

SECTION 708 - STEEL BEAM GUARD FENCE

~~##This section cross-references Sections 175, 703, 711, 812 and 820.~~

~~If any of the above sections are relevant, they should be included in the specification.~~

~~If any of the above sections are not included in the specification, all references to those sections should be struck out, ensuring that the remaining text is still coherent.~~

708.01 GENERAL

This section covers the requirements for the supply and/or installation of steel beam guard fence including proprietary guard fence systems and guard fence terminals.

708.02 STANDARDS

(a) Australian Standards

Australian Standards are referenced in an abbreviated form (e.g. AS 1012).

AS 1012	Methods of testing concrete
AS 1111.1	ISO Metric hexagon bolts and screws
AS 1112.1	ISO Metric hexagon nuts
AS 1214	Hot dip galvanized coatings on threaded fasteners
AS/NZS 1365	Tolerances for flat-rolled steel products
AS 1379	Specification and supply of concrete
AS 1391	Metallic materials - Tensile testing at ambient temperature
AS/NZS 1554.1	Welding of steel structures
AS/NZS 1594	Hot rolled steel flat products
AS 1627	Metal finishing
AS 1720.2	Timber structures – Timber properties
AS 1742	Manual of Uniform Traffic Control Devices
AS/NZS 1906.2	Retroreflective materials and devices for road traffic control purposes - Retroreflective devices (non-pavement application)
AS 3569	Steel wire ropes – Product specification
AS/NZS 3750	Paints for steel structures
AS/NZS 3845	Road safety barrier systems
AS 4100	Steel Structures
AS/NZS 4680	Hot dip galvanized (zinc) coatings on fabricated ferrous articles

(b) Other Documents

VicRoads	Traffic Engineering Manual
VicRoads	Supplement to AGRD Part 6, Section V6.7.12 Provision of Concrete Paving Adjacent to Traffic Barriers
VicRoads	Safe System Design Notes
VicRoads	Road Design Notes
VicRoads	RDN 06-04 - Accepted safety barrier products
VicRoads	RDN 06-08 - The use of Guard Fence
VicRoads	Standard Drawings for Roadworks
Proprietary	Manufacturer's specification and drawings for proprietary guard fence systems and associated national or international standards

Section 175 details the references to these documents.

Other Documents

Manufacturer's recommendations and any applicable VicRoads requirements for each proprietary end treatment.

708.03 DEFINITIONS

The following definitions below will apply to this section.

Manufacturer's recommendations: The specification, installation manual and drawings for a specific proprietary safety barrier device, prepared by or for the manufacturer, detailing the components, the device, and the methods and/or procedures for installation.

Nested w-beams: Two or more steel w-beams erected together (one inside the other) to increase stiffness. Nested w-beams share bolts.

Definition of terms: The meaning of terms and definitions in this section shall be as defined in AS/NZS 3845.

Snug-tight: Is the tightness attained by at least two impacts of an impact wrench or by the full effort of a person using a standard podger spanner in accordance with AS 4100.

708.04 ACCEPTED PRODUCTS

Only safety barrier products listed in VicRoads Road Design Note 06-04 shall be used.

Unless specifically noted within the relevant sub clause, the requirements of this specification apply to public domain and proprietary guard fence systems equally.

Products which are discontinued and in this case including legacy products, or the manufacturer has identified as to be discontinued shall not be used.

New guard fence installations shall not be connected to any products which have been discontinued or identified for discontinuance unless approved by the Superintendent Council.

708.05 GUARD FENCE COMPONENTS

(a) Identification

Mark on any steel w-beams, posts at both ends and all plastic components of proprietary end treatments unobtrusively and permanently in text not more than 20 mm high, the following information:

- (i) name of the manufacturer
- (ii) batch number, or date of manufacture
- (iii) strength grade and base metal thickness of the steel w-beams.

(b) Material test certificates

The properties of all steel for the Works shall be evidenced by test certificates.

HP ~~Where requested~~ **the Contractor shall submit to the Superintendent Council all test certificates related to the supply of steel for the Works at least 14 days prior to commencement of installation.**

Laboratories that perform tests required by this Section shall meet the requirements of AS ISO/IEC 17025. All test reports shall be endorsed in accordance with the AS ISO/IEC 17025 accreditation for that laboratory. Testing laboratories shall comply with the resource requirements for competent testing personnel and appropriate supervision as required by AS ISO/IEC 17025. (Test reports may be called test certificates.)

