or any vehicle of a sub-contractor.
118. From the time when the cartage contractor commences delivery under this contract, the supplier shall indemnify the cartage contractor up to the limit of indemnity stated in Item 18 against:
 - (a) loss of or damage to property of the cartage contractor while that property is at the place of loading or on a site; and
 - (b) claims by any person against the cartage contractor in respect of personal injury or death or loss of or damage to property while at the place of loading or at a site,

arising out of or as a consequence of the carrying out by the cartage contractor of the delivery of material under the contract, but the supplier's liability shall be reduced proportionally to the extent that

any act or omission of the cartage contractor, the cartage contractor's sub-contractors, employees, or agents contributed to the loss, damage, death or injury.

119. The cartage contractor shall make good any loss or damage that may be caused by his, or any delivery driver employed by him or his agents negligence to the suppliers equipment being utilised by the cartage contractor or his delivery drivers or agents up to a maximum specified in Item 18 for any one claim.
120. The cartage contractor shall indemnify and keep indemnified the supplier against any claim, suit, demand; loss, damage or liability incurred, settled, sustained or resulting from or out of the performance by or the failure to perform by the cartage contractor of his obligations under this contract.
121. Clauses 115 to 120 shall not apply to:
 - (a) the extent that the liability of the supplier is limited by another provision of a contract;
 - (b) exclude any other right of the one party to be indemnified by the other party; and
 - (c) damage that is the unavoidable result of the delivery of material in accordance with the contract.

Insurance of Employees

122. Before commencing work under the contract, the cartage contractor shall insure against liability for death of or injury to persons employed by the cartage contractor including liability by statute and at common law. The insurance cover shall be maintained until one business day after the date of cessation of this contract.

Default

123. If a party breaches or repudiates the contract or fails to sign the Formal instrument of Agreement in accordance with clauses 17 and 18, nothing in clauses 124 to 131 shall prejudice the right of the other party to recover damages or exercise any other right.
124. If either party commits a material breach of the contract, the other party may give to the party who committed the breach a written notice to show cause in writing why the party giving the notice should not exercise a right referred to in clause 126 or 129 as the case may be. That notice shall:
 - (a) state that it is a notice under this clause 124;
 - (b) specify the alleged substantial breach;
 - (c) specify the time and date by which the party who committed the breach must show cause (which time shall not be less than five (5) business days after the notice is given to that party); and
 - (d) specify the place at which the response is to be delivered.
125. A material breach includes a failure to rectify any defect to a vehicle stated in clause 67
126. If the cartage contractor fails to show reasonable cause by the time and date specified in a notice to show cause given under clause 124, the supplier may, by written notice to the cartage contractor-
 - (a) take out of the hands of the cartage contractor the whole or part of the work remaining to be completed; or
 - (b) terminate the contract.
127. If the supplier takes work out of the hands of the cartage contractor under clause 105, the supplier shall have that work completed. The supplier shall keep records of the cost of completing the work.
128. When the work taken out of the hands of the cartage contractor is completed, the Supplier's Representative shall ascertain all costs incurred by the supplier in completing the work and shall issue a final payment schedule to the cartage contractor. Such schedule shall certify the difference between all the costs incurred in arranging for the completion of the work and the sum that would have been payable had the cartage contractor completed the work, and where the former sum exceeds the latter the difference shall be a debt due to the supplier and may be deducted from any amounts owing to the cartage contractor or be recovered in a court of competent jurisdiction.
129. If the supplier fails to show reasonable cause by the time and date specified in a notice to show cause given under clause 124, the cartage contractor may, by written notice to the supplier, suspend the whole or any part of the work under the contract. The cartage contractor shall lift the suspension if the supplier remedies the breach. If the supplier has not remedied the breach within five (5) business days of being given the notice of suspension, the cartage contractor may by further written notice, terminate the contract.
130. The cartage contractor shall be entitled to recover from the supplier any costs including loss of profit incurred by the cartage contractor by reason of the suspension.

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131. If the contract is terminated pursuant to clauses 126 or 129, the rights and liabilities of the parties shall be the same as they would have been at common law had the defaulting party repudiated the contract and the other party elected to treat the contract as at an end and recover damages.

