* Make it more readily accessible 400 words
* International journal ? Environmental research letters (400 words), scientific reports, nature energy (try this first – 300 words), energy and environmental sciences (contact to find word limit)
* Put main part in thesis – shrink it down to put it in highly ranking journal by coming out most important points.
* How you’ve calculated amount of flux – solar recharge by matching temperature profile by real flux – assess what is the realistic amount of energy in the 10 top meters.
* Chris: energy short sustainable – try to pick out 3 or 4 key points – reduce modelling
* High impact factor journal UK popular
* Key message points:
  + Interaction heat extraction – footprint for extracting 15 000 W/m² (single house)
  + Sustainability near surface energy – engineering but not from resource perspective
  + Solar recharge 1.8 W/m² -- 11% maximum
  + Equivalent area house needs to extract – artificial heat recharge

Heat ownership issue: no way to monitor until interferences occur. 3D of drawdown needs to be taken into account. License needs to be considered in 3D space.

2025 – backdrop fossil fuel gas boiler no longer allowed so massive rise in technology expected.

50 -90 m – conservative estimate, what if nearer to surface what if shorter

Whatever where it is, need to recharge the system – active recharge is important. 11%

Chen – where was the paper summitted, how does my paper relate to it.

Keep figure 7

5 is complicated

Fig 9 is good for Stuart – but not important for paper (Chris) could go in appendix (good for model)

Fig 7 and 9 - 9c show impact of extraction

Figure 3 swap axis

Where heat is coming from – fig 6 – orange

Figure 5 – yellow

Figure 4 – swap axis – important

Water just impact plume – water movement could be minal or rapid

* Important
* Necessary
* Left out
* Read it from enginner from this outside – format in journal – how much details required to support the conclusion
* All about the story telling

Gas boiler 🡪 get rid of it 🡪 extract heat 🡪 who owns it / available 🡪 not as warm as they thought

<https://www.nature.com/srep/>

<https://pubs.rsc.org/en/journals/journalissues/ee#!recentarticles&adv>

1. Heat balance
   1. Energy requirements for a single UK house
   2. Geothermal flux
   3. solar heat recharge: Solar recharge 1.8 W/m² -- 11% maximum
2. Footprint area of heat extraction from numerical modelling
   1. Areal impact from interaction heat extraction – footprint for extracting 15 000 W/m² (single house)
   2. Sustainability of near surface - engineering but not from resource perspective
3. Discussion –

* Artificial heat recharge requirements
* Soil not as warm as we though