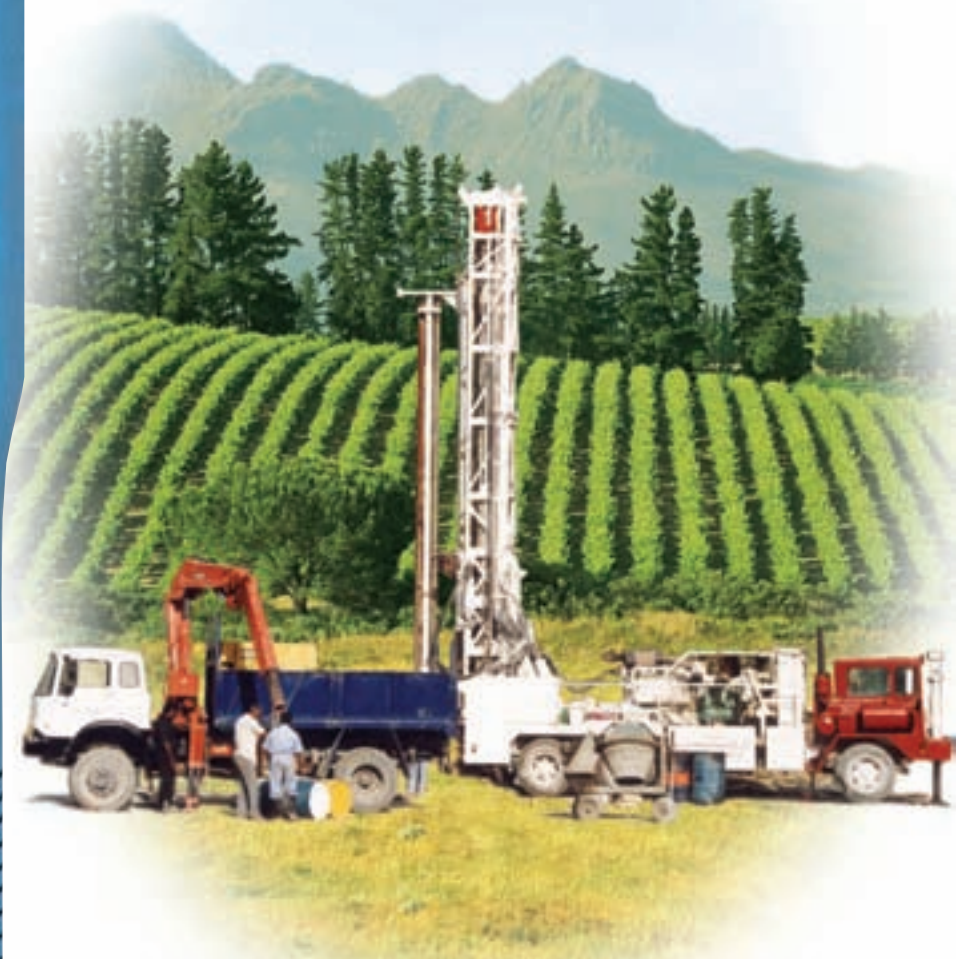


GeoScreen MonitorLine DuroScreen EnviroScreen

PVC & HDPE
**WELLSCREEN
& CASING**



MGS
Marton
Geotechnical
Services Ltd

2 Product ranges

MGS manufactures and supplies an extensive range of wellscreen and casings from different materials and specifications to suit individual applications.

Screens and casings are manufactured to dimensional standards such as DIN 4925, DIN 8062, DIN 8074/5, BS 3505 and ASTM 1875-6.

All MGS wellscreen and casing is manufactured from the highest grade certified resins using the latest extrusion, slotting and threading technology. Computer-aided equipment ensures the highest quality and tolerances are always achieved.

Applications

- ◆ Water Wells
- ◆ Groundwater Control
- ◆ Groundwater Monitoring
- ◆ Groundwater Remediation
- ◆ Contaminated Soil Monitoring
- ◆ Soil Washing
- ◆ Landfill Gas Recovery
- ◆ Landfill Leachate Extraction
- ◆ Geothermal Recovery
- ◆ Horizontal Directional Drilling
- ◆ Railway Track Drainage
- ◆ Embankment Stabilisation
- ◆ Geotechnical Investigation
- ◆ Geotechnical Instrumentation
- ◆ Cathodic Protection

GeoScreen & MonitorLine

A range of smooth and ribbed unplasticised PVC wellscreen and casing.

