

PLASTIC MARINE SOLUTIONS



BEDFORD[®]
TECHNOLOGY

SeaPile[®]

SeaTimber[®]

SeaCamel[®]

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SEAPILE® & SEATIMBER®

SeaPile and SeaTimber are advanced composite plastics with superior properties to timber, steel and concrete for many marine structures and applications.

They can withstand heavy impacts by absorption of energy through recoverable deflection. SeaPile and SeaTimber never rot, corrode or decay. They are impervious to marine borers, yet are totally non-polluting.

Manufactured from a recycled plastic matrix with unique glass fibre reinforcement bars, the stiffness of SeaPile and SeaTimber can be varied and controlled to suit each project. This makes the material the ideal choice for fenders, to build marine structures, and for coastal protection without damaging the environment.

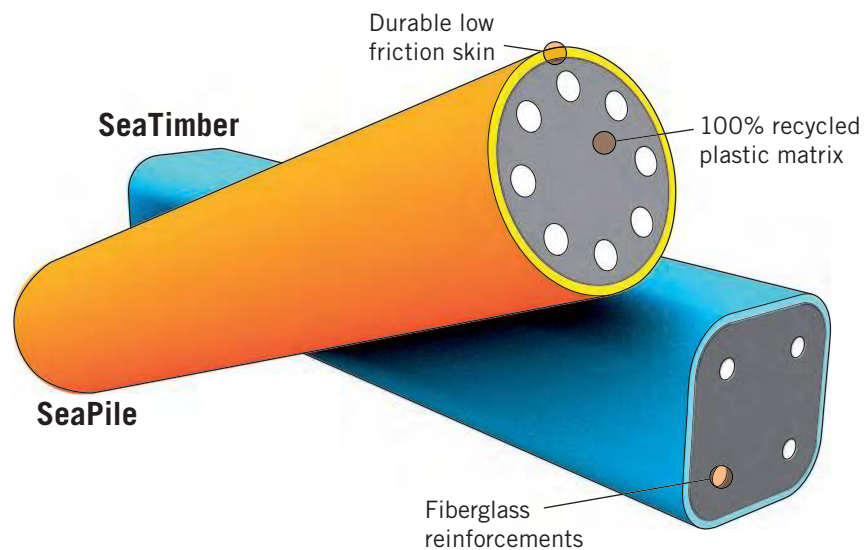
FEATURES

- › Low life cycle cost
- › Will not rot, corrode or decay
- › Unaffected by marine borers
- › Choice of modulus to suit different applications
- › Can be pile driven, sawn and drilled
- › Low friction coefficient
- › Ultra low maintenance
- › Custom colors available
- › Unlimited lengths*

APPLICATIONS

- › Fender piles and systems
- › Structural piles
- › Bridge protection
- › Guidewalls and locks
- › Corner fenders
- › Dolphins
- › Navigation markers
- › Walings and bullrails

*subject to transport restrictions

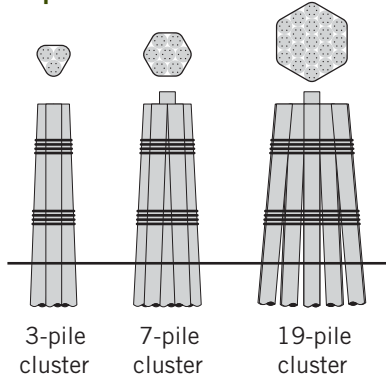




Applications

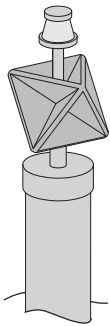
The SeaPile can generally be used in the same applications as traditional timber piling. Examples include:

Dolphins



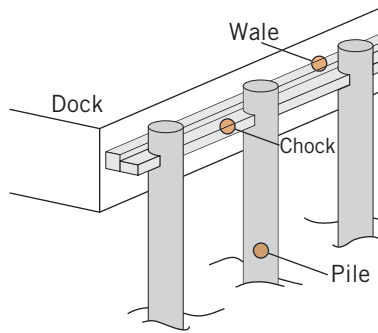
Dolphins, or groups of piles, are placed near piers and wharves to guide vessels into their moorings, to fend them away from structures, or to serve as mooring points. Compared with timber, considerably fewer SeaPiles are needed to absorb the same impact energy.

