



Mr B Levy
Broadoak
Copse Lane
HAYLING ISLAND
PO11 0QB

My Ref: D1908AIAL4

22nd April 2020

Dear Mr Levy,

**RE: BROADOAK, COPSE LANE, HAYLING ISLAND PO11 0QB
PROPOSED DEVELOPMENT**

For clarity in the above application, I have looked again at the proposals for the access and its surfacing. In the previous submissions I said :

- 3.1 New surfacing:** A new secondary access is proposed, approximately equidistant between trees T2 and T3, and partly within their root protection areas. Special surface construction is proposed for this access. The vegetation layer, a nominal 50mm, will be removed. A geotextile membrane shall be installed on the newly exposed surface with no further excavation. A cellular confinement layer shall be installed over the geotextile and filled with an angular fill. This will be levelled off with an additional bearing course and topped off with a wearing course. For a comparatively narrow domestic drive access the use of tarmac makes little difference to the water regimes in the soil, but the wearing course may be block pavements or gravel for additional permeability. The materials should be installed in accordance with the manufacturer's specifications in relation e.g. to vehicle loading and soil characteristics. The manufacturers provide a design and specification service. The construction can be edged with a pinned timber kerb e.g. sleepers, or by using a soil batter sloping back from the access edges. The use of this installation method will reduce the risk of damage to retained trees from this aspect of the development to a minimal and acceptable level.

For the avoidance of doubt, I propose that the installation uses products manufactured and supplied by Geosynthetics Ltd, typically from their 'Cellweb™' range of products, specified and installed in accordance with their recommendations, as set out at Appendix

1. For this application the 150mm cell depth should be sufficient, with the cells filled with 40-20mm clean angular non-calcareous stone (no fines). I understand that the final 'wearing' course is proposed as gravel, and a section showing the installation of this is attached to this letter at Appendix 2. The specification shall apply to the whole area of surfacing including both road accesses and all surfacing across the front elevation of the dwelling.

I recommend that this letter with its Appendices is supplied to the Local Planning Authority so that they may be able to refer to it in their planning permission.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jonathan Fulcher', written in a cursive style.

Jonathan Fulcher **DipArb FARborA**

Appendix 1
Broad oak, Hayling Island
Method Statement for installation of special surfacing

Geosynthetics Ltd
Fleming Road
Harrowbrook Industrial Estate
Hinckley, Leicestershire
LE10 3DU
Tel 01455 617139 Fax 01455
617140
sales@geosyn.co.uk
www.geosyn.co.uk

Method Statement

**For The Installation of
Cellweb Tree Root Protection System.**



When considering damage to tree roots, in applications of vehicular access and parking, the risk of oxygen depletion caused by compaction of subsoil's, site clearance damaging the root source and type of reinforcement are areas which need to be given due consideration.

Other risk factors are:

- Creating an impermeable surface
- Causing a rise in the water table due to construction
- Increasing ground level
- Contamination of subsoils

1. Compaction

When looking at site conditions and use, the following information should be considered to enable a load bearing structure capable of supporting traffic to be proposed:

- Californian Bearing ratio
(CBR) – Standard test method
for measuring soil strength
- Soil types

- Water table
- Maximum load (vehicles)
- Acceptable rut depth
- Reinforcement type Cellweb Cellular Confinement
- Type and Depth of engineered infill material Clean, angular. Usually 40mm to 20mm.

2. **Dig (site strip)**

Site stripping does damage some root structure prior to construction; however, the use of no-dig construction elevates the access road requiring edge protection.

3. **No dig**

- | | |
|---|--|
| 3.1. Remove surface vegetation | Use a suitable herbicide suitable for the specific vegetation and not harmful to the tree root system |
| 3.2. Place geotextile separation filtration layer | Use a Fibretex F4M non woven Geotextile over the prepared sub-grade. Overlap dry joints by 300mm. |
| 3.3. Cellular Confinement System | The three dimensional cell structure, is formed by ultrasonically welding polyethylene (perforated) strips / panels together to create a three dimensional network of interconnecting cells. A high degree of frictional interaction is developed between infill and the cell wall, increasing the stiffness of the system |
| 3.4. Edge restraint | A treated timber edging is usually acceptable. |

4. **Cellular Confinement and Backfill Material.**



construction thickness of the granular material.

Expand the Cellweb 2.56m wide panels to the full 8.1 metre length. Pin the Cellweb panels with staking pins to anchor open the cells and staple adjacent panels together to create a continuous mattress. Infill the Cellweb with a no fines angular granular fill (typically 40-20mm) within each open cell. The use of cellular confinement reduces the bearing pressure on the subsoil by stabilising aggregate surfaces against rutting under wheel loads. Comparisons between cellular confinement and traditional aggregate and geogrid-reinforced structures demonstrate a 50% reduction in

5. Surfacing Options

Block Paving:

- 5.1. Lay second layer of Fibretex F4M Geotextile separation fabric over the infilled Cellweb sections
- 5.2. Lay sharp sand bedding layer compacted with a vibro-compaction plate to recommended depth.
- 5.3. Place block paviments as per manufacturers instructions.

Tarmac:

- 5.4. Place 25mm surcharge of the granular material above the Cellweb system and lay the bitumen base and wearing courses.

Loose Gravel:

- 5.5. Place second layer of Fibretex F4M Geotextile separation fabric over the infilled Cellweb sections
 - 5.6. Place decorative aggregate to required depth
- NOTE: A treated timber edge should be provided to restrict gravel movement.

Grass Blocks:

- 5.7. Place second layer of Fibretex F4M Geotextile separation fabric over the infilled Cellweb sections
 - 5.8. Place 50/50 root-zone bedding layer to the required depth
 - 5.9. Lay recycled Duo Block 500 Grass Protection System infilled with 50/50 root-zone mix.
 - 5.10. Seed as per architects instructions.
- (Alternatively the Grass Blocks may be infilled with gravel.)

Appendix 2
Broad oak, Hayling Island
Section through installation of special surfacing
with gravel wearing course