Diameters: 19-400mm

Joints: Flush, trapezoidal and BSP

Slots: 0.3-3mm

Available in the following specifications:

- ◆ Standard PVC
- ◆ Lead-free (organic) stabilised PVC
- ◆ Ink and print-free



DuroScreen

A range of standard UV-stabilised black HDPE wellscreen and casing.

Diameters: 32-630mm

Joints: Flush-threaded

Slots: 0.3-6mm



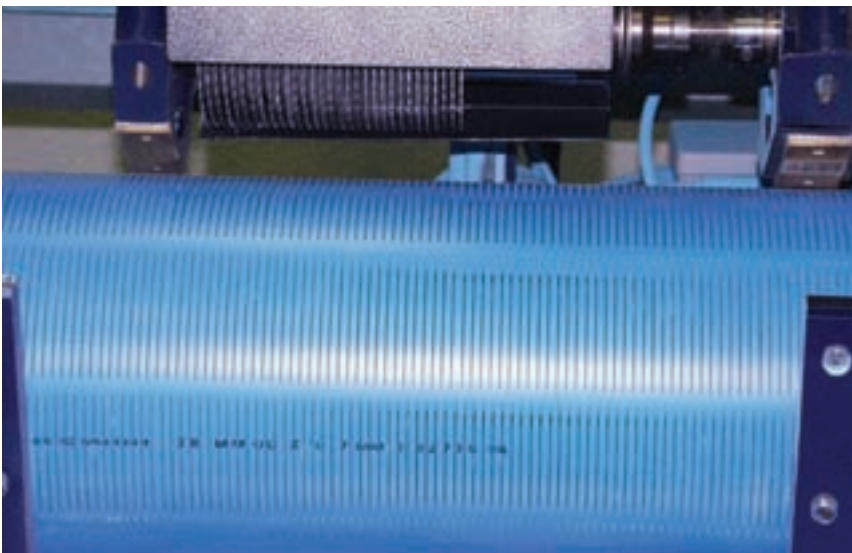
EnviroScreen

A range of natural (non-pigment) HDPE without ink markings.

Diameters: 32-160mm

Joints: Flush and BSP threaded

Slots: 0.3mm



MECHANICAL AND THERMAL PROPERTIES				
PROPERTIES	UNITS	TESTING METHOD	SPECIFICATION	SPECIFIED VALUE
Long term creep pressure For 1000 hours	N/mm2	DIN 53795	DIN 8061	10
Impact resistance at 23±2°C	%	DIN 53453	DIN 8061	Min 90
Water absorption	mg/cm2	DIN 8061	DIN 8061	Max 4
Heat reversion	%	DIN 8061	DIN 8061	Max 5
Density	gm/cc	DIN 53479	DIN 8061	1.4-1.45
Mean co-efficient of linear thermal expansion in the temperature range 0 to 70°C	k ⁻¹	DIN 53752	DIN 8061	0.8x10 ⁻⁴
Thermal conductivity	w/km	DIN 52612 Part 1	DIN 8061	0.15
Vicat softening temperature	°C	ISO 2507 Part 1	ISO 2507 PART 2	≥79
Surface resistance	Ω	DIN VDE 0303 Part 2	DIN 8061	>10 ¹²
Yield point	N/mm2	DIN EN ISO 527 Part 2	DIN 4925	45-55

