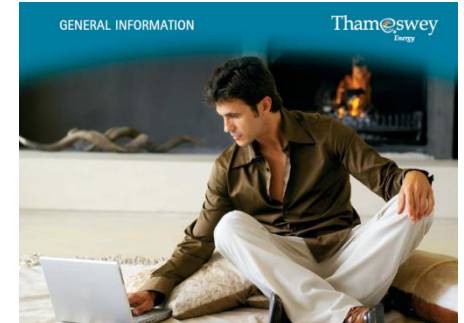


Heat Networks in Woking

Building Woking's Future Energy Infrastructure

ThamesWey's Low Carbon Energy Business



Generating



Distributing



Supplying



‘District Heat’ in Woking



MKIII energy centre

Woking Town
(Victoria Way) 2000



1.3 MWe/4MWth
CCHP

Central Milton Keynes
2006



6 MWe/16MWth
CHP

Poole Road
2021



Up to 9 MWe/19MWth
CHP + ASP + ????

Future of District Energy – what we can expect

- Bigger
- Smarter
- More efficient
- Lower/zero carbon, cleaner air
- Greater energy security (nationally/locally/hourly)
- Multi fuel
- Storage/peak management
- More autonomous
- Longer operating life
- New operating models eg multi partner/'prosumer'/time of use tariffs

What we don't yet know

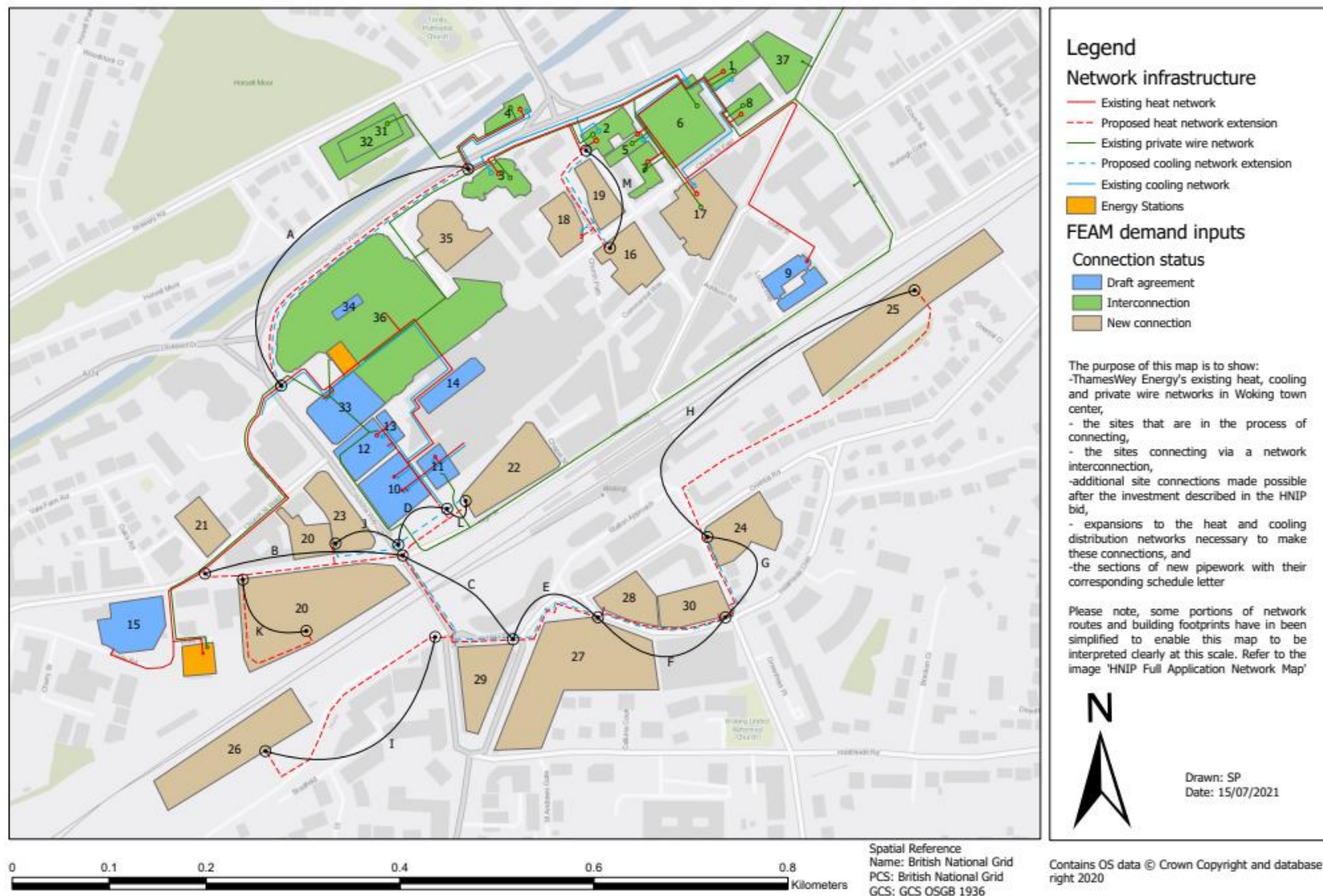
- How are we going to be generating in 15 years time? And in 50? e.g. what form of primary energy/fuels?
- How will we transition to lower carbon/lower temperature/higher efficiency systems?
- What will smarter energy supply systems require of us? (faster response/higher electrical currents for EV/energy sharing/new grid-DSR interactions/smarter customer-building-infrastructure interfaces that talk to each other?)
- How do we increase resilience/reliability?
- What do we have to install now? What can we delay?
- And how do we enable 'everything else' to be installed in an operating system with low/no regrets?

