



SPECIFICATION 304

REHABILITATION OF DISTURBED AREAS

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REVISION REGISTER			
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SPECIFICATION 304

REHABILITATION OF DISTURBED AREAS

GENERAL

304.01 SCOPE

1. The work under this specification consists of the supply of all products, materials and equipment, all preparation and construction and all operations required to complete the Works as shown in the Drawings or specified in the Contract.

304.02 REFERENCES

1. Australian Standards, MAIN ROADS Western Australia Standards and MAIN ROADS Western Australia Test Methods are referred to in abbreviated form (e.g. AS 1234, MRS 67-08-43 or WA 123).

Other Publications

Health (Pesticides) Regulations, 1956

MAIN ROADS Test methods

WA 0.1 Random Sample Site Location

MAIN ROADS Standard Drawings

Guide Sign - Roadside Revegetation. Standard Drawing No. MR-GM-14

MAIN ROADS Specifications

Specification 202	TRAFFIC
Specification 204	ENVIRONMENTAL MANAGEMENT
Specification 301	VEGETATION CLEARING AND DEMOLITION
Specification 302	EARTHWORKS
Specification 303	MATERIAL AND WATER SOURCES
Specification 406	ROCK PROTECTION

304.03 DEFINITIONS

1. The Establishment Period shall mean the period starting from the completion of the works and extending for a duration as nominated in Annexure 304A of this Specification.

***Establishment
Period***

2. "Establishment" shall mean the continuing care and maintenance of the works by accepted practises, as well as rectifying any defects that become apparent in the works under normal use. For the duration of the Establishment Period the Contractor is fully responsible for the continuing good appearance of the works. ***Establishment***

304.04 OTHER REQUIREMENTS

304.04.01 PERSONNEL

1. The Contractor must ensure that personnel under the sole responsibility and supervision of the Contractor must be competent, experienced, and skilled in all aspects of the required works and establishment practices. ***Skilled Personnel***

304.04.02 TRAFFIC MANAGEMENT

1. The Contractor must ensure that all traffic management and control measures necessary to undertake the works are implemented in accordance with Specification 202 TRAFFIC. ***Traffic Management***

PRODUCTS AND MATERIALS

304.05 GENERAL PRODUCTS AND MATERIALS

1. The manufacturer's published product details and instructions for use shall be provided to the Superintendent upon request. ***General***
2. Water used must be potable water where available or obtained from a source containing no substances that will have an effect on the pesticides used or be detrimental to seed germination or vegetation growth. ***Water***
3. Only pesticides registered for the treatment of pests and weeds in Western Australia can be used for the Works. The supply, storage, handling and use of any product must comply with regulations, restrictions and government policy, relating to pesticides and in accordance with manufacturer's published specification. ***Pesticides***
4. Fertiliser(s) if used must be delivered on site in unopened bags or containers bearing the manufacturer's description, analysis of constituents and quantity. Fertiliser(s) must be stored in waterproof sealed bags and sheltered away from water and direct sunlight. ***Fertiliser***
5. Unless otherwise specified in the Contract, the fertiliser(s) must be manufactured for the purpose used in the Contract and must be stored, handled and applied in accordance with the manufacturer's published specification.
6. Suitable spoil material to be used in the Works must be clean material in accordance with Specification 301 VEGETATION CLEARING AND DEMOLITION and must be free of any weeds and materials toxic to plant growth. Contaminated soil must not be used as ***Suitable Spoil***

fill within the Works.

7. The Contractor must use all topsoil stockpiled on site that has been nominated for re-use as topsoil in accordance with Specification 301 VEGETATION CLEARING AND DEMOLITION. ***In situ Topsoil***

8. The Contractor must nominate, prepare and manage all stockpiles of topsoil and/or mulch materials in accordance with Specification 301 VEGETATION CLEARING AND DEMOLITION. ***Stockpiles of Topsoil or Mulch***

304.06 HARD LANDSCAPING

1. Any large feature rocks or boulders retained for use in the works must be placed as shown in the Drawings. ***Placement of Large Rocks and Boulders***

2. Unless specified otherwise in the Drawings, each rock or boulder placed for the purpose of restricting access must be buried 10-30% below finished soil levels.

