

Capabilities on project:
Energy
Environment

Section F

Estimates the spatial requirements for the energy centres and their energy outputs

Energy Centre 1: Taberner House

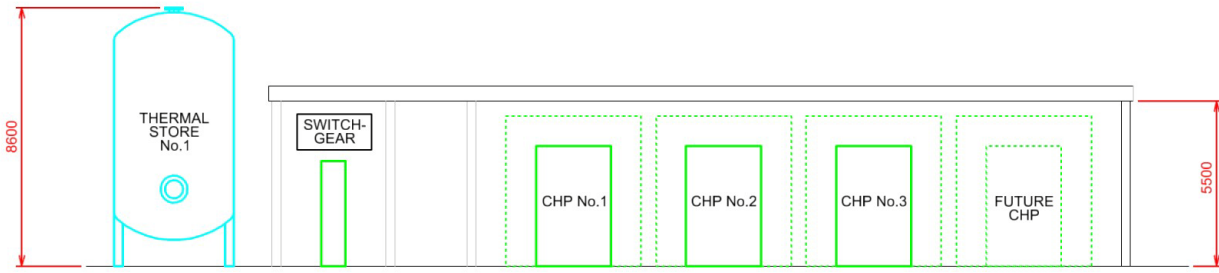
The diagram below provides the current estimated spatial requirements for the energy centre serving energy zone 1 is the basement levels, B1 and B2, of Taberner House.



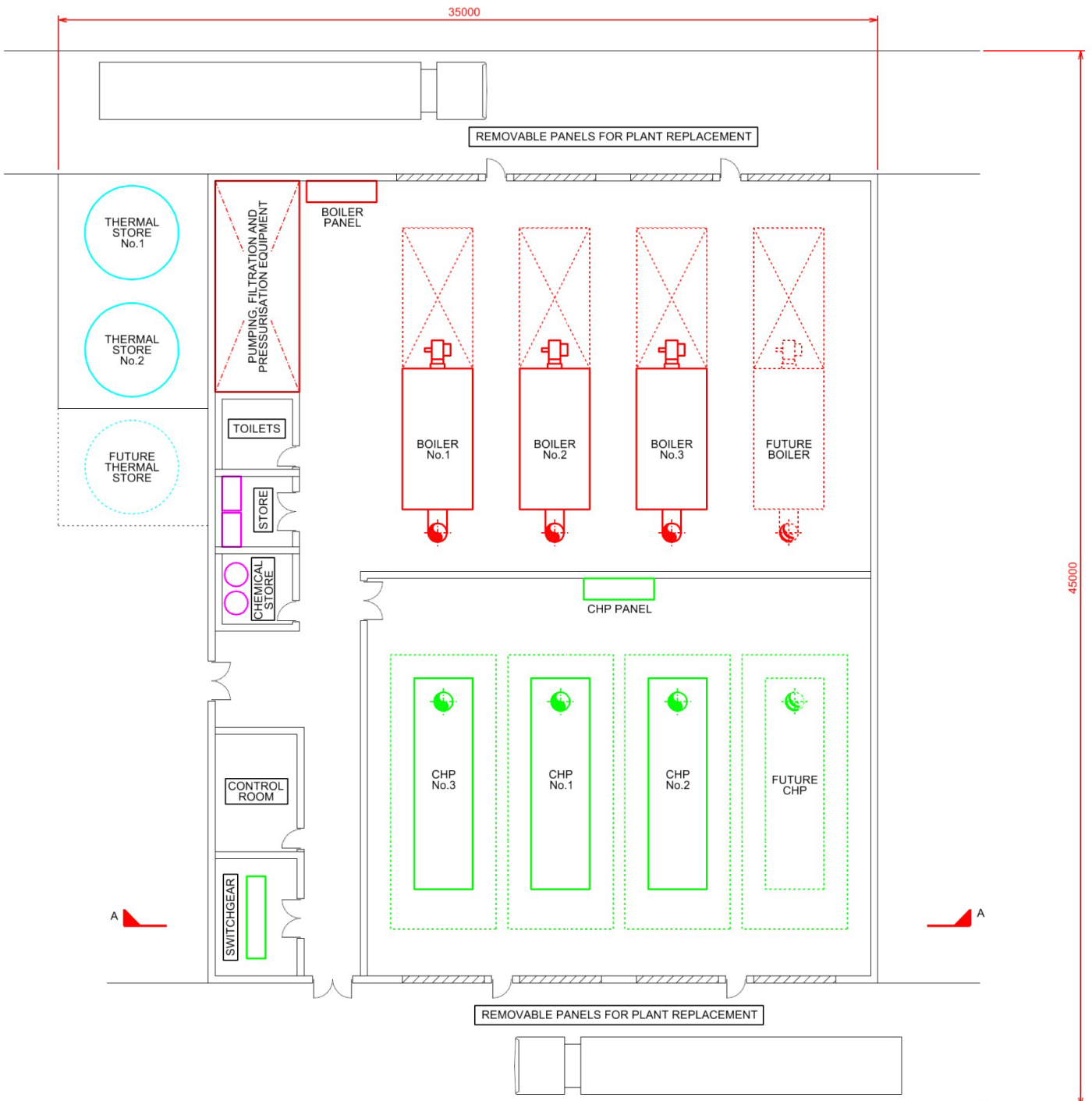
Alternative Energy Centres

The diagram below provides the current estimated spatial requirements for the energy centre serving energy zone 2 and the energy centre serving energy zone 2.

Capabilities on project:
Energy
Environment



SECTION A-A



PLAN

Capabilities on project:
Energy
Environment

Energy centre output

The analysis of costs and efficiencies has been based on a spark-ignition gas-engine CHP module size of approximately 2MWe. The various Zones analysed have CHP capacities estimated as follows:

EC Zone 1 – 10,056 kWe

EC Zone 2 – 5,097 kWe

EC Zone 3 – 9,473 kWe

For this scale of CHP engines, there is relatively little variation in specific cost (£/kW) and efficiency for slightly larger or smaller capacities. The final plant selection will be carried out later when the heat demands are firmer. At this scale, there will be an advantage of having at least two CHP units in each scheme not necessarily of the same capacity as this improves operational flexibility.

For more details on CHP engine sizing and energy centre capacity are presented in the Technical Note in Appendix 1