NOTE: Accreditation bodies which are signatories to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for testing laboratories can offer accreditation against the requirements of AS ISO/IEC 17025. A listing of ILAC signatories is available from the ILAC website (www.ilac.org). In Australia, the National Association of Testing Authorities (NATA, <https://www.nata.com.au>) is a signatory to the ILAC MRA.

The appropriate logo or further details of the ILAC (MRA) signatory shall be noted on the test document, and all reporting requirements of the test method and material standard shall be included. All test reports shall be in English alphanumeric characters.

Where the certification of the steel is incomplete, the Contractor shall arrange for testing to be carried out to demonstrate compliance of the material, at the rate of one test per 1000 lineal metres of material. All test certificates shall be endorsed in accordance with the AS ISO/IEC 17025 accreditation for the testing laboratory

(c) Metal components

Metal components supplied by the Contractor shall be new and conform to the dimensions shown on the drawings.

(i) W-beams

The w-beams shall be manufactured from steel which meets the requirements of AS/NZS 1594 Grade HA350.

The mechanical properties of the base metal shall conform to the following requirements when tested in accordance with AS 1391:

Minimum yield strength	350 MPa
Minimum tensile strength	430 MPa
Minimum elongation in 80 mm	16%

The base metal shall comply with the following tolerances when measured in accordance with the methods of AS/NZS 1365:

Base metal thickness	2.7 mm -0.10 mm, +0.21 mm
Mill tolerance on strip width	+2.5 mm, -0.0 mm
Mill camber tolerance on 2500 mm length	10.0 mm maximum

(ii) Steel Posts and Blocks

Steel posts and blocks shall be manufactured from steel which meets the requirements of AS/NZS 1594 Grade HA250.

The base material thickness shall be 6.0 mm \pm 0.27 mm.

(iii) Terminal sections

Terminal sections and stiffener plates shall be manufactured from steel which meets the requirements of AS/NZS 1594 Grade HA350.

(d) Protective treatment

Unless stated otherwise in the manufacturer's recommendations, the surfaces of all ferrous metal components including posts, blocks, beam elements, anchor plates, connectors and end treatment pieces must, after fabrication, be treated in accordance with the requirements of AS 1627 - Parts 1 and 4, and finished by hot-dipped galvanising in accordance with AS/NZS 4680.

All galvanised coatings shall be smooth, adherent and free from stains, gross surface imperfections, markings, brand names and/or inclusions. Appearance is of prime importance and colour shall be uniform.

Hot-dipped galvanised coating on bolts, nuts and washers shall comply with AS 1214.

Where the galvanising on guard rail or associated fittings has been damaged, the coating shall be repaired by regalvanising or by painting with a minimum of two coats of a zinc-rich inorganic paint in accordance with AS/NZS 3750.9 and one coat of aluminium paint.

Where curved w-beam of less than 45 m curve radius is specified, the curving operation shall be carried out off site in a manner that will not result in damage to the galvanising.

(e) Timber

Timber posts and blocks shall be supplied to the dimensions shown on the drawings. The treatments shown in SD 4091 and SD 4092 are the only ones where timber posts are used

Timber posts and blocks shall be seasoned timber dried to equilibrium moisture content and sawn from species complying with Class 1 or 2 durability and stress grading as specified.

All timber shall be straight and sound, and free from shakes, pipes, cores, flaws and other imperfections. The timber shall be sawn parallel to the grain, and exposed knots shall be sound, tight, well spaced and shall not exceed 25 mm in size on any face.

(f) Wire rope

Wire rope in anchor assemblies for post and w-beam end treatments shall comply with the requirements of AS 3569 and the details shown on the Drawings.

Wire rope used in proprietary devices must comply with the manufacturer's recommendations.

(g) Concrete

Concrete for guard fence maintenance strips shall comply with the requirements of AS 1379, and as specified in VicRoads Section 703, for either:

- (i) Portland cement-based concrete, N20 strength grade, or
- (ii) Geopolymer binder-based concrete, 20 MPa strength grade.

The use of chemical admixtures shall comply with the requirements of Section 703.

708.06 MATERIAL HANDLING AND STORAGE

The Contractor shall ensure that loading, transport, unloading, stacking and handling operations before and after fabrication, are carried out in such a way that items are protected from distortion and that galvanised surfaces are protected from damage.