304.07 MULCH

1. Mulch refers to any chipped site vegetation or inorganic materials such as crushed rock, coarse aggregate, river pebbles, or pea gravel, spread as a soil surface protection measure. ***Definition***

2. Mulch materials must be clean of any weed, grass stolons, seeds and other extraneous materials and free from all matter and substances toxic to plant growth. ***General***

3. Stockpiled chipped site vegetation or uncontaminated chipped vegetative material naturally occurring within the local area must be approved as suitable by the Superintendent, prior to use as mulch. ***Site Vegetation Mulch***

4. Unless specified otherwise in the Drawings or in Annexure 304B, the mulch material must be an average size of between 15 mm to 50 mm, with no individual pieces greater than 100 mm. ***Mulch Size***

304.08 NOT USED

304.09 SEED

1. The Contractor must undertake the collection and or purchase of all seed stock for use in direct seeding of the species and quantities listed in Annexure 304B. ***Seed List***

2. The Contractor must notify the Superintendent 28 days prior to the collection of any seed stock to be supplied by the Principal. ***Seed Supplied by Principal***

3. Prior to any seed collection the Contractor must ensure that all seed suppliers are holders of appropriate and current seed collection/supply licences. ***Seed Collection Licence***

4. All seed collected and or supplied by the Contractor must be clean and dry to accepted industry practices for seed processing, and ***Seed Material***

free from mould, pest and disease.

- | | | |
|----|--|--------------------------------------|
| 5. | Seed must be supplied with a certificate from the Contractor detailing the names of the suppliers, species as nominated in Annexure 304B, date and origin of seed collection and a guarantee that the seed is free of declared noxious plant seed or foreign vegetative parts. | <i>Seed Quality Control</i> |
| 6. | Where specified, certified test reports signed by the Contractor must be supplied for each batch of seed detailing the seed purity using accepted industry practices for seed testing. | <i>Seed Purity Testing</i> |
| 7. | Where specified, certified test reports signed by the Contractor must be supplied for each batch of seed detailing the seed viability using accepted industry practices for seed testing. | <i>Seed Viability Testing</i> |
| 8. | The Contractor must store all seed in secure, dry, well-ventilated storage facilities that are cool and protected from temperature extremes. The seed material must be stored in vermin proof containers above ground level. Seed must be inspected for pest damage, mould and fungus on a regular basis and action taken to avoid seed deterioration. | <i>Seed Storage</i> |
| 9. | Where specified, the seed must be sourced to meet the provenance requirements of the project if nominated in Annexure 304B. Any variation must be confirmed with the Superintendent. | <i>Seed Provenance</i> |

304.10 NOT USED

CONSTRUCTION

304.11 SEQUENCE OF OPERATIONS

- | | | |
|----|---|--------------------------------------|
| 1. | Unless otherwise detailed the sequence of operations shall be: | <i>Sequence of Operations</i> |
| | a) Weed control. | |
| | b) Clearing and topsoil stripping. | |
| | c) Preparation of batters and ground surfaces, including additional weed control. | |
| | d) Ripping and topsoil/mulch respread. | |
| | e) Seeding (if nominated). | |
| | f) Establishment of vegetation. | |

Any changes to the sequence of operations must be confirmed with the Superintendent.

2. The works must commence as early as practicable after completion of the earthworks within the optimum time of year to minimise soil erosion and ensure the effective revegetation of all disturbed soil areas. **Timing of Works**

304.12 WEED CONTROL

1. Operations must be undertaken to meet the requirements for weed control as specified in Specification 204 ENVIRONMENTAL MANAGEMENT and in accordance with Specification 301 VEGETATION CLEARING AND DEMOLITION.

2. The Contractor must implement an approved weed control program as nominated in Annexure 304B, and as necessary to control all weed species prior to undertaking any other works.

