



Figure 3.4 Photograph of roughened surface.

Minimizing the amount of disturbance on a site

The layout of a site must consider and address the physical characteristics of a site. The new features such as roads or buildings must fit onto the site and minimize the need for large cuts and fills. This requires that the plan accommodate the site and the arrangement of the features in a manner that maximizes the integrity of each of them. By minimizing the disturbance and the excavated area at the design level, the designer begins to mitigate the impact of development. In addition, the design should retain as much of the original terrain and character of the site as is feasible. To achieve this, roads should be parallel to contours as much as possible and buildings should be located to minimize grading. If flattened places on the site are in short supply, perhaps the buildings can be designed so as to take advantage of the site relief. The disturbance and earthwork should be limited to necessary areas only. Disturbed areas should be kept small, and strips of existing vegetation should be left in place between disturbed areas. Grading should be scheduled so as to minimize the time of exposure and the risk of erosion, thus maximizing the growth conditions in which the vegetation may restore itself.

By minimizing the amount of area that is to be disturbed, the amount of runoff increase can be reduced, and the facilities necessary to handle the runoff can be reduced also. The reduced runoff translates immediately into a decreased risk of erosion and a smaller requirement for storm water facilities. The areas of preserved vegetation may act as adequate buffers between disturbed areas to reduce the amount of active erosion and sediment protection required. Likewise, the less clearing and grubbing that is done, the greater the preservation of infiltration capacity on the site. Although some inconveniences may occur during construction, there are substantial cost savings involved in the reduction of disturbed area.