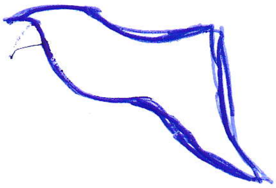
$$\mathbb{P}\left(\mu^{u}_{<\delta}(\varepsilon) \geq 1\right)$$



$$\leq \boxed{\mathbb{E}\left[\mu^{u}_{<\delta}(\varepsilon)\right]}$$ by Markov's inequality.

$$= \int_{B_\varepsilon} \int |\det \nabla^2 X(t)|\, \mathbb{1}[\nabla^2 X \prec 0]\, \mathbb{1}[\nabla^2 X < \delta]\, p_t(\nabla^2 X, \nabla X)\, dt$$

divide by

$$\boxed{\text{NTS that } \frac{1}{\varepsilon^N} \mathbb{P}(\mu(\varepsilon) \geq 1) \text{ converges}}$$

$$\cancel{\frac{1}{\varepsilon} \mathbb{P}(\mu(\varepsilon) \geq 1)}$$

$$\frac{1}{\varepsilon} \int_{B_\varepsilon} \longrightarrow \mathbb{E}\left[|\det \nabla^2 X(t_0)|\, \mathbb{1}[\nabla^2 X(t_0) \prec 0] \times \mathbb{1}[\nabla^2 X(t_0) < \delta] \,\middle|\, \nabla X(t_0) = 0 \right]$$