3. Any changes to the timing and sequence of weed control operations must be confirmed with the Superintendent.

4. Treated areas must remain undisturbed for two weeks or as recommended by the herbicide manufacturer. **Disturbance**

5. Treated areas must display signs of dying off within 14 days of application as evidence of compliance. If weed mortality rate is less than 100% the Contractor must repeat the application at their own expense until the desired mortality rate is achieved. **Compliance**

304.13 CLEARING OF SITE

1. Existing vegetation and topsoil must be removed where nominated in the Drawings. All clearing, stockpiling and treatment of cleared vegetation must be undertaken in accordance with Specification 301 VEGETATION CLEARING AND DEMOLITION. **Clearing**

304.14 SALVAGE OF EXISTING VEGETATION

1. The Contractor must remove tree trunks nominated for salvage as specified in the Drawings or in 301 VEGETATION CLEARING AND DEMOLITION Annexure 301A, and ensure that the tree trunks are not broken by equipment during removal, transport or placement. **Salvage of Tree Trunks**

2. Unless specified otherwise in the Drawings or in Annexure 304B, the Contractor must place nominated tree trunks salvaged from clearing operations and retained for use as fauna habitat logs or in the landscaping works parallel to the contours. **Placement of Tree Trunks**

304.15–304.17 NOT USED

304.18 PREPARATION OF BATTERS, PITS AND GROUND SURFACES

- | | |
|--|--|
| <p>1. All disturbed areas nominated for rehabilitation must be cleared of surface rubbish and any material that may hinder plant growth before any further surface preparation works are commenced.</p> | <p><i>Clearing Surface</i></p> |
| <p>2. For material pits the sides and floor must be formed to a flowing finish with batter slopes not steeper than 6 Horizontal in 1 Vertical.</p> | <p><i>Pit Reshaping</i></p> |
| <p>3. During pit reshaping any material carted to the pit must be spread uniformly over the shaped surface. The order of spreading must be degraded topsoil and undesirable weedy vegetation (if any), removed bituminous surfacing (lump form), demolition material, rock, oversize material, unsuitable material, spoil, overburden, suitable topsoil and mulch.</p> | <p><i>Order of Respreading</i></p> |
| <p>4. The Contractor must prepare all nominated finished soil surfaces by ripping, disking, harrowing, tilling, furrowing, raking, tracking or other means to form a loose and roughened surface to a minimum depth of 500 mm and at not more than one metre spacing or as otherwise specified in the Drawings.</p> | <p><i>Surface Preparation</i></p> |
| <p>5. Unless specified otherwise in the Drawings or in Annexure 304B batter surfaces with a slope of 4 Horizontal in 1 Vertical or flatter and more than ten metres from a shoulder or table drain must be prepared, to a minimum depth of 300 mm to alleviate compaction and prepare a loose surface prior to topsoil/mulch respread. Benched and stepped batters must not be ripped prior to topsoil/mulch respread.</p> | <p><i>Depth of Cultivation on Batters</i></p> |
| <p>6. Pit bases and batter slopes in hard ground must be ripped and reinstated in accordance with this Specification unless the Contractor can demonstrate that the material meets the requirements for the definition for rock in accordance with Specification 302 EARTHWORKS.</p> | <p><i>Rocky Ground</i></p> |
| <p>7. Surface preparation must be carried out along the contour unless ripping a redundant road/track or if cross ripping the floor of a material pit or as otherwise detailed in the Revegetation Plan or Pit Management Plan. Ripping along a redundant road/track must be in a manner that prevents channelling of runoff along the road/track.</p> | |
| <p>8. The Contractor must protect all finished and prepared soil surfaces from soil erosion and weed infestation as necessary, in accordance with Specification 204 ENVIRONMENTAL MANAGEMENT until works as nominated can occur or a Certificate of Practical Completion has been issued.</p> | <p><i>Temporary Protection Measures</i></p> |

304.19 TOPSOIL RESPREAD

- | | |
|---|-----------------------------|
| <p>1. Approved site suitable topsoil and/or imported topsoil (as specified) must be respread as soon as practical following construction/pit operations with regard for the weed control program as nominated in Annexure 304B. Where suitable spoil has been identified from the works this must be spread first, followed by the topsoil.</p> | <p><i>Timing</i></p> |
|---|-----------------------------|

