Derivation of the Langevin equation

You can have a look at these notes, page 33

http://www.lpthe.jussieu.fr/~leticia/TEACHING/cours-martine-2016.pdf

The idea is also explained in the book
Quantum dissipatie systems
By Ulrich Weiss

There is "classical" introduction.

Absorbing states

These are states from which the dynamics cannot escape. They typically appear in dynamical systems which do not satisfy physical microscopic evolution rules. The voter model is an example of a "spin" model with an absorbing state (full consensus).

About **the T dependence of the lambda(T)** factor which is related to the fluctuations of the interfaces due to thermal noise:

Domain growth morphology in curvature driven two dimensional coarsening
Alberto Sicilia, Jeferson J. Arenzon, Alan J. Bray, and Leticia F. Cugliandolo
arXiv:0706.4314, Physical Review E 76, 061116 (2007).

Time to reach the ground state in SK
It depends on which is the question asked. If you want the energy density to reach the energy density of it, it's fast,
No size dependent time-scale. You can see it from

LFC & Kurchan, J. Phys. A 27 (1994) 5749.

But if you want to reach the exact spin configuration(s) that correspond to the ground state, then you need a time scale which scales with N. A. Montanari proposed an algorithm which, he claims, scales as N^2, if I'm not mistaken. One of the refs. Is

Optimization of the Sherrington-Kirkpatrick Hamiltonian
By: Montanari, Andrea
Conference: 60th IEEE Annual Symposium on Foundations of Computer Science (FOCS) Location: Baltimore, MD Date: NOV 09-12, 2019

You can find it on the web

On **annealed disorder**

This is a very recent reference. You can find previous ones dealing with this problem in the bibliography

arXiv:2104.04363 [pdf, other]

cond-mat.dis-nn cond-mat.stat-mech
Annealed averages in spin and matrix models

Authors: Laura Foini, Jorge Kurchan

Replica treatment of the Hopfield model

Ref. Amit, Gutfreund & Sompolinsky