



ANDROMEDA

Reusable Industrial Materials

Reusables
Division

Brochure # 033 - 16
Erosion Control Materials
Holeybelt Grade B



Picture # 1 shows a bush track restored with landscape grade holeybelt. It is on a very steep hill in skeletal granite soils, which erode easily. Existing erosion gullies were first filled with soil, then the belt placed over it and secured in place. Already, six months after installation, the grasses are growing through the holes in the belt, and forming a thick vegetation layer under the belt to resist further erosion. This track is near Tamworth, on the McLaren's conservation project.

HOLEYBELT GRADE B - Erosion Control

What it is:

Holeybelt Grade B is disused woven conveyor belt from the mines of Australia. The older that it is, the better this mat will provide a grippy surface. It has had holes punched along its entire length. It is usually between 9mm and 12 mm thick.

What it does:

It provides a strong and durable membrane that allows water to pass through and grass to grow up through it. In time the belt virtually disappears, but still provides a heavy duty walk way through parks and over sand dunes.

Why it is used:

This product provides a remarkably cost effective track. Its low initial cost and estimated life of 100 years make it a great choice for beach areas subject to heavy traffic, both pedestrian and vehicular. As well, it can be removed for reuse elsewhere. Being a reused material, it also possesses low embodied energy, because it has not been reprocessed to any degree after its initial manufacture.

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Photo #2. Holeybelt walkway installed by Coastcare NSW provides an attractive and softer alternative to board and chain.



Photo #3. After 12 months the holeybelt virtually disappears and sinks into the ground, so that mowers can pass clear over it. This walkway is only 400 mm wide, yet is adequate for a lot of pedestrian traffic.



Photo #4. Holeybelt laid over a sandy track on Morton Island minimises the formation of wheel ruts. In this application the belt needs to be stretched somewhat and pegged down at the ends.

HOLEYBELT GRADE B - Erosion Control

The holes in the belt provide several benefits for erosion control :

- When installed on sloping ground, the inherent energy of the rainwater running down its length is dissipated. This minimises rutting at its lowest point, where erosion is most likely to occur.
- Provide flexibility for fixing when this is necessary, enabling the use of pegs, bearers, or helix anchors. It also provides substantial anchorage points for joining the belts, especially at an angle, using the wire twitch, known in the bush as the Cobb and Co hitch.

- Makes for an easy system of terminating the belts around a pole or bar, again using Cobb and Co hitches. (see detail in photo # 8)

- The mat provides a kind of linear mulch system, allowing the water to pass through, yet helping to conserve the ground moisture for the grasses to use as they grow through the belt. These grasses will in time form a vegetation layer which will provide cohesion to the soil under the mat.



Photo #5. Access to beaches on the intertidal zone can be tricky, even for experienced 4WD users. Many a vehicle has been stranded at this point to suffer various degrees of inundation with salt water when the tide rises. Here Holeybelt only about 40 metres long bridges the tricky portion, allowing secure escape from the beach, and also minimising disturbance of the sand.

Some technical details of Holeybelt Grade B

Width These sizes are commonly available	Thickness/weight Kg / m	Width These sizes only occasionally available	Thickness/weight Kg / m	Hole Details
800mm	9mm/11 - 12mm/14	1100mm	9mm/15 - 12mm/20	The standard holes are 20 mm dia, on a 45 x 45 grid. As well, a 90 x 90 grid can be made.
900mm	9mm/13 - 12mm/16	1200mm	9mm/17 - 12mm/22	
1000mm	9mm/14 - 12mm/18	1400mm	9mm/20 - 12mm/25	



Various methods of fixing.

These photographs show some of the common sense methods of fixing Holeybelt in the beach sand and bush environment, as used by various Government and Coastcare Departments.



Photo # 6: Shows the use of inverted U pegs, each about 700 mm long and 16 mm thick (deformed bar is best) driven into the sand at various points along the track. It is best to lay holeybelt on a hot day, and stretch it a bit before driving in the pegs. Use a 4 WD or tractor to stretch it.

Photo # 7: Shows Holeybelt fixed into sand with a hardwood bearer and marine ply gusset plate. This detail allows the Holeybelt to be easily removed and reinstalled in case it is disturbed by a tidal surge.

Photo # 8: This shows a good simple method of terminating a long piece of Holeybelt on the uphill end of a steep incline using a bush pole. The belt is returned round the pole and fixed with some Cobb and Co hitches. (use 2.5 mm soft tie wire for easiest results.) The pole is anchored to a suitable stump or tree or rock with some small wire rope or even fencing wire. This arrangement is quickly installed in the bush.



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Holeybelt Grade B is only one of many reusable industrial materials processed and supplied from Moonbi by Andromeda.

Others include:

Holeybelt Grade A - used for horse floats and vehicles, mats etc.

Splitbelt, standard and A grades - used for yards and general work.

Rubber Rails - used for horse yards and decorative fences.

Blasting Mats - used to control fly from blasting rock.

Staytight Yard Wire - used in cattle yards and feed lots.

Disposal Wire Rope - general work, desilting, vehicle recovery.