- | | | |
|----|--|-----------------------------------|
| 2. | If not specified in the Drawings or Annexure 304B a nominal depth of 75 mm of topsoil but not more than 100 mm must be placed. | <i>Topsoil Depth</i> |
| 3. | Topsoil must be uniformly spread over the nominated finished and prepared ground surfaces to the depth, levels and slope as shown in the Drawings or in accordance with Annexure 304B. | <i>Respreading Topsoil</i> |
| 4. | The finished surface of the placed topsoil must be free from large stones, lumps and clods. | |

304.20–304.21 NOT USED

304.22 EROSION CONTROL

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|----|--|--|
| 1. | Operations must be undertaken to meet the requirements for erosion and sedimentation control as specified in Specification 204 ENVIRONMENTAL MANAGEMENT. | |
| 2. | The Contractor must implement erosion control measures as detailed in the Drawings or Annexure 304B. | <i>Erosion Control Measures</i> |

304.23 MULCH RESPREAD

- | | | |
|----|--|-----------------------------------|
| 1. | Unless detailed otherwise in the Drawings or Annexure 304B, the Contractor must spread approved mulch (as specified) as soon as is practical after surface preparation and topsoiling. | <i>Timing</i> |
| 2. | If not specified in the Drawings or Annexure 304B a nominal depth of 75 mm of mulch but not more than 100 mm must be placed. | <i>Mulch Depth</i> |
| 3. | Mulch must be uniformly spread over the ground surface to an even depth to present an even surface. | <i>Even Depth of Mulch</i> |
| 4. | Unless specified otherwise in the Drawings, mulch can be mixed with site topsoil and spread in one operation to a minimum depth of 150 mm. | <i>Mixing Mulch</i> |

304.24 NOT USED

304.25 DIRECT SEEDING

304.25.01 GENERAL

- | | | |
|----|---|--|
| 1. | The Contractor must carry out direct seeding operations where nominated in the Drawings, using horticultural/revegetation industry accepted practice and equipment, to achieve the completion criteria as specified in Annexure 304C. | |
| 2. | Seed mixes and rates to be used in the direct seeding operations must be as specified in the Drawings or Annexure 304B. | |

3. Seeding must be undertaken as soon as practical following construction/pit activities, within the optimum time of year for the Region to match seasonal rainfall.

Timing

304.25.02 PREPARATION OF SEED MATERIALS

1. Seed must be pre-treated to break seed dormancy mechanisms in preparation for sowing, using generally accepted industry practices or as specified in Annexure 304B.

Seed Pre-treatment

2. Seed, in separate labelled bags for each species, must be delivered for batching into the nominated seed mixes as nominated in Annexure 304B.

Seed Batching

3. The Contractor must give the Superintendent not less than 5 working days notice when and where the batching of seed is to occur. The Superintendent reserves the right to attend this seed batching.

4. The prepared seed mixes must be delivered on site, in containers labelled to identify seed mix and weight, ready for use in the direct seeding operations.

5. Seed mixes must be blended with a carrier-bulking agent (such as clean washed sand, vermiculite, or similar) in the proportions by volume of bulking agent to seed, to suit the project requirements and allow for the even spreading of seed.

Bulking of Seed Mixes

304.25.03 SEEDING OPERATIONS

1. Prior to commencing any operations the Contractor must assess the presence of weed species and confirm there are no obstruction, obstacle, hazard or factor likely to cause delays or failures of the operations. The Contractor must notify the Superintendent of any necessary works required to minimise the risk of delays or failures of the operations.

Obstruction

2. Not less than 5 working days prior to commencing any direct seeding operations on site, the Contractor must certify to the Superintendent that: **HOLD POINT**

- a) The nominated areas are correctly defined.
- b) No obstructions, obstacles, hazards or factors likely to cause delays or failures of the operations have been identified.
- c) The soil surfaces are ready for cultivation.
- d) Details of the seed pre-treatment and batching of the seed mixes are documented.
- e) Certificates of seed purity and viability are provided for each batch, if specified.
- f) Details of the procedures, materials and any equipment to be used are documented.
- g) Equipment (if required to be used) has been calibrated to uniformly apply the nominated seed.
- h) A program for the direct seeding operations is documented and submitted for approval.

The Contractor must confirm with the Superintendent any changes to the operations that may be necessary following approval.