Navigational aids



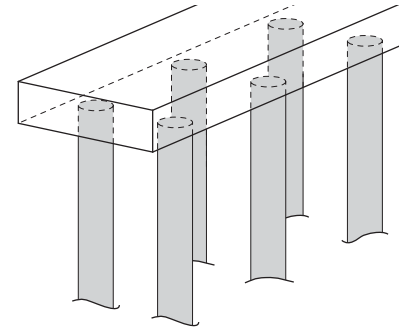
Single piles or dolphins are used to support lights, day beacons, fog signals, and radar beacons.

Fender piling



Piles are used extensively as vertical fenders set out in front of a marine structure. During the berthing of a ship, fender piles act as a buffer to absorb and dissipate the impact energy of the ship. They also provide a barrier to prevent vessels from going underneath the pier.

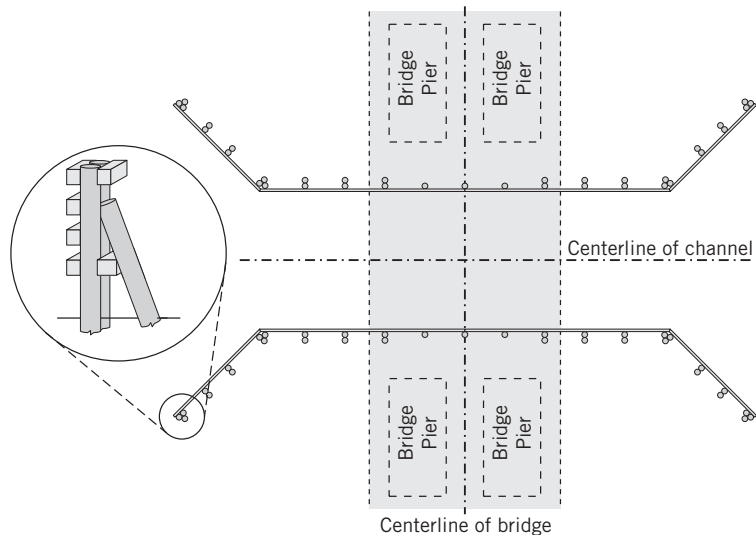
Light structural piling



Piles are used to support the loads of light-duty piers and wharves. Structural piling generally uses bracing between piles to increase the strength and stiffness of the foundation for the structure.

Bridge pier protection

Piles and dolphins are widely used to create protective structures for bridge piers, and to guide vessels into the channel and away from bridge supports. 3-pile clusters are used in impact zones, single piles in less vulnerable areas.

