



8303 Synthetic Turf

Revision 13/03/2024

8303.1 Introduction

This supplementary specification refers to the supply and installation of synthetic turf including the civil works and activities associated with and inclusive to complete such works to the locations and specifications as detailed on the Drawings, and in accordance with manufacturer’s specifications.

8301.1 Definitions of Terms

This section describes any term which are specific to this specification or requires clarification due to an ambiguous understanding.

Term	Definition as Applies to this Specification
Synthetic Turf	Any surface which replaces natural turf with an artificial surfacing mimicking grass
Manufacturer Certification	Certification of the manufacturer that the product meets all requirements of the specification including Australian Standards
Supplier Certification	Certification of the supplier with the artificial turf industry

8303.2 Referenced Documents

This supplementary specification shall be read in conjunction with the following:

- MRS01 *“Introduction to Specifications”*;
- MRTS01 *“Introduction to Technical Specifications”*
- MRS03 & MRTS03 *“ Drainage Structures, Retaining Structures and Embankment Slope Protections”*
- MRS04 & MRTS04 *“General Earthworks”*
- MRS05 & MRTS05 *“Unbound Pavements”*
- MRS07B & MRTS07B *“Insitu Stabilised Pavements using Cement or Cementitious Blends”*
- MRS70 & MRTS70 *“Concrete”*
- MRC Std Drawing A3-09729, *“Playground Softfall Treatment Artificial Turf”*
- MRC Supplementary Specification 8204 *“Hand placed fibre reinforced concrete paving”*
- MRC Supplementary Specifications 8320 *“Landscape Footings”*
- MRC Supplementary Specifications 8349 *“Playground Drainage”*
- MRC Supplementary Specifications 8107 *“Subsoil Drainage, Type C”*
- Manufacturer’s specifications;
- Other specification and standards as referenced throughout this supplementary specification; and
- the project Drawings

8303.3 Description of Work

Work items incorporated by this supplementary specification are identified in Section 8303.6 and 8303.7 with individual activities/tasks for measurement and payment sourced from the Bill of Quantities and listed in MRC Supplementary Specification Annexure 8303_1 Section 1:



8303.4 Quality Systems Requirements

8303.4.1 Std Test Methods (Testing Regime)

The following minimum testing regime applies to this specification:

Unless otherwise stated the manufacturer and supplier certification of the synthetic turf shall form the basis of the requirements of the table listed in 8303.6

Civil works activities associated with the subgrade/floor of excavation, subsoil drainage installation, base course and crusher dust installation shall be tested as per the relevant MRTS specification MRTS03, MRTS04, MRTS05, and MRTS70 unless otherwise approved by the Superintendent.

8303.4.2 Hold Points, Witness Points and Milestones

The following table represents the minimum inspection requirements for this specification;

Activity	Inspection Type	When
Material Certification	Milestone	4 Weeks prior to works commencing
Construction Procedure	Milestone	4 Weeks prior to works commencing
Final location of synthetic turf	Hold Point	During site survey layout.
Excavated of material	Witness Point	At completion of excavation
Bed/Subgrade Excavation Floor proof roll	Hold Point	At completion of excavation and compacting
Sub soil drainage installation	Witness Point	Completion of subgrade proof roll
Base course proof roll	Hold Point	After compaction
Concrete edging prepour	Hold Point	Prior to pouring concrete
Approval to strip formwork	Hold Point	After 70% strength gain
Approval to backfill to kerb	Hold Point	7 days after stripping and prior to installation of base course against kerb
Installation 4% cement treated crusher dust layer	Witness Point	After base course proof roll approval to proceed
Installation of synthetic turf	Witness Point	Prior to commencing backfilling operations
Works as Executed documentation	Hold Point	Minimum 14 days prior to practical completion being requested.

8303.4.3 Construction Tolerances

Unless otherwise approved by the Superintendent the following construction tolerances shall apply to this Specification;

- Drainage tolerances in accordance with MRTS03 Drainage Structures, Retaining Structures and Embankment Slope Protections
- Earthworks tolerances in accordance with MRTS04 Earthworks General
- Pavement tolerances in accordance with MRTS05 Unbound Pavement

Tolerances specific to the project are detailed on the design drawings and are included in Clause 2 of MRC Supplementary Specification Annexure 8303_1.

