

- OVERALL CONSTRUCTION
- EDGED VS NON-EDGED
- PERMEABLE VS NON-PERMEABLE
- COLOUR
- CHOICE OF CONTRACTOR

ALTERNATIVE CONSTRUCTION METHODS ADVANTAGES AND DISADVANTAGES

Background

- Project initially aimed to connect footpath from "Cricket Gates" to Pavilion along Southern boundary. Subsequent discussions led to the decision to extend this to encompass the whole perimeter with two main aims:
 - 1. To enable access to the whole field for all, including wheelchair users and, e.g., parents with baby buggies.
 - 2. To enable use in all weathers by, e.g., joggers and dog walkers.
- The poor condition of the field led us to include drainage improvement in the overall project
- Four experts were consulted regarding a tarmac surface, as used in Mayfield, Battle and others
- Two experts were consulted regarding alternative surfaces

Option 1: Tarmac Path



- We have one leading from the Car Park to the Accessible Car Park.
- It is 1.2m wide with concrete edging.
- It is well-used and has greatly improved both safety and access to the Adult Exercise Equipment, Children's Playground and Picnic area.
- Observation suggests that a 1.5m wide path would be better, to allow easy passing.
- This is a mock-up of the suggested no-edge path along the Southern Boundary.
- The companies quoting for the work variously recommended no-edge, concrete-edge and timber-edge
- Cost Estimates (path only): £42k-£88k



Option 2: Gravel Circles

This system uses the same aggregate base as tarmac surfaces but is topped with recycled plastic mouldings infilled with crushed gravel. It is a popular choice for car parking, providing drainage with a secure surface.





The plastic grid can be seen in this car park application using pea shingle not crushed gravel. An alternative infill with a different mesh is earth and grass.

This mock-up, based on the above picture, gives an idea of appearance (the lean is not intentional!) Cost Estimate: £38k



Option 3: Farmyard Panels



Recycled plastic Ground Stabilising Slabs are used extensively in farmyards and even military training areas. They require no aggregate base and grass is encouraged to grow through the holes

This mock-up, using a picture from an actual installation, shows the Southern boundary

Cost Estimate: £33k



Option 4: Grass Mesh-Matting

This was considered in the early stages of the project and so is included here. It requires a welldrained surface, and that is not possible on the Playing Fields.

It has not been included in the further Assessment.



Costs

	Tarmac	Gravel Circles	Farmyard Panels
Prepare Base	£20k	£20K	-
Edging	£25k	-	-
Top Surface Material	£10k	£6k + £6k	£27k
Top Surface Labour	£12k	£6k	£6k
TOTAL	£67k/£42k	£38k	£33k

NOTES

- 1. The Tarmac Costs are calculated from the detailed estimate factored to the cheapest estimate. The cost in Italics is with Edging.
- 2. The Gravel Circle and Farmyard Panel costs are derived from the Tarmac estimates and quoted bulk prices for materials. We do not have firm quotations

Criteria and Weighting

The following Criteria and weightings have been used to compare the systems:

- 1. Suitability for Wheelchair Users (5)
- 2. Suitability for All-Weather use (5)
- 3. Ecological Impact (3)
- 4. Visual Impact in AONB (3)
- 5. Long-Term Durability (3)
- 6. Maintenance Requirements (3)
- 7. Installation Cost (8)

The choice of weighting of these criteria is debatable – try others. We use them to compare the systems to the existing surface. So, a system that was no better or worse than existing would score 0. A system that looked OK but not as good as existing would score -1. A system that was good in all weathers would score +5

Comparison of Options

Criteria	Existing	Tarmac/ & Edging	Gravel/Grass Circles	Farmyard Panels
Wheelchair 5	0	+5	+3	+2
Weather 5	0	+5	+5/+3	+4
Ecological 3	0	-3	-2/-1	-1
Visual 3	0	-2	-3/-1	-3
Durability 3	0	+3	+2/+1	+1
Maint'ce 3	0	0	-2/-1	-1
Cost 8	0	-5/-8	-6/-4	-3
Total Score	0	+3/0	-4/-1	-2
Score - Cost	0	+8/+8	+2/+3	+1

It must be stated that the criteria and weighting are highly debatable. Readers are invited to propose and test their own alternatives with the warning that these must not be chosen to favour one system over another but based on very clear criteria. This sheet has undergone numerous revisions as readers suggest changes, but all outcomes have been the same, that the unedged Tarmac is optimal.

EDGED VS NON-EDGED ADVANTAGES AND DISADVANTAGES

EDGED PATH ASSESSMENT

- + Safety: Visual edge
- + Neater appearance
- + More robust edge to surrounding soil
- + National Trust use timber edging
- + Matches existing path sections
- Safety: Potential trip hazard
- Appearance: Draws attention to path
- Battle and Mayfield examples successfully use non-edged
- Cost: Additional £25,000 for concrete, £15,000 for timber

The Non-Edged Path has the opposite characteristics. On balance, the Committee decided that the Non-Edged Path was best suited to this application as it would blend into the background, our footfall would be a fraction of that at NT properties so durability was less of an issue, and the higher costs did not yield any significant benefit.

PERMEABLE VS NON-PERMEABLE ADVANTAGES AND DISADVANTAGES

PERMEABLE SURFACE ASSESSMENT

- + Drains surface into subsoil and eliminates puddles.
- + Allows any build up of water pressure under the path to dissipate.
- + Rougher surface provides extra grip.
- Run-off will drain into the surrounding subsoil anyway the total exiting into the drain channel at the end of the field will be the same whether or not the path is permeable.
- = Cost: Cost appears to be similar for both grades, the main difference being the size of the aggregate in the mix.
- Rougher surface needs more effort from wheelchair and buggy users.
- Durability: A minor issue as our loading will be low.

The Non-Permeable surface has the opposite characteristics. The default preference of the Planning Authority is permeable. The biggest trade-off is between providing a smooth surface for ease of pushing and a rough surface for grip. Given that some steep gradients are inevitable, we decided that the permeable surface is preferable.

PATH COLOUR OPTIONS

PATH COLOUR ASSESSMENT

- The image shows the colour options available.
- Colours such as these would add ~£6,000 to the price though we may be able to negotiate a discount.
- A dark green (highlighted) *may* blend better with the surrounding grass but this is a matter of opinion.
- The Battle and Mayfield paths are both 'black' as is our existing pathway. None seem out of place.
- On balance, we will go with 'black'



CHOICE OF CONTRACTOR

Choice of Contractor

- Three quotes were obtained:
 - 1: National Contractor
 - 2: Local Contractor and have worked for us before
 - 3: National Contractor
- Quote 1 was highest and they were unwilling to engage in discussion of options to reduce it.
- Quote 2 were cheapest, at £45,000 for the path but they were unwilling to quote for the drainage work, and their specification for the path surface was single layer instead of a sub-base and top-coat.
- Quote 3 was £52,000 for a higher specification path than Quote 2. They were also willing to carry out both path and drainage work at the same time, reducing our project management burden.

We decided to go with Quote 3 on the basis that they would manage the whole project. The total cost eventually proved similar to that for Quote 2 and an independent drainage contractor.