

ABSTRACT. In this paper the author continues his investigation into the scaling limit of a partial difference equation on the d -dimensional integer lattice \mathbf{Z}^d , corresponding to a translation invariant random walk perturbed by a random vector field. In a previous paper he obtained a formula for the effective diffusion constant. It is shown here that for the nearest neighbor walk in dimension $d \geq 3$ this effective diffusion constant is finite to all orders of perturbation theory. The proof uses Tutte's decomposition theorem for 2-connected graphs into 3-blocks.