**Standard lengths
(in metres)**

- 6.0
- 3.0
- 2.0
- 1.0

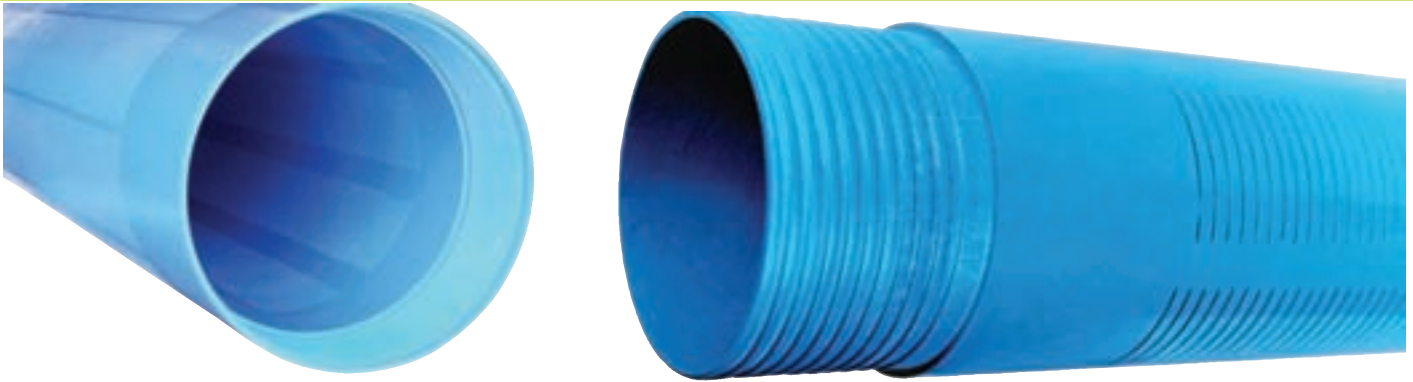
Other lengths are available on request to maximise efficient container loading.

For example:
5.8 2.9 & 2.2



OPEN AREA RATING OF SCREENS ACCORDING TO SLOT DIMENSION (IN ACCORDANCE WITH DIN 4925)							
NOMINAL SIZE DN	Slot 0.3mm	Slot 0.5mm	Slot 0.75mm	Slot 1mm	Slot 1.5mm	Slot 2mm	Slot 3mm
35	5.2%	6%	9.1%	9.4%	9.7%	12.1%	-
40	5.2%	6%	9.1%	9.4%	9.7%	12.1%	-
50	5.2%	6%	9.1%	9.4%	9.7%	12.1%	-
80	5.2%	6%	9.1%	9.4%	9.7%	12.1%	-
100	5.2%	6%	9.1%	9.4%	9.7%	12.1%	-
115	5.2%	6%	9.1%	9.4%	9.7%	12.1%	-
125	4.7%	5.6%	8.2%	8.5%	8.8%	11%	13.5%
150	-	5.6%	8.2%	8.5%	8.8%	11%	13.5%
175	-	5.6%	8.3%	8.5%	8.8%	11%	13.5%
200	-	-	8.3%	8.5%	8.8%	11%	13.5%
250	-	-	7.6%	7.9%	8.1%	10.2%	12.5%
300	-	-	7.6%	7.9%	8.1%	10.2%	12.5%
350	-	-	-	7.9%	8.1%	10.2%	12.5%
400	-	-	-	7.9%	8.1%	10.2%	12.5%

4 GeoScreen – Smooth Surface



CASING AND SCREEN WITH SMOOTH SURFACE IN ACCORDANCE WITH DIN 4925

NOMINAL DIAMETER	DIMENSION	OUTSIDE DIAMETER	WALL THICKNESS	OUTSIDE DIAMETER OF SOCKET	INSIDE DIAMETER	WEIGHT
ND (inch)	DN (mm)	mm	mm	mm	mm	Kg/m
Standard Wall - average collapse resistance 6 bar. Approximate installation depth 100m						
1.25"	35	42	3.5	46	35	0.64
1.5"	40	48	3.5	53	41	0.73
2"	50	60	4	66	52	1.0
3"	80	88	4	94	80	1.6
4"	100	113	5	121	103	2.5
4.5"	115	125	5	132	115	3.0
5"	125	140	6.5	149	127	4.05
6"	150	165	7.5	176	150	5.5
6"	155*	165	5	176	155	3.52
7"	175	295	8.5	205	178	7.5
8"	200	225	10	241	205	10.0
10"	250	280	12.5	297	255	15.6
12"	300	330	14.5	350	301	21.2
14"	350	400	17.5	425	365	31.0
16"	400	450	19.5	475	411	38.9
Thick Walled - average collapse resistance 14 bar. Approximate installation depth 300m						
4"	100	113	7	125	96.6	3.6
4.5"	115	125	7.5	137	110	4.3
5"	125	140	8	152	124	5.2
6"	150	165	9.5	180	146	7.3
7"	175	195	11.5	211	172	10.4
8"	200	225	13	247	199	13.7
10"	250	280	16	304	248	21.2
12"	300	330	19	359	292	29.7
14"	350	400	21.5	433	358	40.9
16"	400	450	23.5	490	403	50.3

IMPORTANT Installation depth

The maximum installation depth is determined by the collapse resistance and will vary up or down in accordance with actual ground conditions. The depths indicated above are based on practical experience and are intended only as a general guide. In solid unbroken strata, the suspended length equivalent to the joint strength can be approached or even exceeded if

there is a high water table. In unconsolidated formations, the installation depth is variable and consideration must be given to ground water and formation pressures and the presence, or otherwise, of a gravel pack.