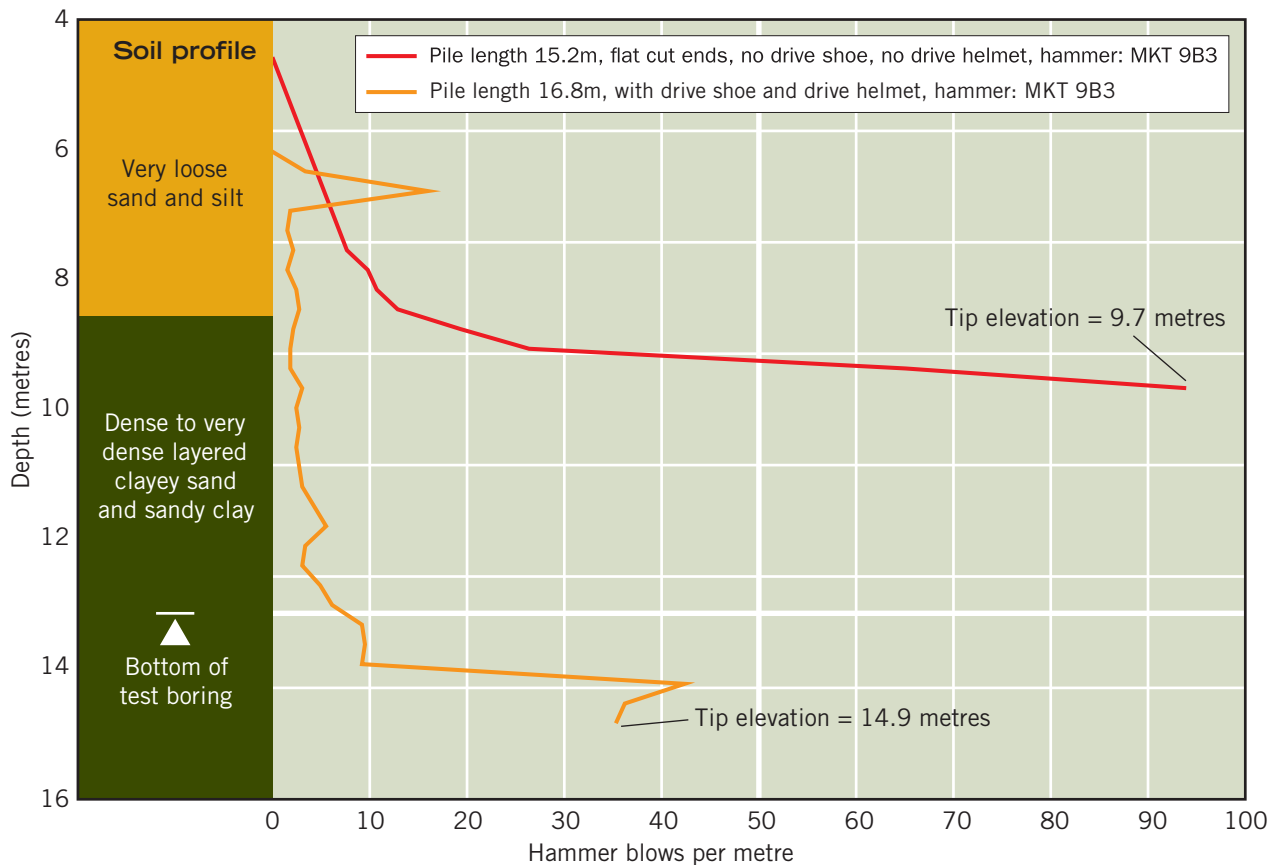


Installation



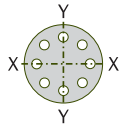
Various connecting methods are available to increase pile length. SeaPile and SeaTimber lengths can also be attached to steel pile extensions.

Pile driving data



Proven in Practice



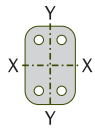


SeaPile Performance Data



SeaPile Section	Diameter		Rebar Qty	Rebar Size		Yield Strength*		Modulus of Elasticity*		Nominal Stiffness*		Weight	
	Inch	mm		Inch	mm	lb/in ²	MPa	lb/in ²	MPa	lb-in ²	kN-m ²	lb/ft	kg/m
10 SP 6F08	10	254	6	1	25	4830	33.3	302000	2083	1.48E+08	426	28-35	42-52
10 SP 8F08	10	254	8	1	25	5910	40.8	369000	2545	1.81E+08	520	29-36	43-54
13 SP 8F08	13	330	8	1	25	5170	35.7	345000	2379	4.84E+08	1388	43-50	64-74
13 SP 8F10	13	330	8	1.25	32	8180	56.4	481000	3317	6.74E+08	1936	44-52	66-77
13 SP 8F11	13	330	8	1.375	35	9830	67.8	562000	3876	7.88E+08	2262	45-53	67-79
13 SP 12F08	13	330	12	1	25	5740	39.6	377000	2600	5.29E+08	1517	44-52	66-77
13 SP 12F10	13	330	12	1.25	32	10110	69.7	613000	4228	8.59E+08	2467	46-54	69-80
13 SP 12F11	13	330	12	1.375	35	11380	78.5	759000	5234	1.06E+09	3055	47-55	70-82
13 SP 12F12	13	330	12	1.5	38	12840	88.6	885000	6103	1.24E+09	3562	49-57	73-85
13 SP 12F13	13	330	12	1.625	41	14960	103.2	1023000	7055	1.43E+09	4117	51-59	76-88
16 SP 16F08	16	406	16	1	25	6750	46.6	394000	2717	1.27E+09	3638	71-79	106-118
16 SP 16F10	16	406	16	1.25	32	9860	68.0	548000	3779	1.76E+09	5061	74-82	110-122
16 SP 16F11	16	406	16	1.375	35	11330	78.1	687000	4738	2.21E+09	6344	76-83	113-124
16 SP 16F12	16	406	16	1.5	38	12750	87.9	830000	5724	2.67E+09	7665	77-85	115-127
16 SP 16F13	16	406	16	1.625	41	14550	100.3	898000	6193	2.89E+09	8293	78-86	116-128
16 SP 16F14	16	406	16	1.75	44	16430	113.3	988000	6814	3.18E+09	9124	80-89	119-132