8303.5 Preliminary

Samples and certificates of compliance to the material requirements must be submitted for approval a minimum 4 weeks prior to ordering of materials. Council takes no responsibility for ordered materials which have not been approved for use. **(MILESTONE)**



The Contractor is to submit or ensure the following documentation is in place 4 weeks prior to delivery or a prestart is conducted. **(MILESTONE)**:

- Construction and installation procedure
- Quality Plan
- Workplace Health and Safety Plan

Other requirements unique to the project will be listed in the MRC Supplementary Specification Annexure 8303_1 Synthetic Turf **(MILESTONE)**

8303.5.1 Materials

The following table outlines the Technical Information and product specification required for the synthetic turf to be supplied unless noted otherwise on the project Drawings.

Technical Information & Product Specification Artificial Turf	
Pile Length	25-40 mm
Colour	Bi-colour Filaments/tefts

The following Standards and their referenced standards shall be utilised when procuring the synthetic turf:

Standard	Description
AS 3541.1	Synthetic Sporting Surfaces Part 1 – General Principles
AS 2983	Testing of synthetic sporting surfaces
BS EN 15330-2	Surfaces for sports areas. Synthetic turf and needle-punched surfaces primarily designed for outdoor use
ISO 19721	Plastics — Abrasion test method for artificial turfs using combined UV exposure and mechanical wear
AS 4422	Playground surfacing – Specifications, requirements and test method

Artificial turf industry certification of the supplier and the product shall be obtained for the proposed use and integrity of the turf.

Jointing tape/glue shall be as recommended by the manufacturers specifications and stored and as per the manufacturers requirements.

Any variation to materials from design drawings or manufacturers requirements must be approved by the Superintendent prior to any works on site commencing.

The synthetic turf is to be installed in accordance with the manufacturer’s specifications, ensuring that any excavation does not damage Council infrastructure. The finished surface level of the product is to be flush with adjacent levels, limiting potential trip hazards.

8303.6 Construction

This section lays out the works operations with more detail based on specific requirements of this supplementary specification. Some activities may appear to include items which are stated within other specifications the purpose is to reinforce that requirement specific to this supplementary specification.

8303.6.1 Work Operations

Work operations incorporated in this item will include:

- a) **Work operations included in Clause 2.1.5 of MRS01 “Introduction to Specifications”;**
- b) **Supplying all materials;**



Type and supply of synthetic turf will be nominated in the Design Drawings. All materials, plant, and labour required to carry out the works under this Specification is to be supplied by the Contractor, refer to MRC Supplementary Specification Annexure 8303_1 Synthetic Turf Annexure.

Where the synthetic turf is Principal supplied the designated storage site will be the point of supply for the purposes of this Specification, delivery to site will be the Contractors responsibility and cost. Other associated materials but not limited to glue/tape, formwork, reinforcing steel, concrete, sub soil drainage, and underlying base materials shall be supplied by the contractor at their cost.

Materials shall be stored in accordance with the manufacturers requirements.

c) Site layout with superintendent

The final location and extent of the synthetic turf is to be marked out on site and shall be inspected and approved by the Superintendent prior to excavation commencing. This is to ensure the dimensions are correct to the plans and site layout complies with the purpose of the artificial turf. **(HOLD POINT)**

d) Carrying out excavations;

Excavation of material to level and grade as per design plans, vertical tolerances shall not exceed +5mm/-10mm. if not specified on design drawings excavation depth to be as per MRC Std drawing 09729 "Playground Softfall Treatment Artificial Turf"

Bed/Subgrade is to be inspected for areas of unsuitable material **(HOLD POINT)**

If unsuitable material is identified this is to be removed and replaced with approved material as per the instructions of the Superintendent

e) Utilising or disposing of excavated material;

Excess excavated materials shall be disposed of or utilised as per Superintendents instructions. Material stockpiled shall ensure that all Environmental ESC measures are in place and maintained

f) Bottom of Excavations Compaction

The bottom of the excavation shall be compacted to 97% SDD and tested at a frequency of 1/200m²

All loose material is to be removed from floor of excavation.

