

PERFECT-PITCHING

PRIVATE CARAVAN SITE DEVELOPMENT CONSULTANCY

ROADS & HARDSTANDINGS:

Hard Surfaces - Overview:

‘Hard Surfaces’ is something of a generic term covering access and/or circulation routes within a site in general and, more specifically, stable pitching areas.

Both ‘Hard Surfaces’ have specific functional demands performing to different sets of criteria dictated largely by end-user’s requirements.

That said, certain basic design considerations are common to both:

- ‘Hard Surfaces’ should only be considered if the natural ground conditions fall short of the performance requirements.

Apart from the aesthetic considerations, which will be addressed later, the installation of ‘Hard Surfaces’ will add additional cost to the development, and, accordingly, should only be considered as a last resort.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Overview (Cont'd):

- 'Hard Surfaces' should be durable, low maintenance and withstand not only the weight of the vehicles traversing them but also the tyre scrub from differential tracking caused during manoeuvring of heavy multi-axel vehicles and/or towing combinations.
- 'Hard Surfaces' potentially can detract from the overall aesthetics of a Site and care should be taken to mitigate this effect wherever possible by carefully considering:
 - Extent and scope of works - thus avoiding a car-park feel, and
 - Choice of topping materials – such that the 'Hard Surfaces' should be complimentary to the general site ambience and not at variance with it.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Overview (Cont'd):

That said, the economic availability of alternative materials (natural stone/road planings) may be a major factor in any decision making.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction:

There is something of a misconception that poor ground conditions can be mitigated merely by the importation and installation of successive layers of hardcore or other granular material.

Likewise, there is a range of proprietary systems on the market which, if used in isolation as a one-stop solution to poor ground conditions, may not always achieve the impressive performances claimed.

The basic physics is that if the ground substrate is poor then no matter what is added to the surface the desired performance could be compromised.

To maximise the stability of what would otherwise be unstable ground, the various construction options need to be considered elementally:



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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Substrate Stability:
 - The introduction of a nonwoven geotextile mechanically and thermally bonded membrane laid on the exposed substrate before overlaying with granular material effectively reinforces the unbound granular overlayer preventing migration and compression into the underlying substrate.
 - The prevention of the layers intermixing under the imposed load of trafficking mitigates the resultant loss of bearing strength in the overlayer and potential for rutting and surface deformation.



Without Geotextile Membrane



With Geotextile Membrane

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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Substrate Stability (Cont'd):

The benefits of incorporating a geotextile membrane can include:

- The possibility of reducing the depth of granular material with a potential cost saving whilst at the same time achieving the required performance levels.
- Providing a weed deterrent barrier reducing the need for and reliance on chemicals in the control of same with a resultant:
 - Saving in maintenance, and
 - Avoiding potential Health & Safety issues of young children and pets coming into contact with chemicals in the course of play and recreation.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Substrate Stability (Cont'd):

The most common of the geotextile trade names is 'Terram' supplied through a variety of alternative manufacturers with costs typically ranging between 50p and £1.00 per square metre largely dependant upon quantity purchased.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Granular Fill:
 - Traditionally this comprised of builder's hardcore (bricks, blocks and concrete) as being the most easily available and economic material.

To this can be added road planings and natural aggregate but these alternatives come at an additional cost and may not be as easily sourced.

The difference between these two basic specifications – hardcore -v- road planings and/or natural aggregate is where the end-users requirements come into play:

- For access and/or circulation within a site - the issue is merely one of withstanding the loadings imposed by successive trafficking.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Granular Fill (Cont'd):

In respect of stable pitching areas - other factors come into play not least a visitor's wish to erect an awning for all but the shortest of stays.

For this to be possible the 'hard surface' must be capable of accepting plastic or metal pegs and this may prove difficult, bordering on impossible, if the load bearing bed comprises of large pieced hardcore.

Conversely, the smaller composition of road planings and/or natural aggregates is less restrictive and, thus, more accommodating.