All materials and components shall be stored in such a manner that damage and corrosion are prevented. Generally, storage at least 200 mm above the ground on platforms, slabs, or other supports under cover will be satisfactory. Rusted or bent or damaged steel shall be rejected.

The Contractor shall store components in such a manner that the freshly galvanised surfaces are protected from the attack of 'white rust', which can occur on freshly galvanised articles that are transported or stored under damp or badly ventilated conditions (including contact stacking).

If stacks are located behind a serviceable road safety barrier system, the clear space between the road safety barrier system and the stack must allow for the dynamic deflection of the system and be at sufficient distance from the ends of the system to allow the proper functioning of the end treatments.

708.07 CONSTRUCTION

(a) General

Construction of guard fence includes supply, delivery, handling and assembly of component and devices, setting out, and supply and installation of delineation.

The Contractor shall plan and execute the work in a manner that prevents damage to underground and above ground facilities such as utilities, services, structures, pavements, vegetation, etc.

The Contractor shall construct the guard fence to form a smooth line vertically and horizontally, when viewed along the line of the installation, free of humps, sags, or other irregularities, within tolerances.

Any component of a guard fence must not be welded or flame cut in the field under any circumstances. Welding and flame cutting in a workshop may be undertaken only where shown on the Drawings or in accordance with the manufacturer's recommendations.

(b) Damage

Where the galvanising on guard fence components or associated fittings has been damaged, the coating shall be repaired by regalvanising or by painting with a minimum of two coats of a zinc-rich inorganic paint in accordance with AS/NZS 3750.9 and one coat of aluminium paint.

(c) Sequence of work

Where the guard fence is being constructed on a road open to traffic, the Contractor shall carry out the work so end treatments and transitions can be commissioned at the earliest practicable time, desirably on the day of installation. Where this cannot be achieved on the day, temporary end treatments to the satisfaction of the Superintendent Council shall be provided until the permanent treatment is complete.

(d) Removal of redundant safety barrier systems

Removal of an existing installed safety barrier system includes:

- (i) dismantling or demolition of safety barriers, transitions and end treatments;
- (ii) extracting all posts, anchors and other in-ground components and materials;
- (iii) removing all components and waste materials from the site;
- (iv) cleaning, backfilling and mechanically compacting all excavations and holes formed by the extraction of posts, anchors and other in-ground components and materials; and
- (v) stacking or disposing of components and waste materials.

Following the removal of all redundant posts, anchors and other in-ground components by extraction or excavation, the holes shall be cleaned and backfilled. Backfilling and compaction of holes shall proceed in 150 mm layers using similar materials to existing surrounding layers. The backfill shall be compacted to not less than the density of the surrounding layers.

708.08 INSTALLATION**HP Prior to installation the Contractor shall confirm with the Superintendent Council the required location and length of all guard fence.**

The guard fence shall be installed at the positions so confirmed and shall be constructed true to line and level.

(a) Posts

Posts shall be installed to the depth, line and spacing shown on the drawings, and to the tolerances in Clause 708.07(d).

Posts shall be orientated to the direction of traffic as shown on the drawings.

Posts shall be installed by driving, provided there is no distortion or damage which may reduce their effectiveness. The installation must not cause any damage to the pavement beyond 100 mm from any part of any post, including any soil plate attached to the post.

If site conditions dictate that the posts cannot be driven, then the posts shall be installed in holes. The bottom of the holes shall be adequately compacted to achieve the same density as the surrounding soil. The posts shall be supported to true line and level while the holes are backfilled with clean, well-graded, non-cementitious subbase or base course granular material and compacted to achieve the same density as the surrounding soil.

All post holes in rock shall have a 75 mm minimum clearance from the back of the post to the face of the hole.

Except for anchorage posts, post holes in rock shall be backfilled with granular material. Other post holes shall be backfilled with selected earth, free of rock. The backfilling shall be firmly compacted in layers not exceeding 100 mm compacted thickness. Where posts are located in areas to be paved with concrete or premixed bituminous material, the backfilling of the post holes shall be finished 50 mm below the underside of such paving and the remaining depth of the holes shall be filled and compacted with material similar to the surrounding material.

The foundation of any post shall be deemed complying when the displacement at ground level does not exceed 3 mm when a 1 kN force is applied 200 mm below the top of the post in any direction. For any posts failing the test, the Contractor shall take remedial measures and retest the rectified post plus one other similar post within 5 m.