*Typical Performance +/- 10%



SeaTimber Performance Data

SeaTimber Section	Height		Width		Rebar Qty	Rebar Size		Yield Strength*		Modulus of Elasticity*		Stiffness*		Weight	
	Inch	mm	Inch	mm		Inch	mm	lb/in ²	MPa	lb/in ²	MPa	lb-in ²	kN-m ²	lb/ft	kg/m
8x12 0F00	8	203	12	305	0	-	-	2620	18.1	154000	1062	6.89E+07	198	31-38	46-57
8x12 4F08	8	203	12	305	4	1	25	3720	25.7	219000	1510	97969650	281	32-39	48-58
8x12 4F10	8	203	12	305	4	1.25	32	4360	30.1	290000	2000	1.30E+08	372	33-40	49-60
8x12 4F11	8	203	12	305	4	1.375	35	4670	32.2	311000	2145	1.39E+08	399	33-41	49-61
8x12 4F12	8	203	12	305	4	1.5	38	5140	35.4	343000	2366	1.53E+08	440	34-41	51-61
8x12 4F13	8	203	12	305	4	1.625	41	5450	37.6	379000	2614	1.7E+08	487	34-42	51-63
8x12 4F14	8	203	12	305	4	1.75	44	5800	40.0	414000	2855	1.85E+08	532	35-42	52-63
12x8 0F00	12	305	8	203	0	-	-	2740	18.9	161000	1110	1.60E+08	458	31-38	46-57
12x8 4F08	12	305	8	203	4	1	25	3660	25.2	242000	1669	2.40E+08	689	32-39	48-58
12x8 4F10	12	305	8	203	4	1.25	32	4360	30.1	349000	2407	3.46E+08	994	33-40	49-60
12x8 4F11	12	305	8	203	4	1.375	35	4860	33.5	389000	2683	3.86E+08	1108	33-41	49-61
12x8 4F12	12	305	8	203	4	1.5	38	5190	35.8	433000	2986	4.30E+08	1233	34-41	51-61
12x8 4F13	12	305	8	203	4	1.625	41	5680	39.2	486000	3352	4.82E+08	1384	34-42	51-63
12x8 4F14	12	305	8	203	4	1.75	44	5850	40.3	532000	3669	5.28E+08	1515	35-42	52-63
10x10 0F00	10	254	10	254	0	-	-	2700	18.6	159000	1097	1.23E+08	353	33-40	49-60
10x10 4F08	10	254	10	254	4	1	25	4610	31.8	278000	1917	2.15E+08	618	34-41	51-61
10x10 4F10	10	254	10	254	4	1.25	32	6140	42.3	351000	2421	2.72E+08	780	34-42	51-63
10x10 4F11	10	254	10	254	4	1.375	35	6960	48.0	398000	2745	3.08E+08	885	35-42	52-63
10x10 4F12	10	254	10	254	4	1.5	38	8280	57.1	460000	3172	3.56E+08	1022	35-43	52-64
10x10 4F13	10	254	10	254	4	1.625	41	8810	60.8	503000	3469	3.89E+08	1118	36-44	54-66
10x10 4F14	10	254	10	254	4	1.75	44	9790	67.5	560000	3862	4.34E+08	1245	37-45	55-67
12x12 0F00	12	305	12	305	0	-	-	2600	17.9	155000	1069	2.51E+08	722	42-51	63-76
12x12 4F08	12	305	12	305	4	1	25	4410	30.4	252000	1738	4.09E+08	1173	43-52	64-77
12x12 4F10	12	305	12	305	4	1.25	32	5310	36.6	295000	2034	4.78E+08	1373	44-52	66-77
12x12 4F11	12	305	12	305	4	1.375	35	6020	41.5	334000	2303	5.42E+08	1555	45-53	67-79
12x12 4F12	12	305	12	305	4	1.5	38	6740	46.5	375000	2586	6.08E+08	1746	46-53	69-79
12x12 4F13	12	305	12	305	4	1.625	41	7110	49.0	406000	2800	6.58E+08	1890	46-54	69-80

*Typical Performance +/- 10%