During grouting, consideration must be given to a temperature increase and density.

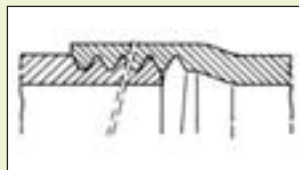
* Non DIN 4925 dimension

SCREEN WITH RIBBED SURFACE IN ACCORDANCE WITH DIN 4925						
NOMINAL DIAMETER	DIMENSION	OUTSIDE DIAMETER	WALL THICKNESS	OUTSIDE DIAMETER OF SOCKET	INSIDE DIAMETER	WEIGHT
ND inch	DN mm	mm	mm	mm	mm	Kg/m
1.5"	40	48	3.5	5.5	41	0.95
2"	50	60	4.0	6.0	52	1.31
3"	80	88	4.0	6.0	80	1.94
4"	100	113	5.0	7.5	103	3.11
5"	125	140	6.5	9.0	127	4.71
6"	150	165	7.5	10.0	150	6.30
8"	200	225	10.0	12.5	205	11.15

Thread Connections

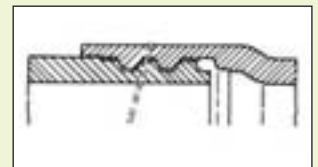
BSP

DIN 2999
DN35 (1.25") – DN50 (2")



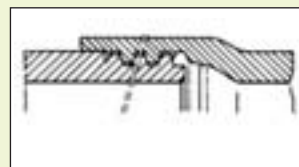
ROUNDED TRAPEZOIDAL

For use on heavy-duty large diameter DN250 (10") and above



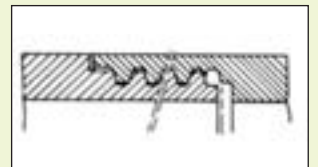
TRAPEZOIDAL

DIN 4925
6mm pitch
DN 80 (3") – DN200 (8")
12mm pitch
DN 250 (10") – DN400 (16")



FLUSH THREAD (TNA)

DIN 4925 modified



6 MonitorLine

DIN 8062					
OUTSIDE DIAMETER mm	INSIDE DIAMETER mm	WALL THICKNESS mm	WEIGHT approx kg/m	MAX JOINT STRENGTH load kN	COLLAPSE RESISTANCE bar
90	81.4	4.3	1.62	-	8.6
90	76.6	6.7	2.46	15	36.0
110	101.6	4.2	1.96	45	4.3
110	99.4	5.3	2.44	45	8.9
125	113	6.0	3.14	55	8.7
125	110	7.5	3.88	55	18.0
140	126.6	6.7	3.93	60	8.6
140	120	10.0	5.72	60	31.0
160	147.6	6.2	4.20	63	4.5
160	144.6	7.7	5.16	63	8.5
180	162.5	8.6	6.49	77	8.6
200	180.8	9.6	8.04	88	8.8
225	207.6	8.7	8.28	101	4.5
225	203.6	10.7	10.09	101	8.5
250	230.8	9.6	10.15	113	4.4
250	226	12.0	12.57	113	8.7
280	255	12.5	14.72	126	7.0
280	248	16.0	18.60	126	15.2
315	290.8	12.1	16.13	140	4.4
315	285	15.0	19.80	140	8.6
400	396.2	15.4	26.06	168	4.4
400	361.8	19.1	32.01	168	8.6

BS 3505						
NOMINAL DIAMETER Inch mm		OUTSIDE DIAMETER mm	WALL THICKNESS Min mm	INSIDE DIAMETER mm	WEIGHT kg/m	COLLAPSE RESISTANCE Bar
3/4	0.75	26.8	2.9	20.5	0.37	34
1	25	33.6	3.2	26.7	0.5	34
3	80	89	4.60	79.0	1.85	10
4	100	114.3	6.00	101.4	3.10	10
4.5	115	125	6.00	112.5	3.34	8
5	125	140	7.30	124.3	4.64	10
6	150	168.3	6.60	154.1	5.11	4
8	200	219.1	10.30	196.9	10.30	7.5
10	250	273	12.80	245.4	16.00	7.5
12	300	323.8	15.20	291.1	22.50	7.5
13	330	355	16.70	319.1	27.50	7.5
14	355	400	14.50	375.2	27.20	3.5
16	400	450	16.30	421.9	35.00	3.5