HP Prior to the installation of any w-beam barrier system where non standard post lengths are required or other special measures (e.g. shallow concrete foundations) are proposed to be used, the Contractor shall provide details of the measures proposed and evidence that the effectiveness of the barrier system will be maintained, for consideration by the Superintendent Council. Where shallow foundations that require a concrete ground beam are proposed to be constructed, the design shall be proof engineered by a VicRoads pre-qualified consultant.

Alternative methods of support are not permitted for end treatments unless otherwise accepted in RDN 06-04. For proprietary systems requiring alternative arrangement, the Contractor shall consult with and implement the requirements of the licensed product supplier. The Contractor may submit proposals for extending the guard fence to a location where installation of the end treatment is feasible, or proposals for a different end treatment.

Surplus excavated material remaining after the guard fence has been constructed shall be disposed of off site by the Contractor.

(b) W-beams

The w-beam sections shall be lapped so that the exposed ends face away from near-side approaching traffic. The edges of the w-beam section or backing plate adjacent to posts shall be fixed in contact with the post or post blocks and all bolts shall be fully tightened.

End treatments of the types specified shall be constructed in accordance with the details shown on the drawings.

Posts attached to bridges and culverts shall be bolted to supporting members and/or set on mortar pads as shown on the drawings.

All bolts used in guard fence construction, other than nuts on wire rope assemblies, shall be tightened to a snug-tight condition.

All bolts on the traffic side of w-beam installations shall be flush with the w-beam.

(c) End treatments

During installation of wire ropes in the end treatments of w-beam, the Contractor shall ensure that no twisting of the rope occurs. When rope assemblies are used, the nuts at each end of the rope shall be tightened to a minimum torque of 50 Nm on the assemblies or as per the manufacturer's requirements.

The Contractor shall maintain tension in the wire ropes in end treatments until the Date of Completion, by keeping the nuts at both ends tightened to 50 Nm or to manufacturer's requirements.

(d) Tolerances

W-beam guard fence shall be erected to the following tolerances:

- (i) Variation from true plan position of posts±20 mm
- (ii) Variation of line of w-beams from specified vertical profile±10 mm
- (iii) Variation of w-beams from specified horizontal alignment±20 mm
- (iv) Variation of posts from vertical (measured at top of the post).....±15 mm
- (v) Orientation of block and/or post to w-beam.....+0 mm, -15 mm
(measured at the point of greatest offset between
the block or post to the w-beam)
- (vi) Dimension of holes-0 mm, +50 mm
- (vii) Top of bolt head relative to w-beam-0 mm, +5 mm

After installation the top of the rail shall be within 25 mm of the specified level and 50 mm of the specified line. Variations from specified line and level shall not occur at a rate exceeding 15 mm in any 5 m length.

Notwithstanding these requirements the line and level of the guard fence shall be adjusted where necessary to provide a smooth and even vertical and horizontal alignment.

For proprietary systems refer to manufacturer requirements.

(e) Barrier offsets to kerb and channel, traffic lanes and batters

Guard fence shall be installed at the offsets shown on Standard Drawing SD 3502. The desirable level shall be adopted unless otherwise approved by the Superintendent Council.

Where practicable, w-beam guard fence should not be installed behind kerb and channel.

Posts shall be installed such that the back of post is not less than 500 mm from hinge point. This also applies where a manufacturer's proprietary system allows for installation at less than 500 mm from the hinge point.

(f) Height of guard fence

Where the face of the guard fence is erected within 0 to 1 m behind the back of kerb, the mounting height (vertical dimension from ground surface to centre of w-beam) shall be measured from the lip of kerb. Where the face of the guard fence is erected within 1.5 m from edge of carriageway without kerb, the mounting height shall also be measured from that edge of carriageway (typically the edge line). For distances beyond 1.5 m, the mounting height shall be measured from the nominal ground surface at the guard fence location.

708.09 PROTECTION OF GUARD FENCE POSTS FOR MOTORCYCLIST SAFETY

Where specified, steel rub rail or other proprietary under-run systems, as listed in RDN 06-04, shall be attached below the w-beam in accordance with the manufacturer's recommendations and the following:

- installation shall only be on nominated sections of barrier as shown on the drawings
- rails are to be placed in line with the face of w-beam
- rails shall be placed in accordance with the requirements for steel guard fence
- a 50 mm gap shall be provided between the rub rail and the ground to allow for passage of water, litter and leaves.

