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Real Innovation

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PROJECT	NORTH MANCHESTER GENERAL HOSPITAL
PROJECT NUMBER	20200 MSCP
DOCUMENT NUMBER	20200-SEL-XX-XX-SP-X-0004
TITLE	SUDSBASE30 AGGREGATE ATTENUATION SYSTEM
REVISION	P01
STATUS	S2
	FOR INFORMATION

Product Description

SudsBase30 Aggregate is a graded, low fine's, crushed aggregate with a maximum nominal aggregate size of 40mm. It is designed to have a void ratio of greater than 30% and can be used solely or in junction with Drainagg 20*.

It has also been designed to be used directly below paver laid asphalt. This will alleviate the need for any additional requirements such as blinding prior to carrying out the surfacing works.

Laid thickness will be dependent on ground conditions/construction methods and final application and guidance can be gained from either Aggregate Industries SUDS Design Guide where a direct replacement of Drainagg 20 and accompanying information can be used or alternatively contact your Specification Manager or Technical Manager.

(* If used above Drainagg 20 then there will be a requirement to lay a geotextile such as Charcon Permafilter between the 2 layers)

Property	Specification
Mixture requirements	
• Designation	0/40
• Max fines	UF ₅
• Oversize	OC ₈₀
• Overall grading	GO
• Crushed and uncrushed gravel	Not permitted
Resistance to fragmentation	LA _{30 max}
Durability	
• Water absorption to BS EN 1097-6:2000, Clause 7.	WA ₂₄₂
• For WA>2%, magnesium Sulphate Soundness	MS ₁₈
Void ratio	Vmin30
Passing 425 micron	Non-plastic

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SudsBase30
Laying and Compaction Requirements

Laying

SudsBase30, the material shall be placed and spread evenly. Spreading shall be undertaken either concurrently with placing or without delay; levelling off the material to an even depth.

Material laid up to 225 mm compacted thicknesses shall be spread in one layer so that after compaction the total thickness is as specified. Material of compacted thickness greater than 225mm shall be laid in two or more layers and the minimum compacted thickness of any such layer shall be 100mm. Where the layers are of unequal thickness, the lowest layer shall be thickest layer.

Compaction

Compaction shall be completed as soon as possible after the material has been spread.

Compaction of the material shall be carried out by a method specified in Table 1 with the following applying.

- The number of passes is the number of times that each point on the surface of the layer being compacted shall be traversed by the item of compaction plant in its operating mode (or struck in the case of Power Rammers).
- The compaction plant in Table 1 is categorised in terms of static mass. The mass per metre width of roll is the total mass on the roll divided by the total roll width. Where a smooth wheeled roller has more than one axle, the category of the machine shall be determined on the basis of the axle giving the highest value of mass per metre width.

The surface of any layer of material shall on completion of compaction and immediately before overlaying, be free from movement under construction plant and from ridges, cracks, loose material, potholes, ruts or other defects.

Table 1: Compaction requirements for SudsBase30

Type of Compaction plant	Category	Number of passes for layers not exceeding the following compacted thicknesses		
		110mm	150mm	225mm
Smooth wheeled roller (or vibratory roller operating without vibration)	Mass per metre width of roll: Over 2700kg up to 5400kg	16	Unsuitable	Unsuitable
	Over 5400kg	8	Unsuitable	Unsuitable
Pneumatic tyre roller	Mass per wheel: Over 4000kg up to 6000kg	12	Unsuitable	Unsuitable
	Over 6000kg up to 8000kg	12	Unsuitable	Unsuitable
	Over 8000kg up to 12000kg	10	16	Unsuitable
	Over 12000kg	8	12	Unsuitable
Vibratory roller	Mass per metre width of vibrating roller: Over 700kg up to 1300kg	16	Unsuitable	Unsuitable
	Over 1300kg up to 1800kg	6	16	Unsuitable
	Over 1800kg up to 2300kg	4	6	10
	Over 2300kg up to 2900kg	3	5	9



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	Over 2900kg up to 3600kg	3	5	8
	Over 3600kg up to 4300kg	2	4	7
	Over 4300kg up to 5000kg	2	4	6
	Over 5000kg	2	3	5
Vibrating plate compactor	Mass per square metre of base plate:			
	Over 1400kg/m ² up to 1800kg/m ²	8	Unsuitable	Unsuitable
	Over 1800kg/m ² up to 2100kg/m ²	5	8	Unsuitable
	Over 2100kg/m ²	3	6	10
Vibro-tamper	Mass:			
	Over 50kg up to 65kg	4	8	Unsuitable
	Over 65kg upto 75kg	3	6	10
	Over 75kg	2	4	8
Power rammer	Mass:			
	100kg up to 500kg	5	8	Unsuitable
	Over 500kg	5	3	12