CLAIMS:

1. A structural element made from sheet material that is deformed at intervals along its length and width to provide pods that protrude from the plane of the sheet where the walls of the pods slope obliquely relatively to the plane of the sheet, wherein at least two sheets are formed with such pods, and two of the sheets are juxtaposed to each other in mirror-image, or facing, fashion, with floors of the pods engaging in contact zones.

2. A structural element in the form of a structural panel consisting of two outer sheets that act as the tensile and compression chords, both with multiple inwardly orientated pods throughout the panel and who's apexes are joined together, which have a close proximity one to another in order to be mechanically interdependent creating a double depth space-frame lattice type matrix where loads placed on the panel's surface are resisted and transferred through the chords and with the pods acting as interconnecting diagonal braces.

3. A structural element according to claim 1 or claim 2, wherein the two engaging sheets are joined in the contact zones to provide a unitary element formed of the two sheets.

4. A structural element according to any one of the preceding claims, wherein the pods are frusto-conical in shape.

5. A structural element according to any one of the preceding claims, wherein the floor of the pod is circular.

6. A structural element according to any one of the preceding claims, wherein a part of the floor or base of one or more of the pods is removed leaving a flange.

7. A structural element according to any one of the preceding claims, wherein one or more of the pods has more than one side composed primarily of a flat area.

8. A structural element according to any one of the preceding claims, wherein the mouths of the pods are substantially square.

9. A structural element according to claim 8, wherein the pods occupy substantially the whole of the upper reference plane, just leaving a grid for that upper plane where the pods meet at their upper edges.

10. A structural element according to any one of the preceding claims, wherein the pods leave spaces between them in the material of the plane of the or each sheet around the pods.

11. A structural element according to claim 10, wherein the material of the plane of the sheet around the pods is provided with strengthening portions, such as corrugations, ridges or folds.

12. A structural element according to any one of the preceding claims, wherein the connected pods form substantially diamond beam formations with adjacent connected pods such that multiple diamond beam structures are formed in the structural element in the negative spaces immediately between pairs of joined pods.

13. The structural element of claim 12, wherein the substantially diamond beam structure has a flattened top and/or bottom that defines a frustum and the frustum's minimum width on a given diamond beam is no more than half the width of the diamond at that section.

14. A structural element according to any one of the preceding claims, wherein the depths of the pods are in the range of 7 to 20mm.

15. A structural element according to any one of the preceding claims, wherein the sides of the pods are predominantly at an angle between 70 and 80º from the plane of the upper or lower surface of the structural element.

16. A structural element according to any one of the preceding claims, wherein between 10 and 40% of the surface of the sheets remain in the reference plane.

17. A method for producing a structural element comprising providing a sheet material, deforming deformed it at intervals along its length and width to provide pods that protrude from the plane of the sheet where the walls of the pods slope obliquely relatively to the plane of the sheet, providing a second sheet, deforming it at intervals along its length and width to provide pods that protrude from the plane of the second sheet where the walls of the pods slope obliquely relatively to the plane of the second sheet, juxtaposing the two sheets such that the pods are juxtaposed to each other in mirror-image or aligning fashion and such that floors of the juxtaposed pods engage in contact zones, and joining the sheets in the contact zones to provide a unitary element.

18. A method according to claim 17, wherein the two sheets are deformed at the same time.

19. A method according to claim 17 or claim 18, wherein the deformation is a single pass pressing action.

20. A pallet comprising a structural element according to any one of claims 1 to 16.