Thank you for the comments and suggestions. We appreciate your effort and tried to make the remarked sections more clear and added relevant information. Please find our detailed answers below:

Section 2.1: Geological description of the area is poor. It does not say much if you state that there are "quaternary glacial sediments". More detailed description must be added. If this is glacial till.. what is the clay contet for example? As sediment properties will influence effectiveness of GPR as well as changes in volume of the soil if freezing will accour.

-> Many thanks for pointing out these issues. We will extend information concerning glacial deposits and soil properties.

Line 106: ERT resolution is affected by many factors (electrode spacing, applied electrode configuration, 2D or 3D survey, overall electrical properties of the soil and numerous settings that you can change during data inversion process) and it is not good idea to state that 10m level is some magical depth where resolution drops. Also it is much more better to have high conductivity layers then low conductivity layers for ERT. My suggestion is to avoid discussion about ERT at all. No necessity to include it in this paper. & Line 110: Also for GPR it is not streightforfard to get the distance. It is also product of your interpretation.

-> It was not the intention to sound like ERT resolution would drop significantly below a specific depth. We are sorry if this may have been formulated inadequately. Of course ERT resolution depends on multiple factors, yet resolving the exact position of a vertical layer boundary in the target depth of >10m is not very accurate, and further decreased by the high conductive layer above the target, because then less current runs through the aquifer. We will revise this paragraph.

RC Line 112: If you would previously described soil type in moire detail it would be clear why 10m is already far for GPR. In sandy sediments you can get in depth of 20+m with ~200 MHz.

-> The statement will be adapted to make clear, that determined position is indeed just an interpretation of GPR reflections converted to distance using measured velocity profiles. In combination with the improved site description we will make more apparent why GPR penetration is limited in our setting.

Line 128: What GPR signal propagation speed was used and how did you determined it? This is crytically important question that must be explained in detail. Yes later you explain method for ZOP, but whas obtained values used also for reflection data? Also I suggest to use not only velocity values but values of dielectric permittivity (neglecting all the complications and assuming that this equation is valid v=c/sqrt(e)). Most GPR specialists use values of permittivty instead of velocity.

-> Thank you for pointing that out. This was indeed not evident in the manuscript. A table will be added to show which v(z)-profiles were used for time-distance-conversion and we will explain, why the profiles are used. We mainly use velocity instead of permittivity, because this is what we can directly derive using measured traveltime and knowing source-receiver distance. Also calculating distances to reflectors is the main target, which can be calculated using the velocity. Permittivity values will be added to make it more convenient for readers.

Line 175: Are there no spatial variations in GPR propagation speed without frozen zone? This must be explaned.
-> Yes, there are spatial variations as seen in the baseline measurements, which add to the uncertainty. Thanks for pointing that out. We will address this in the section.

Line 175: I did not found explanation what value for Vfrozen was used?
-> No value for v_frozen was used. We can add a possible value range from literature.

Line 182: Obtained information regarding sediments indicate multiple layer situation. As a result explanation of GPR signal propagation speed determination in the section of methods must be improved in order to explain that different propagation speeds were used for different layers.
-> This will be clarified by the changes as suggested in your comment to line 128. We use the v(z)-profiles from baseline measurements as velocities in the different layers.

Line 287. Theoretically also relfection GPR resolution depends of FIrst Fresnel zone as we approximate area of the reflection via First fresnel zone.
-> Yes, reflection GPR resolution also depends on Fresnel zone width. We will change the paragraph to address this.