Settlement of Disputes

132. Notwithstanding the succeeding clauses, the cartage contractor shall, if the delivery of materials has not been completed, at all times (subject as otherwise provided for in the contract) proceed without delay to continue delivery under the contract and perform its obligations under the contract and in so doing shall comply with all directions as defined in clause 18 that are issued or given to or served or made upon the cartage contractor by the Supplier's Representative under or pursuant to the provisions of the contract.
133. Where disputes or differences arise out of the contract or concerning the performance or the non-performance by either party of its obligations under the contract, the aggrieved party shall, not later than ten (10) business days after the dispute or difference arises, submit the matter at issue in writing, specifying with detailed particulars the matter at issue, to the other party.
134. Where the dispute or difference concerns the interpretation of the contract the provisions of clauses 21 and 22 shall be invoked prior to resorting to clause 133.
135. As soon as practicable but no later than ten (10) business days after the receipt by the other party of a notice of dispute, the Supplier's Representative and the cartage contractor or a representative of the cartage contractor shall meet and use their best endeavours to resolve the dispute.
136. If resolution cannot be reached the matter at issue shall be determined by an alternative dispute resolution process.
137. Where the matter at issue is referred to an alternative dispute resolution process no proceedings in respect of that matter shall be instituted by either the cartage contractor or the supplier in any court unless and until the process has been completed and a decision made in respect of that matter at issue.
138. Alternative dispute resolution shall be effected:
- (a) by one of at least three persons, none of whom shall be an employee of either party or have had any association with the work under the contract, whose names are submitted in writing by the supplier for selection by the cartage contractor within a period of ten (10) business days after the meeting referred to in clause 135, and whose name is notified in writing by the cartage contractor to the supplier within ten (10) business days after the names are so submitted; or
 - (b) a professional arbitrator or mediator agreed upon in writing by the parties within ten (10) business days after the meeting referred to in clause 135; or
 - (c) in the absence of that selection or agreement, by an arbitrator appointed in accordance with the provisions of the laws relating to arbitration in force in the State of Victoria within ten (10) business days after the meeting referred to in clause 135; or
 - (d) where the dispute arises under or in relation to the Owner Driver's Act, a code of practice under that Act or this contract, the Small Business Commissioner.
139. A reference to arbitration or mediation under this clause shall be deemed to be a reference to arbitration within the meaning of the laws relating to arbitration in force in the State of Victoria and the arbitration proceedings shall be conducted in Victoria. The arbitrator or mediator shall have all the powers conferred by those laws and it shall be competent for him to enter upon the reference without any further or more formal submission than is contained in this clause.
140. The cost of arbitration shall be borne as decided by the arbitrator or in the absence of such a decision, equally between the parties.

Insolvency

141. If:
- (a) a party informs the other party in writing or creditors generally that the party is insolvent or is financially unable to proceed with the contract;
 - (b) execution is levied against a party by a creditor;
 - (c) a party is an individual person or a partnership including an individual person, and if that person-
 - (i) commits an act of bankruptcy;
 - (ii) has a bankruptcy petition presented against him or her or presents his or her own petition;
 - (iii) is made bankrupt;

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- (iv) makes a proposal for a scheme of arrangement or a composition; or
 - (v) has a deed of assignment or deed of arrangement made, accepts a composition, is required to present a debtor's petition, or has a sequestration order made, under Part X of the *Bankruptcy Act 1966* (Cth); or
- (d) in relation to a party being a corporation:
- (i) notice is given of a meeting of creditors with a view to the corporation entering a deed of company arrangement;
 - (ii) the party enters a deed of company arrangement with creditors;
 - (iii) a controller or administrator is appointed;
 - (iv) an application is made to a court for the winding-up of the party and not stayed within ten (10) business days;
 - (v) a winding-up order is made in respect of the party;
 - (vi) it resolves by special resolution that it be wound up voluntarily (other than for a members' voluntary winding-up); or
 - (vii) a mortgagee of any property of the party takes possession of that property,

then, where the other party is-

- (a) the cartage contractor, the supplier may, without giving a notice to show cause, exercise a right under clause 126; or
 - (b) the supplier, the cartage contractor may, without giving a notice to show cause, exercise the right to suspend work under clause 129.
142. The rights given by clause 141 are in addition to any other rights and may be exercised notwithstanding that there has been no breach of Contract.

Notices

143. A notice shall be deemed to have been given when it is received by the person to whom it is addressed or is delivered to the address of that person stated in the contract or last communicated in writing by that person to the person giving the notice, whichever is the earlier.
144. The supplier, the Supplier's Representative and the cartage contractor shall each notify the others of a change of address.

Waiver

145. The non-exercise of or delay in exercising any power or right of a party does not operate as a waiver of that power or right, nor does any single exercise of a power or right preclude any other or further exercise of it or the exercise of any other power or right. A power or right may only be waived in writing, signed by the party to be bound by the waiver.

Amendment

146. Except for any direction allowed by this contract to be given by the Supplier's Representative, the contract may only be amended or supplemented in writing signed by the parties.

Severability

147. Any provision of this agreement which is invalid or unenforceable in any jurisdiction is to be read down for the purposes of that jurisdiction, if possible, so as to be valid and enforceable, and is otherwise capable of being severed to the extent of the invalidity or unenforceability, without affecting the remaining provisions of this contract or affecting the validity or unenforceability of that provision in any other jurisdiction.