3. The Contractor must delineate areas on site nominated for direct seeding by the use of stakes or site features or other means, to suit the project site conditions and specified mix requirements, so that the areas are clearly marked prior to the start of operations. **Delineation of Areas to be Seeded**

4. The soil surface must be prepared in response to the site soil conditions to provide a suitable soil surface environment for seed germination and unless specified otherwise, the soil surface must be lightly cultivated immediately prior to seeding to form a loose and roughened surface. **Soil Preparation**

5. Seed must be sown uniformly in overlapping passes to allow for complete seed coverage of the prepared surfaces, within the marked areas. **Seeding**

6. Unless detailed otherwise in the Annexure 304B, hand broadcasting, farm machinery, calibrated blower or spreader (handheld or mechanical) may be used as necessary to suit the size and location of the area to be seeded, taking into consideration the site slopes, soils and local weather conditions.

7. Seeding must not occur when the wind speed exceeds 25km per hour, or in heavy rain if a mechanical blower or spreader is used. **Heavy Rain or Wind**

- | | |
|--|--|
| <p>8. Unless otherwise detailed in the in the Drawings or Annexure 304B seed on batter surfaces with a slope equal to or steeper than 6 Horizontal in 1 Vertical must be covered by light harrowing, rolling, scarifying, dragging or raking of the seeded area as soon as practical and within the same day of seeding.</p> | <p><i>Covering of Seed</i></p> |
| <p>9. Unless detailed otherwise in the Drawings or in Annexure 304B, mulch must not be spread over any areas of direct seeding.</p> | <p><i>No Mulch Over Seed</i></p> |
| <p>10. All machinery must be in good working order to uniformly apply seed and the calibration of the equipment must be demonstrated to the Superintendent upon request.</p> | <p><i>Calibration</i></p> |
| <p>11. The Contractor must ensure seeded areas are not disturbed by equipment and vehicles, or by pedestrians and animal traffic during the seeding operations and during the Establishment Period.</p> | <p><i>Disturbance of Seeded Areas</i></p> |

304.26–304.29 NOT USED

ESTABLISHMENT PERIOD

304.30 COMPLETION OF WORKS

- | | |
|---|--|
| <p>1. Prior to completion of the works the Contractor must remove all rubbish and surplus materials accumulated during construction and the Site must be left in a neat and tidy condition.</p> | <p><i>Tidying Up</i></p> |
| <p>2. Prior to the commencement of the Establishment Period the Contractor must ensure that: As constructed drawings detailing all seeding works are signed by a suitably experienced and qualified person, in environmental, botanical, horticultural and/or related fields who is familiar with Main Roads requirements, have been prepared and presented to the Superintendent</p> | <p><i>Completion of Works</i></p> |
| <p>3. The Contractor must give the Superintendent at least 7 days notice that the works are ready to be inspected for completion.</p> | <p><i>Notice for Inspection</i></p> |
| <p>4. The Contractor must certify to the Superintendent that all the works have been completed in accordance with the requirements of the Contract before seeking approval to commence the Establishment Period.</p> | <p><i>HOLD POINT</i></p> |

304.31 VEGETATION ESTABLISHMENT

- | | |
|---|---|
| <p>1. The Contractor must establish and monitor the condition and development of the Works during the Establishment Period as nominated in Annexure 304A.</p> | <p><i>Establishment Period</i></p> |
|---|---|

2. Prior to commencing the Establishment Period, the Contractor must provide to the Superintendent for approval, a detailed program of all activities including timing to be undertaken by the Contractor to establish the vegetation in accordance with this Specification.

***Vegetation
Establishment
Program***

3. The approved Vegetation Establishment Program must include inspections of the Works and the Contractor must notify the Superintendent of any vandalism of the Works or any other damage within 5 days of detection.

4. The designated activities to establish the works must include but not be limited to:

***Designated
Establishment
Activities***

- a) Progressive weed control.
- b) Inspections.
- c) Repair and replace any erosion rills in soil surfaces, as nominated in Annexure 304C.

304.32 MONITORING PROGRAM

1. The Contractor must undertake monitoring and reporting on the condition and development of the works during the Establishment Period as nominated in Annexure 304A.

