

Capability Statement: Geosynthetic Sand Containers (GSC's)



Geosynthetic Sand Containers (GSC's) commonly referred to as 'sandbags' can be used to mitigate erosion and protect assets in a variety of situations. Natural Area can custom manufacture GSC's to suit any application and have used bags ranging in size from 0.15 m³ to 1 m³ (approximate filled dimension). The bags are made from heavy grade geotextile and individually stitched.

Installation includes filling the bags on site using either imported fill or fill available on site, hand stitching the opening using an industrial sewing machine and then manoeuvring the bags into position. Depending on the size of the bag, a 'filling frame' may be required to fill the bags and an excavator may be required to manoeuvre them. Smaller bags can be manoeuvred by hand.

Natural Area have installed GSC's over a range of environments for protecting pathways, protecting tree roots, creating batters/embankments and for providing toe protection to riverbanks. Natural Area can provide initial advice on site, provide detailed drawings, supply and install all the required materials and tools.



▶ City of Melville, Jeff Joseph Reserve

Natural Area installed 100 GSC's at Jeff Joseph Reserve for the City of Melville. The river foreshore site was heavily eroded and was impacting the amenity of the area. The GSC's had a filled dimension of approximately 0.75 m²; all bags were filled on site using river sand and positioned into place using a small excavator. River sand eventually built up over the GSC's, so a natural environment was retained.

▶ City of Melville, Point Walter Foreshore

Natural Area installed GSC's at Point Walter Reserve to create an embankment to protect nearby pathways. The foreshore area was highly eroded and the installation of GSC's enhanced the amenity and aesthetics of the area. The GSC's had a filled dimension of approximately 1 tonne and were filled on site using river sand and manoeuvred into place using an excavator.

▶ City of Melville, Mount Henry Jetty

Natural Area installed 64 small GSC's to two areas adjoining the Mount Henry jetty in Mt Pleasant. The purpose of the works were to provide temporary protection to the adjoining pathway until such a time that a more detailed plan using rock could be prepared. GSC's were placed in a double layer revetment by hand.

▶ City of Mandurah, Riverside Foreshore

Natural Area supplied and installed 270 GSC's to a section of foreshore within the City of Mandurah. The GSC's had a filled dimension of 0.15 m³ (approximately) so could be manoeuvred into place by hand. The installation process was a joint effort by Natural Area and the City of Mandurah work crew and volunteers. The purpose of the work was to provide toe protection to a heavily undercut section of riverbank.