Bottom of excavation is to be presented for inspection and proof rolled in the presence of the Superintendent prior to sub soil drainage being laid **(HOLD POINT)**

g) Installation of Subsoil Drainage (if required)

Where design drawings show subsoil drainage requirement this shall be supplied and installed as per design drawings, in the absence of detail MRC Std drawing A3—09703 shall apply. This includes connection to a point of discharge outside of the synthetic turf area, refer to MRC Supplementary Specification 8349.

h) Installation of Concrete Edging (if required)

Formwork is to be supplied and installed in accordance with AS3600 and AS3610 and the design drawings. Installed formwork has been installed to project drawings line, levels and shape, positional tolerance Horizontal +25mm/-5mm, Vertical +/-5mm's. **(WITNESS POINT)**

Reinforcing complies with project drawings and AS4671, in the absence of detail MRC Std Drawing A4-00421 shall apply.

Inspection of reinforcing and formwork prior to pouring shall be carried out by the Superintendent. **(HOLD POINT)**

All concrete is to be batched, transported, placed, and compacted in accordance with MRTS70 including all required testing unless otherwise specified in MRC Supplementary Specification 8303_1 Synthetic Turf Annexure



Finishing of the concrete is to be in accordance with the design drawings.

Construction and Contraction/Expansion Joints are to be incorporated as per the design drawings or as per the Superintendents instructions.

Immediately after the initial set of the concrete curing shall commence and continue for a minimum of seven days. Plastic sheeting shall not be used as part of the curing process.

Formwork is not to be stripped prior to 70% strength being gained or as approved by the Superintendent. **(HOLD POINT)**

Unless approved by Superintendent further works (including the laying of base course) against the kerb must not occur until after 7 Days of stripping, curing is to continue for this period.

i) Carrying out all works to allow the installation of synthetic turf, and base layers as specified on the Drawings, and in accordance manufacturer's specifications.

The kerb must be backfilled and compacted prior to the base course installation. Upon the Superintendents approval to proceed with the base course the contractor shall supply, place, and compact the road base course in accordance with MRTS05 including testing with the thickness as per the design drawings, in the absence of detail MRC Std drawing A3—09729 "Playground Softfall Treatment Artificial Turf" shall apply unless otherwise specified by the manufacturer of the synthetic turf.

The contractor shall make arrangements for the Superintendent to inspect the finished base course and carry out a proof roll. The contractor shall be responsible for any damage caused to the concrete edging. **(HOLD POINT)**

A 4% cement stabilised crusher dust layer shall be supplied, placed, and compacted in accordance with design drawings, where there is an absence of detail MRC Std Drawing A3-09729 shall apply. All construction works are to be performed in accordance with MRTS05 including testing. **(WITNESS POINT)**

Supply and install Artificial turf as per the design drawings and manufacturers written instructions. Joins are too be installed using products recommended by the manufacturers requirements, the artificial turf to be laid in the direction indicated and all joins are to be located as per the design drawings, in the absence of this the manufacturers requirements shall apply. **(HOLD POINT)**

j) Clean up and backfilling against kerb;

Backfilling to kerb is not to occur until after curing has occurred. Where backfilling and turfing is required it shall be left 10mm below level of concrete finished level **(WITNESS POINT)**.

Site is to be cleaned of all debris, excavated material, and construction materials.

8303.7 Post Construction

a) Collection and submission of all As Constructed data including QA data requirements.

The Contractor is to supply and submit Works as Executed documentation as required by MRC D20 - *Drawings and Documentation* for approval by the Superintendent 14 days prior to requesting a practical completion inspection. **(HOLD POINT)**

Format of submitted "As Constructed" documentation shall be compliant with MRC Supplementary Specification 8919.

8303.8 Measurement and Payment



Provision for these works shall be included in the scheduled unit rate for the items show in Clause 8303.3 of this Supplementary Specification and annexure. No separate payment will be made for the works specified within this Supplementary specification or it's annexure.

Version Control:

Version	Description	Reviewed / Endorsed	Date
1.0	Original issue		05.08.2014
2.0	Review of specification	C. Sultana	13.03.2024