***Monitoring
and
Reporting***

2. Prior to commencing the Establishment Period, the Contractor must provide to the Superintendent, a detailed program of all the monitoring and reporting activities including timing to be undertaken by the Contractor.

***Monitoring
Program***

3. Each monitoring report must:

***Monitoring
Reports***

- a) Outline the works undertaken during the reporting period.
- b) Compare development of the Works with the relevant outcome-based completion criteria (Annexure 304C).
- c) Identify any follow up remedial works to be undertaken.
- d) Set out a program for the remedial works.

4. Electronic copies of each report must be supplied to the Superintendent within 14 days of the end of the reporting period.

5. The final monitoring report at the end of the Vegetation Establishment Period must be included in the Hand-over report submitted at Final Completion.

***Final
Monitoring
Report***

304.33–304.80 NOT USED

AS BUILT AND HANDOVER REQUIREMENTS

304.81 HANDOVER REQUIREMENTS

1. The Contractor must be responsible for preparing reproducible as constructed drawings of the works in accordance with Main Roads Design and Drawing Presentation standards.

***As
Constructed
Drawings***

2. As Constructed Drawings must be completed detailing all seeding works signed by a suitably experienced and qualified person, in environmental, botanical, horticultural and / or related fields who is familiar with Main Roads requirements.

304.82 FINAL COMPLETION

1. The Contractor must give the Superintendent at least 7 days notice that the works are ready to be inspected at the end of the Establishment Period.

2. Acceptance of the works by the Superintendent at the end of the nominated Vegetation Establishment Period, shall be subject to

***Final
Completion***

- a) Satisfactory preparation and submission of monitoring reports.
- b) Satisfactory preparation and submission of As Constructed Drawings
- c) Satisfactory completion of all additional maintenance and remedial works as directed by the Superintendent.
- d) The revegetation Works meeting the completion criteria as detailed in Annexure 304C for final completion.

304.83– 304.90 NOT USED

CONTRACT SPECIFIC REQUIREMENTS

304.91–304.99 NOT USED

ANNEXURE 304A – SPECIFIC REQUIREMENTS

(Complete the blank template schedules to match the specific requirements of the Contract, and delete this note.)

304A.1. LIST OF CONTRACT DRAWINGS

Drawing Number	Drawing Name

304A.2. The Establishment Period shall be:

304A.3. Monitoring must occur during the Establishment Period and after Completion of the Works at:

Monitoring Requirements

304A.4. The Completion Criteria for this project are nominated in Annexure 304C.

ANNEXURE 304B – MATERIAL REQUIREMENTS

(Complete the blank template schedules or insert drawing numbers to match the specific requirements of the Contract and delete this note)

304B.1. SEED

(Insert N/A if no provenance requirements for the project)

SPECIES	PROVENANCE	QUANTITY

304B.2. TOPSOIL RESPREAD REQUIREMENTS

Type/Topsoil Condition	Location	Depth (mm)

304B.3. MULCH RESPREAD REQUIREMENTS

Type/Mulch Size	Location	Depth (mm)

304B.4. SURFACE PREPARATION

Location	Details

304B.5. EROSION CONTROL REQUIREMENTS

Location	Details

304B.6. FAUNA HABITAT LOGS

Placement Location	Amount	Notes

304B.7. TIMING OF WORKS

Item	Optimum Time Period	Notes
Seeding		

304B.8. WEED CONTROL REQUIREMENTS

The Contractor must identify all weed species within the Contract area and prepare a Weed Control Program in accordance with 204 ENVIRONMENTAL MANAGEMENT. Weed species and locations include but are not limited to the listing below.

Weed species	Timing of control	Control measures

Locations of designated weeds nominated for removal are summarised as:

Co-ordinates or Chainage		Weed species	Treatment details
North	East		

304B.9. REVEGETATION SIGNS

Item	Number	Notes

ANNEXURE 304C – COMPLETION CRITERIA

(Complete the blank template schedules to match the specific requirements of the Contract and delete this note)

304C.1. EROSION CONTROL

Criterion	Twelve weeks after Practical Completion	Six Months after Completion	At Final Completion
Maximum number of active rills > 150 mm in depth within each nominated zone.			

Acceptance criteria shall be full compliance with the specifications for product and material and construction requirements.