STANDARD SLOT WIDTH RANGE (showing average percentage area)	
0.20mm	3%
0.30mm	4%
0.40mm	5%
0.50mm	6%
0.75mm	9%
1.00mm	11%
1.25mm	13%
1.50mm	16%
2.00mm	20%
3.00mm	25%

DuroScreen and casing is used widely within the landfill industry for the extraction and monitoring of landfill gas (biogas). Other applications include groundwater monitoring, contaminated soil remediation, mining and landfill leachate extraction.

HDPE is highly resistant to the wide range of chemicals found within landfill and contaminated land and its physical properties, in particular its flexibility make it an ideal product for landfill engineering.

It is fully compatible with all metric-sized HDPE pipes.



Features

- ◆ Dimensions to DIN 8074/75
- ◆ Standard 10% open area
- ◆ Resistant to aggressive chemicals
- ◆ High strength, tough and durable
- ◆ Flush threaded joints
- ◆ Standard range of slot sizes from 0.3-6mm
- ◆ Standard perforation 12mm
- ◆ Standard 3 metre lengths
- ◆ Other lengths available (1.0, 2.0, 2.9, 5.8, 6.0 metres)
- ◆ UV stabilised (black)

OUTSIDE DIAMETER mm	DUROSCREEN 17			DUROSCREEN 11		
	INSIDE DIAMETER mm	WALL THICKNESS mm	WEIGHT kg/m	INSIDE DIAMETER mm	WALL THICKNESS mm	WEIGHT kg/m
32	-	-	-	25	3	0.28
40	-	-	-	32	3.7	0.44
50	-	-	-	40.8	4.6	0.70
63	-	-	-	51.4	5.8	1.05
90	-	-	-	73.6	8.2	2.12
110	97.4	6.3	2.08	90.0	10.0	3.14
125	110.8	7.1	2.66	102.2	11.4	4.08
140	124.0	8.0	3.34	114.4	12.8	5.11
160	141.8	9.1	4.40	130.8	14.6	6.67
180	159.6	10.2	5.48	147.2	16.4	8.42
200	177.2	11.4	6.79	163.6	18.2	10.40
225	199.4	12.8	8.55	184.0	20.5	13.10
250	221.6	14.2	10.6	204.4	22.8	16.20
280	248.2	15.9	13.2	229.0	25.5	20.30
315	279.2	17.9	16.7	257.6	28.7	25.70
355	314.8	20.1	21.2	290.4	32.3	32.60
400	354.6	22.7	26.9	327.2	36.4	41.40
450	399.0	25.5	34.0	368.0	41.0	52.40
500	443.4	28.3	41.9	409.0	45.5	64.60
560	496.6	31.7	52.5	458.0	51.0	81.10
630	558.6	35.7	66.5	515.4	57.3	102.50

8 DuroScreen

Specifications

FULLY SLOTTED (10% OPEN AREA)

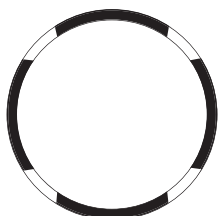
Slot sizes: 0.3, 0.5, 0.75, 1, 1.5, 2, 3 & 6mm
Standard axial slot spacing: 15mm
(Other axial spacing and slot sizes available on request).

PIPE DIAM (da)

63-90
110-140
160-225
250-280
315-355
400-450

NO. ROWS

2
3
4
5
6
8



FULLY PERFORATED (10% OPEN AREA)

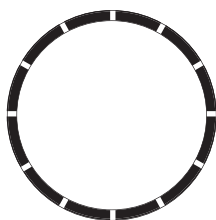
Standard hole diameter: 12mm
Standard axial hole spacing: 31.25mm
(Other hole sizes and axial spacings available on request)

PIPE DIAM (da)