Governing Law

148. The parties accept the law of the State of Victoria as the proper law of contract and both parties submit to the non-exclusive jurisdiction of the Courts of that State and any Courts hearing appeals from those Courts.

RK

ANNEXURE A

Special clauses from the Head Contract or the General Conditions of Contract for the Supply of Quarry Materials for Major Road, Bridge or Associated Construction Works or any other contract that affect the responsibilities of the Cartage Contractor under this contract

Where no Special Clauses are required this page shall state:

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ANNEXURE B Definition of Items

This Annexure shall be completed and issued as part of the contract documents and shall be read as part of the Contract.

Item	Item Description	Clause	Information	
1	The supplier	1	..... ..... ACN and ABN (if applicable)	
2	The address of the supplier	1	..... ..... Phone: Fax: Email:	
3	The cartage contractor	1	..... ..... ACN and ABN (if applicable)	
4	The address of the cartage contractor	1	..... ..... Phone: Fax: Email:	
5	The supplier's representative	1 and 26	..... ..... ACN and ABN (if applicable)	
6	The address of the supplier's representative	1 and 26	..... ..... Phone: Mobile: Fax: Email:	
7	The contract documents comprise	20	Document	No of copies to be provided
			(i) Contract for the Hiring of Cartage Contractors to Transport Quarry Materials	.....
			(ii) .....	.....
			(iii) .....	.....
			(iv) .....	.....

RK

Item	Item Description	Clause	Information
	Owner Drivers Act Documents to be provided to the cartage contractor	24	Code of Contract provided on / / 20... Information Booklet provided on / / 20... Rates and Cost Schedule provided on / / 20... <i>(The documents must be supplied at least three days before the cartage contractor signs the Formal Instrument of Agreement)</i>
8	Payment Rate	6	<input type="checkbox"/> Fixed runs, being a set rate for delivery of a specified amount from the place of loading to a particular site as set out in Schedule C; or <input type="checkbox"/> A rate calculated by the tonnage carried and kilometres travelled, as set out in Schedule C; or <input type="checkbox"/> A rate calculated by another method agreed to and set out in Schedule C.
	Rate Revision	6	Rates are to be revised every days
	Minimum period of work available under this contract	7	..... hours <i>(This information must be provided under the Owner Drivers Act)</i>
	Amount to be paid if no work is performed	7	\$..... <i>(This information must be provided under the Owner Drivers Act)</i>
9	Termination date of this contract	13	The day of 20..... <i>(If nothing is stated 365 day after the supplier signs the Formal Instrument of Agreement)</i>
10	Days on which the cartage contractor is not required to provide the services	42	...............
	Public Holidays, if any, on which the cartage contractor is required to provide the services	45	...............
11	Rest periods to which delivery drivers are entitled when none is prescribed by law	52	...............
12	Personal Protection Equipment to be worn by delivery drivers	54
	Other attire the supplier requires the delivery drivers to wear	55

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Item	Item Description	Clause	Information
13	Type, Capacity and Configuration Requirements for Vehicles to be provided	57	Type of vehicle: Capacity: Fitted with: <ul style="list-style-type: none"> • ground operated retractable covers YES/NO • limit switches YES/NO • reversing horn YES/NO • flashing lights on cabin YES/NO • backing cameras YES/NO • emergency first aid kit YES/NO Other:
	Each vehicle shall be subject to a roadworthy test each	59(e)	..... months (If no figure is stated 12 months)
14	Communication and/or monitoring to be installed in each vehicle	61	...............
	Supplier promotional material to be applied to each vehicle	64	...............
15	Damages payable to supplier for stood down vehicles	68	\$ (If nothing is stated \$200 per day)
16	Time for provision of Annexure C; or Estimate of anticipated use of vehicles	75 77	..... ( ) business days prior to start of deliveries () business days after the signing of the Formal Instrument of Agreement by the supplier
	Time for delivery of cement material	88	..... minutes from the time of completion of mixing (If nothing is stated 75 minutes)
17	The reference date is	1	___ / ___ / ___ and () business days thereafter until final payment. (If no date and period is inserted the date shall be the date occurring twenty (20) business days after services were first supplied under the contract and every twenty (20) business days thereafter)

JK

Item	Item Description	Clause	Information
	Claims for • payment • final payment shall be delivered within	99 101	..... ( ) business days of the reference date () of the termination of this contract <i>(If no period is stated five (5) business days in each case)</i>
	• Payment • Final payment schedule shall be delivered within: The due date is	104 105 1	..... ( ) business days of receipt of a payment claim () business days after receipt of a final payment claim or of the termination of this contract <i>(If no period is stated ten (10) business days in each case)</i> <i>(The period agreed can be no more than 10 business days)</i> () business days after the payment or final payment claim is made <i>(If no time is stated within twenty (20) business days after a payment or final payment claim is made)</i>
	The rate of interest on overdue payments shall be	114	.....% <i>(If no percentage is stated the interest rate for the time being fixed under section 2 of the Penalty Interest Rates Act 1983)</i>