304C.2. WEED CONTROL

Criterion	Twelve weeks after Practical Completion	Six Months after Completion	At Final Completion
Healthy foliage cover of weeds (%) within each representative plot.			
Compliance with acceptance criteria (%).			

Two or more randomly selected representative plots (... m x ... m or equal area) per nominated zone within the project area. Nominated planting/seeding and grassing zones are as shown in the Drawings.

Acceptance criteria for weed control shall be:

- a) The approved weed control program is implemented as required.
- b) Treated areas display signs of dying off within 14 days of application.

304C.10. DIRECT SEEDING

Criterion	Six Months after Completion	At Final Completion
Mean number of stems (excluding weed species) / m ² within each representative plot.		
Number of species within each representative plot.		

Species richness (% of species sown) within each nominated seeding zone.		
Bare soil areas (excluding weed species) > 4m ² within each representative plot.		

Two or more randomly selected representative plots (..m x ..m or equal area) per nominated seeding zone within the project area. Nominated seeding zone are as shown in the drawings.

Acceptance criteria for individual seedlings from direct seeding shall be:

- a) Plants are well formed and exhibits signs of healthy growth
- b) Plants are free of disease symptoms (e.g. yellowing, wilting, etc.)
- c) Plants are free from signs of insect pests

304C.11. REGENERATION FROM TOPSOIL

Criterion	Six Months after Completion	At Final Completion
Mean number of stems (excluding weed species) / m ² within each representative plot.		
Number of species within each representative plot.		
Bare soil areas (excluding weed species) > 10m ² within each representative plot.		

Two or more randomly selected representative plots (..m x ..m or equal area) per nominated zone within the project area. Nominated zones are as shown in the drawings.

SPECIFICATION 304 GUIDANCE NOTES

DELETE THESE GUIDANCE NOTES FROM FINAL DOCUMENT AFTER USING FOR REFERENCE

All edits to downloaded TDP documents should be tracked with deletions struck through e.g. *example* and insertions in italics e.g. *example*. If **all** information relating to a clause is deleted then the clause number should be retained and the words "**NOT USED**" should be inserted.

The proposed documents with tracked changes is then submitted to the Project Manager for review, prior to printing the final batch of documents. When this final printing is carried out, the tracked changes option is to be **turned off**.

The Custodian of this specification is the Manager Environment.

For more guidance on completing this specification and the historical Author's Notes see "Environmental Procedure Specification 304 Revegetation & Landscaping" D18#843784.

SPECIFICATION AMENDMENT CHECKLIST

Specification Name: No: **304** Revision No: _____ Title: **Rehabilitation of Disturbed Areas**

Project Manager: Name: _____ Signature: _____ Date: _____

Checked By: Name: _____ Signature: _____ Date: _____

Contract No: _____ Contract Description: _____

ITEM	DESCRIPTION	SIGN OFF
<i>Note: All changes/amendments must be shown in Tracked Change mode until approved.</i>		
1.	Project Manager has reviewed Specification and identified Additions and Amendments.	
2.	CONTRACT SPECIFIC REQUIREMENTS addressed? – Contract specific materials/products/clauses added? (Refer Specification Guidance Notes for guidance).	
3.	Any unlisted Materials/Products proposed and approved by the Project Manager? – if “Yes” provide details at 15.	
4.	Standard Clauses amended? – MUST SEEK approval from Manager Contracts	
5.	Clause deletions shown as ‘NOT USED’.	
6.	Appropriate INSPECTION & TESTING parameters included in Spec 201 (Test Methods, Minimum Testing Frequencies verified).	
7.	ANNEXURES completed (Refer Specification Guidance Notes).	
8.	HANDOVER and AS BUILT requirements addressed.	
9.	Main Roads QS has approved changes to SMM .	
10.	Project Manager certifies completed Specification reflects intent of the design.	
11.	Completed Specification – independent verification arranged by Project Manager	
12.	Project Manager’s review completed.	
13.	SPECIFICATION GUIDANCE NOTES deleted.	
14.	TABLE OF CONTENTS updated.	
15	Supporting information prepared and submitted to Project Manager.	
Further action necessary:		

Signed: _____ (*Project Manager*) Date: _____