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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Granular Fill (Cont'd):

This may appear to be a secondary requirement but the ability to easily accept awning pegs can be a major satisfaction issue for many would-be visitors and a potential source of dissatisfaction jeopardising the prospect of return and/or regular visits.



There may be a temptation, on cost and/or material availability grounds, to consider the pitching area as two separate elements:



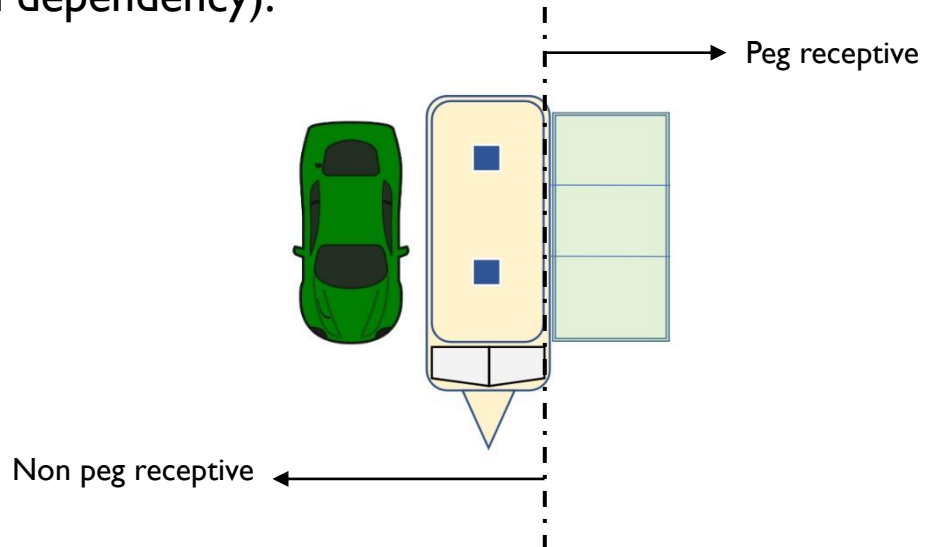
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ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Granular Fill (Cont'd):
 - The part occupied by the awning (with a dependency on pegging) and
 - The part occupied by car/caravan/motorhome (with no such dependency).



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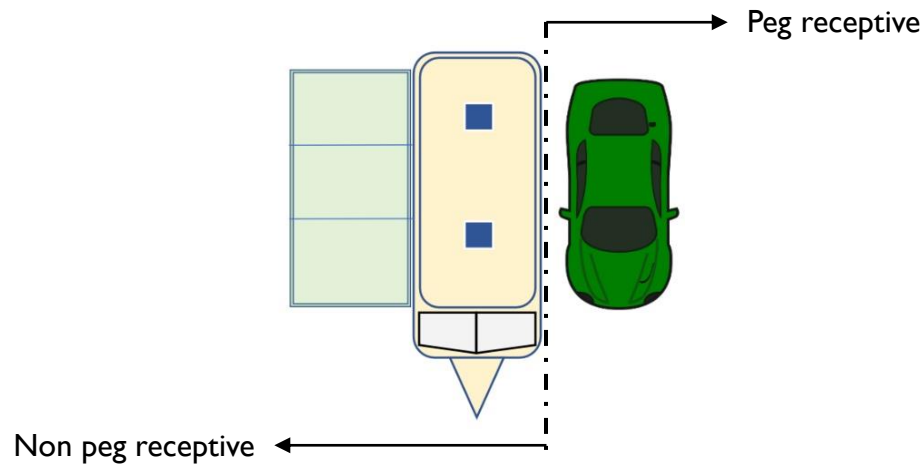
ROADS & HARDSTANDINGS:

Hard Surfaces - Design & Construction (Cont'd):

- Granular Fill (Cont'd):

However, sight should not be lost of the fact that continental caravans and/or motorhomes are not uncommon in the UK.

With the access door on the opposite side to the UK models, the reversed configuration will leave the awning in a non peg receptive area and not suitable for continental tourers.



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ROADS & HARDSTANDINGS:

That concludes the 'taster' edition for this Design Consideration which we trust you have found interesting, informative & imaginative in equal measures.

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