18	Amount of Third Party Property Damage for which each vehicle is to be insured	59(c)	\$ <i>(If no amount is stated the amount shall be \$1,000,000)</i>
	Third Party Insurance required if Dangerous Goods are being carried	115	\$ <i>(If no amount is stated \$10,000,000)</i>
	Public Risk Insurance to be held by cartage contractor	116	\$ <i>(If no amount is stated \$10,000,000)</i>
	Payment to be made by cartage contractor	117	\$ <i>(If no amount is stated \$50,000)</i>
	Indemnity to be paid to cartage contractor	118	\$ <i>(If no amount is stated \$50,000)</i>
	Maximum loss or damage to be made good by cartage contractor	119	\$ <i>(If no amount is stated \$10,000)</i>

ANNEXURE C Delivery schedule

Where there is a delivery schedule in a contract between the supplier and a Contractor a copy shall be attached for the cartage contractor in accordance with clause 75. Where there is no such schedule the supplier shall complete a schedule to supply to the cartage contractor in accordance with clause 78.

EXAMPLE ONLY

1. Transport of material shall commence on the day of 20
2. The date for completion of supply is the day of 20
3. Unless otherwise specified, material shall be delivered to the site within the following times:

Monday	..... am to	pm
Tuesday	..... am to	pm
Wednesday	..... am to	pm
Thursday	..... am to	pm
Friday	..... am to	pm

4. Unless otherwise specified, delivery shall be made: (*strikeout inapplicable alternatives below*)
 - (a) to the roadbed, as and where directed by the Superintendent
 - (b) dumped by the roadside, as and where directed by the Superintendent
 - (c) into stockpile;
 - (d) into hoppers of pavers or windrow boxes.
5. Material shall be delivered: (*strikeout inapplicable alternatives below*)
 - (a) each working day at about constant rates;
 - (b) each working day at rates as ordered;
 - (c) intermittently at rates as ordered.

RK

FORMAL INSTRUMENT OF AGREEMENT

It is agreed that the documents listed in Item 7 and any directions issued under this contract by the supplier's Representative shall comprise the contract between the persons listed in Items 1 and 3.

Supplier

Signed by: (print name)
(print position)
on behalf of the supplier on this day of 20.....

Signature

This contract was signed by the above person in my presence on this ____ day of 20.....

Signed by: (print name)
(print position)

Signature of Witness

Cartage Contractor

Signed by: (print name)
(print position)
on behalf of the cartage contractor on this day of 20.....

Signature

This contract was signed by the above person in my presence on this ____ day of 20.....

Signed by: (print name)
(print position)

Signature of Witness

YD

PK

SCHEDULE A Drivers

Name	Licence No	Address	Tel No	Mobile	Elected Period Of Absence
					..... days
					..... days
					..... days
					..... days
					..... days

SCHEDULE B Vehicles

Type	Make	Model	Year of Make	Reg No	Capacity	Road Worthy Certificate Sighted
						YES/NO
						YES/NO
						YES/NO
						YES/NO



SCHEDULE C Rates of Payment

Include a copy of the agreed rates of payment.

NB. Administrative charges, Insurance charges and similar expenses shall not be passed from the Supplier to the Cartage Contractor unless evidence is produced that such costs have been incurred.

YD

SCHEDULE D Payment In Lieu of Notice on Termination by the Cartage Contractor under Sub-Clause 14(A) and Sub-Clause 14(B)

s. 22

Payment in lieu of notice

In accordance with sub-clause 14(c) the supplier may, in lieu of providing notice of termination as required by sub-clause 14(a) or sub-clause 14(b), pay a contractor an amount calculated in accordance with section 21 of the Owner Drivers Act.

That section prescribes the amount as the gross amount less the deductible amount where:

- the 'gross amount' is the higher of:
 - (a) the amount that would be paid under the regulated contract for the minimum number of hours specified in the contract over the minimum required period of notice;
 - (b) the monthly average of the amount paid to the contractor by the hirer over the period of 6 months immediately before the termination multiplied by the number of months of the minimum required period of notice.
- and the 'deductible amount' is, if a vehicle supplied under the contract and subject to the termination:
 - (a) is subject to finance arrangements at the time of termination, the amount of fixed overhead costs as provided in the most recent applicable rates and costs schedule that would be payable over the minimum required period of notice; or if it
 - (b) is not subject to 'finance arrangements' at the time of termination, the amount of fixed and variable overhead costs as provided in the most recent applicable rates and costs schedule that would be payable over the minimum required period of notice.

'Finance arrangements' includes any fees, interest, charges or expenses incurred by a cartage contractor in respect of the purchase, hire purchase or lease of a vehicle used to provide services under the contract.

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