

PROBLEMS AND CAUSES – GABIONS AND RENO MATTRESSES

<u>PROBLEM</u>	<u>CAUSE(S)</u>
GABIONS	
Settlement and distortion of structures	<ul style="list-style-type: none"> - Foundation soil with insufficient or non-uniform bearing capacity. - Foundation soil with very high moisture content. - Foundation soil not well compacted. - Foundation scour. - Backfill material not properly compacted. - Thickness of backfill layer greater than 300mm. - Backfill material with moisture content higher than the optimal value. - Backfill material has high fines content.
Bulging of the front face	<ul style="list-style-type: none"> - Construction frame not used. - Inadequate filling material. - Pre-formed braces were either not used or not tensioned properly. - Compaction of backfill was not done parallel to the front face. - Excessive compaction energy. - Vehicles and construction machinery was kept within 1m from the front face. - Fill surface not left with a slight inclination (2 – 4%) away from the facing front and not sealed at the end of each work day.
RENO MATTRESSES	
Scour of the foundation soil	<ul style="list-style-type: none"> - Filling material in mattresses too big. - Absence of geotextile.
Loss of filling material	<ul style="list-style-type: none"> - Filling material too fine. - Absence of a geotextile.
Mattresses sliding	<ul style="list-style-type: none"> - Poor anchor on top of slope.
Excessive abrasion of the mesh	<ul style="list-style-type: none"> - Poor transportation.

DISCLAIMER – The instructions given herein are of a general nature and does not exempt the contractor from the obligations and the responsibilities for the definition and correct execution of all the specific operation required for the implementation of the project. In such respect, SANPAC AFRICA LTD., will not be liable for any inaccuracies or omissions in the execution results and will not bear the consequences of any connected liability.