63-90
110
125
140-180
200-225
250
280
315
355
400
450
500
560
630

NO. ROWS

6
8
9
12
15
18
20
24
30
30
28
32
36
40



MECHANICAL AND THERMAL PROPERTIES

PROPERTIES	STANDARD	UNIT	VALUE PE80	VALUE PE100
DENSITY	DIN53479	g/cm ³	0.953	0.96
MF1190/65	DIN53735	g/10min	0.7-1.0	0.3-0.55
TENSILE STRESS AT YIELD	DIN53455	N/mm ²	21	24
ELONGATION AT YIELD	DIN53455	%	10	8
TENSILE STRESS AT BREAK	DIN53495	N/mm ²	30-33	37
ELONGATION AT BREAK	DIN53455	%	>600	>600
MODULUS OF ELASTICITY (SHORT TERM)	DIN53457	N/mm ²	800	1000
MODULUS OF ELASTICITY (LONG TERM)	DIN53437	N/mm ²	150	150

EnviroScreen is a range of natural, non-pigmented HDPE screen and casing, without inked markings and specifically developed for high quality groundwater monitoring.

Standard slot size is 0.3mm which allows high quality borehole construction and for sand filter pack to be used even in the finest of soil formations.

EnviroScreen can also be packed in EnviroSeal, a tough, durable and moisture-resistant plastic cover which is hermetically sealed to minimise the risk of contamination in transport and on site.



Features

- ◆ Dimensions to DIN 8074
- ◆ Sizes from 32-125mm
- ◆ 0.3mm slot
- ◆ Natural HDPE
- ◆ No pigmentation
- ◆ No ink markings
- ◆ Standard 1m length
- ◆ Flush and BSP threaded joints
- ◆ Hermetically sealed in plastic bags



DIMENSIONS AND WEIGHTS

OUTSIDE DIAMETER mm	INSIDE DIAMETER mm	WALL THICKNESS mm	WEIGHT kg/m
32	26	4.0	0.30
35*	27	4.0	0.28
40	37	4.0	0.43
44*	35	4.5	0.5
50	41	4.5	0.66
63	51.4	5.8	1.05
75	66.4	4.3	0.98
90	79.8	5.1	1.39
110	97.4	6.3	2.08
125	110.8	7.1	2.66

* Non DIN 8074 dimension

10 Accessories

MGS also provides an extensive range of accessories made from both plastic and steel for all types of wellscreen and casing to meet all requirements for borehole completion.

Accessories include caps and plugs, centralisers, clamps and lifting adaptors, wellheads, borehole covers, filter pack and Bentonites.

THREADED PLUGS	THREADED CAPS	REDUCERS
		
LIFTING ADAPTOR	CENTRALIZERS	CLAMPS
		
SAMPLING & END CAPS		
		
PROTECTIVE COVERS		
		
PE CAPS, POINTS & PLUGS		
		



GEOFILTERS

MGS utilises the wide range of geotextile products currently available to produce the GeoFilter range.

All GeoFilters should be selected on the aquifer particle size and its uniformity co-efficient.

ADVANTAGES:

- ◆ Lower capital costs
- ◆ Smaller bore holes
- ◆ No gravel pack required
- ◆ Filters for different soils
- ◆ Easy to install

APPLICATIONS:

- ◆ Piezometers
- ◆ Groundwater monitoring wells
- ◆ Landfill gas monitoring wells
- ◆ Dewatering wells

RANGE:

- ◆ **GeoRap** – for pore sizes ranging from 100-450 microns and diameters from 19-500mm.
- ◆ **GeoSock** – A knitted polyester filter combined with an abrasion resistant outer cover. 650 micron pore size, diameters from 50-600mm.
- ◆ **GeoNet** – a highly tensile EVA sleeve which protects the Geofilter during transport and installation. Sizes 2-16"

MGS wellscreen and casing is distributed worldwide through an extensive network of sales representatives.

European distribution network ensures that stocks of standard items are available for immediate delivery.

Products are supplied in more than 60 countries in the four continents Europe, Africa, Asia and Australasia.

Worldwide users include drilling, geotechnical and civil engineering companies, municipalities, water authorities, public works departments, ministries, development banks, agricultural organisations, aid agencies and The United Nations.



GeoScreen MonitorLine DuroScreen EnviroScreen

Quality products for a quality environment



Geotechnical Centre, Rougham Industrial Estate, Rougham,
Bury St Edmunds, Suffolk IP30 9ND, England
t +44 1359 271167 f +44 1359 271168 e info@mgs.co.uk
www.mgs.co.uk