

# LandEscape Farm Reception and Service Hub

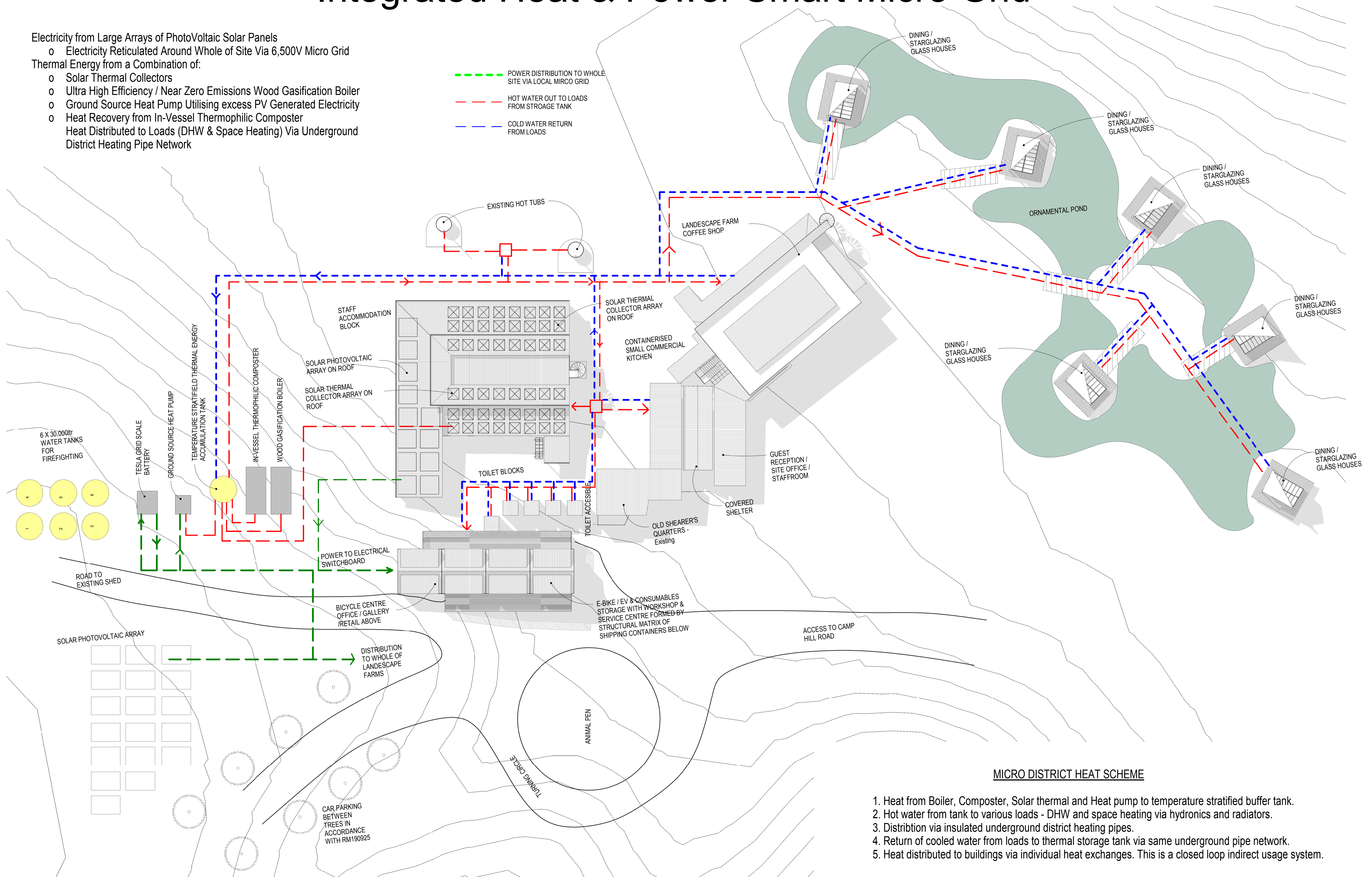
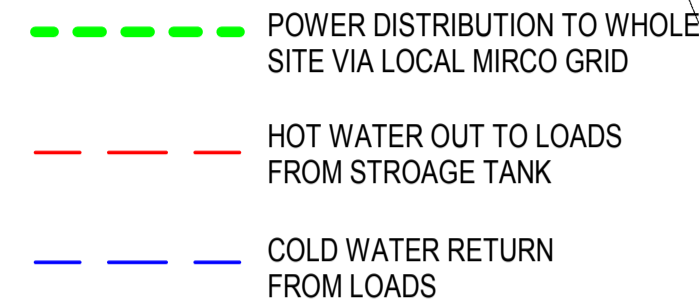
## Integrated Heat & Power Smart Micro Grid

Electricity from Large Arrays of PhotoVoltaic Solar Panels

- o Electricity Reticulated Around Whole of Site Via 6,500V Micro Grid

Thermal Energy from a Combination of:

- o Solar Thermal Collectors
- o Ultra High Efficiency / Near Zero Emissions Wood Gasification Boiler
- o Ground Source Heat Pump Utilising excess PV Generated Electricity
- o Heat Recovery from In-Vessel Thermophilic Composter
- o Heat Distributed to Loads (DHW & Space Heating) Via Underground District Heating Pipe Network



**MICRO DISTRICT HEAT SCHEME**

1. Heat from Boiler, Composter, Solar thermal and Heat pump to temperature stratified buffer tank.
2. Hot water from tank to various loads - DHW and space heating via hydronics and radiators.
3. Distribution via insulated underground district heating pipes.
4. Return of cooled water from loads to thermal storage tank via same underground pipe network.
5. Heat distributed to buildings via individual heat exchanges. This is a closed loop indirect usage system.