708.10 CERTIFICATE OF COMPLIANCE

HP Further to Clause 708.07 Installation, and prior to the issue of **Statement of Compliance** ~~the Certificate of Practical Completion~~, the Contractor shall arrange for a **safety barrier compliance audit on all proprietary guard fence end treatments constructed under the Contract**. The audit shall be undertaken and a report prepared by the Australian Licensed Supplier of the safety barrier system. A Certificate of Compliance (CoC), signed by the Contractor’s Representative and the Licensed Supplier, shall be provided certifying that the products have been installed in accordance with the manufacturer’s Installation Manual and this specification. A CoC shall be provided for each end treatment installed.

In addition, the Contractor shall complete and submit to the Superintendent Council a signed copy of the Checklist / Inspection and Test Plan as per the manufacturer’s Product and Installation Manual.

708.11 DELINEATORS

The Contractor shall supply and fasten delineators to the top of the w-beam, comprising flexible plastic mounting brackets fitted with 100 cm² of Class 1A retro-reflective material, as defined in AS/NZS 1906.2. Delineators shall be installed in accordance with VicRoads Supplement to AS 1742.2 Clause 4.2.5.4(b).

The Contractor shall arrange delineators so that vehicles approaching from either direction at night will only see:

- red delineators on the left side of one-way and two-way roadways;
- white delineators on the right side of two-way roadways; and
- yellow delineators on the right side of one-way roadways.

Delineators shall not be installed on guard fence when the barrier offset is greater than 4 m from the traffic lane. White guide posts with delineators shall be installed in accordance with VicRoads Supplement to AS 1742.2 Clause 4.2.4 – Guide Posts.

Where guard fence delineators are required to be installed as part of the Works, they shall be installed in accordance with the requirements of VicRoads Supplement to AS 1742.2.

708.12 MAINTENANCE STRIPS FOR GUARD FENCE

The Contractor shall provide maintenance strips beneath the guard fence and terminals as indicated on the drawings and/or as nominated in Table 708.121.

*** **Table 708.121 Maintenance Strip Locations**

Location	Start CH	Finish CH	Direction	Strip Type
## The following item is an example only - change text to suit your specification. DELETE THIS ROW BEFORE PRINTING:				
Road Name	00	125	North Bound	Concrete

(a) Concrete maintenance strips

The concrete maintenance strip shall be placed parallel to the barrier, such that it extends a minimum of 300 mm clear of the rear of the post and 300 mm clear from the face of w-beam. It shall be constructed with minimum 2% crossfall away from the road and shall be flush with the adjacent ground level so the finished level does not impede road runoff.

The concrete maintenance strip shall be placed between and around the posts to not affect the performance of the guard fence.

All bedding material used for cast in place concrete construction works shall be in accordance with Section 812 for Class 3 Crushed Rock or Section 820 for Class 3 Crushed Concrete.

The concrete maintenance strip shall consist of 75 mm depth of N20 strength grade portland cement-based concrete or 20 MPa geopolymer binder-based concrete conforming to the requirements of Clause 708.05(g), on 75 mm of compacted Class 3 crushed rock.

The edges of the infill area shall be boarded up prior to placing concrete to ensure smooth edges are produced. Alternatively, the expansion joints may be sawcut to 75% of the concrete depth. The infill area may utilise low strength concrete (< 0.85 MPa).

The edge board shall be placed parallel with the steel beam guard fence. The surface of the maintenance strip shall be finished with a wooden float to produce a lightly textured surface.

Where the concrete maintenance strip is adjacent to kerb or pavement, separation from the kerb or pavement by the use of a cork expansion joint (or approved alternative) shall be produced. Full depth expansion joints shall be provided perpendicular to the line of the steel beam guard fence 200 mm each side of every post.

The Contractor shall topsoil and grass all disturbed areas as necessary to ensure that the concrete maintenance strip is flush with the adjacent ground surface level.

708.13 INTERACTION OF GUARD FENCE WITH EXISTING ASSETS

The Contractor shall install the guard fence to provide for its dynamic deflection that does not interfere with any existing roadside furniture.

The Contractor shall remove any existing guard fence located between existing assets, such as gantry legs, variable speed signs and bridge piers. The Contractor shall allow for the interaction between all roadside furniture, including slip base light poles, and the guard fence by providing for the dynamic deflection zone or providing reduced post spacing as per the Drawings.

The Contractor shall integrate the guard fence with any existing lengths of safety barriers protecting ends of bridge parapets as shown on the drawings and in accordance with Clause 708.13.

