Cow protocol has a gas overhead compared with trading only an AMM directly, if not sufficient trades are settled in one batch. The gas overhead is mostly given by the additional transfers between the user account, the settlement contract and the AMMs.

I think this can be partly reduced, if one implements the logic of the settlement contract as a pre_hook and post_hook of uni v4. Of course, it is only a gas-saving, if one later trades against univ4, but I guess most trades are going through univ4 in a year.

There is also an additional overhead of one unnecessary AMM for which the pre_hook and post_hooks implement the settlement logic. But I guess this is easily outweighed by the benefits, though I have not done the exact math.

Wdyt? Would it be worth it?