The Contractor shall remove and dispose of existing guide posts that conflict with a new guard fence, including any in front of a new guard fence located within a 4 m offset from the traffic lane and any behind a new guard fence greater than 4 m offset from the traffic lane, as well as bollards or other roadside furniture affected by the Works or where shown on the drawings or instructed by the Superintendent Council.

708.14 MODIFICATION TO THE GUARD FENCE AT THE INTERFACE WITH WRSB

The Contractor shall be responsible for any alteration and/or relocation of any existing WRSB, including the removal and disposal of existing redundant WRSB, dismantling and reinstating existing WRSB (including terminals) and extension of existing WRSB (including the provision of a concrete maintenance strip where specified) where required and as shown on the drawings.

The Contractor shall terminate the guard fence at the interface with the WRSB ensuring sufficient overlapping of systems as detailed on the drawings.

Any variations to the interface of the guard fence with the WRSB shall be reviewed for acceptance by the Superintendent Council prior to installation of the guard fence.

Any modifications to the WRSB shall be in accordance with Section 711 and the relevant VicRoads Standard Drawings.

The Contractor shall be responsible for the supply of all materials and labour necessary to undertake the modification works as specified above and as shown on the drawings.

708.15 ASSOCIATED PAVEMENT (SHOULDER) WIDENING

Where specified, the Contractor shall widen the existing shoulder on the median or outer verge applications adjacent to locations where guard fence is to be installed, as per VicRoads Supplement to AGRD Part 6, Section V6.7.12, or as shown on the typical cross section, drawings or specification.

The Contractor shall provide additional pavement between the edge of existing pavement and the guard fence. The Contractor shall adopt the nominated pavement design. Where a nominated pavement design has not been specified the Contractor shall construct the widening with a pavement that matches the existing.

The edge of shoulder shall be saw-cut to provide a neat straight edge against which the additional pavement can be placed.

Pavement layers shall be stepped a minimum 150 mm horizontally to enable new widening to be keyed into the existing pavement.

708.16 CONCRETE

Unless otherwise specified, and any applicable requirements for proprietary barrier systems, the placement of concrete shall comply with the requirements of Section 703.

708.17 EXISTING SIGNS AND MARKINGS

All existing signs that are temporarily removed or relocated during the execution of the works shall be reinstated to their original location as soon as practicable to ensure that adequate information is provided to road users. In all cases the Contractor shall provide continuity of regulatory and warning signs.

The Contractor shall reinstate all signs to a standard not less than the pre-existing condition and to the satisfaction of ~~the Superintendent~~ Council.

The Contractor shall reinstate any existing painted edge lines, including audible edge lines and reinstate or replace any missing Raised Reflective Pavement Markers (RRPMs) along the length of the Works, including RRPMs damaged by the installation process for the guard fence.

708.18 MEDIAN CROSSINGS

Where a median crossing is removed, the Contractor shall reinstate the median with a treatment consistent with the surrounding area. Any redundant median crossing signs within the Limit of the Works shall be removed and delivered to a storage area nominated by ~~the Superintendent~~ Council.

Median crossings within the Limit of the Works shall be retained by the Contractor.

Where detailed on the drawings, new median crossing points shall be constructed in accordance with the pavement details specified, to provide for adequate access for emergency vehicles and shall be integrated with the guard fence installation.

708.19 EXISTING VEGETATION

The Contractor shall ensure that the existing vegetation within the Limit of Works is not affected by the Works. Areas where no works are required shall not be disturbed. Any damage to existing vegetation shall be rectified immediately to the satisfaction of ~~the Superintendent~~ Council.

708.20 GRASSING OF DISTURBED AREAS

(a) General

All disturbed areas shall be topsoiled and grassed in accordance with the requirements of Section 740. All areas are to be cultivated to a minimum 50 mm depth, and moistened prior to the application of grass seed and fertiliser.

Grass seed shall be applied at a rate of not less than 200 kg/Ha. Fertilizer shall be applied in accordance with the manufacturer's recommendations.

HP ~~A joint inspection of all grassed areas shall be carried out between the Contractor and Superintendent three months after sowing has taken place.~~

~~Areas with less than 90% cover shall be re-sown by the Contractor.~~

~~Any remedial works required are to be performed within two weeks of the date of inspection.~~

~~(b) Maintenance of grassed areas~~

~~The Contractor shall be responsible for the maintenance of grassed areas, including mowing, for the duration of the Defects Liability Period for the Whole of the Works.~~