Phased expansion of the heat and chilled water networks

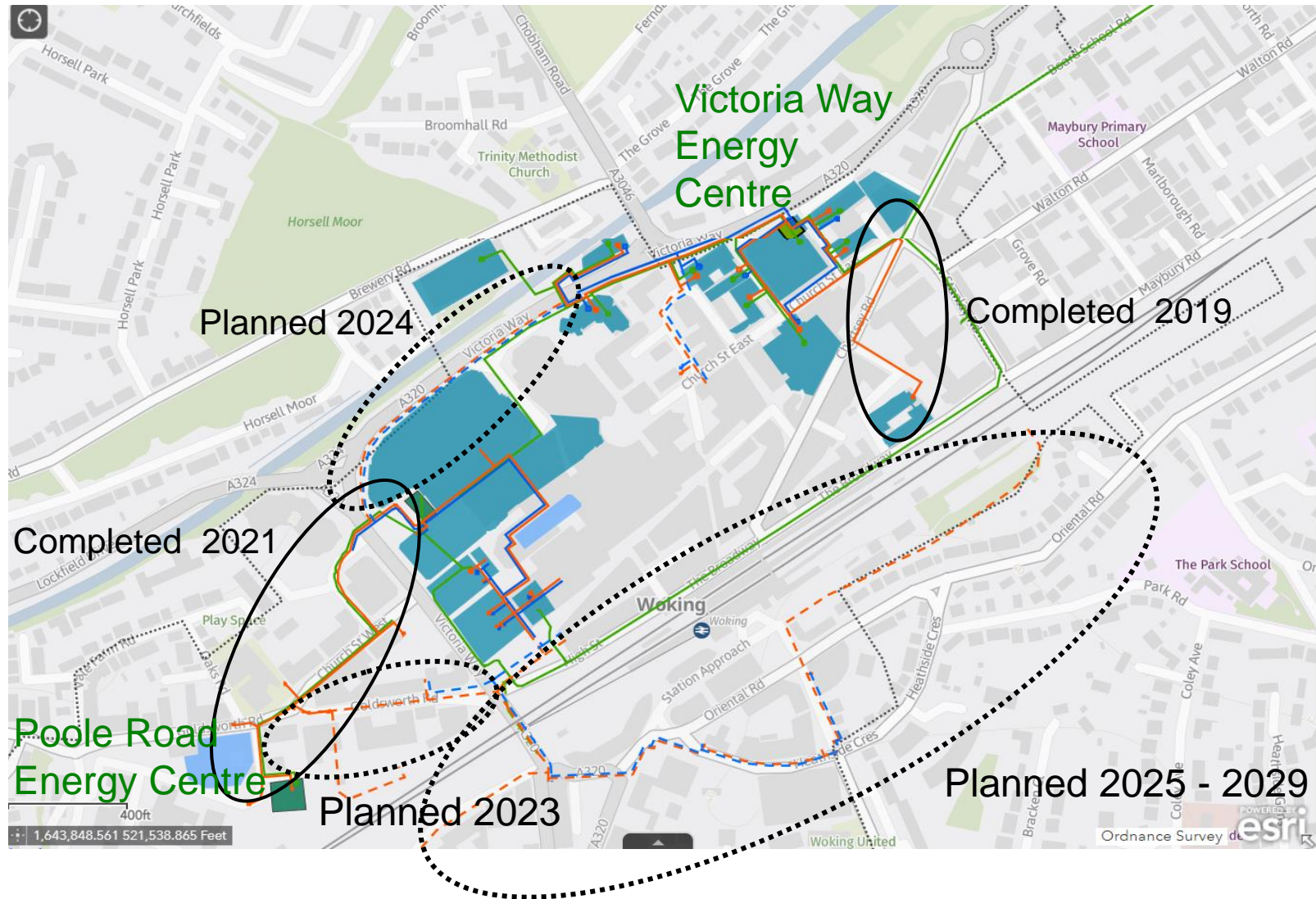
1. Victoria Square – 429 new apartments, 189 bed Hilton hotel, and conference performing arts school and 150,000, sq.ft retail (completed March 2022)
2. Interconnection - linking original DH and CHW networks with new networks
3. Expansion - 3,000 new homes in town centre over next 10 years



Woking Town Centre District Energy Future Networks



Network extension plan



Poole Road Brief

Energy Centre

- Lean design of plant spec and size
- Future proof design challenge
- 63°C supply to the plate
- Return heat into offices
- Rapid build, flexible design for phased addition of plant
- Controls architecture, linking to satellite storage and ASHPs coupled to DH

Distribution network

- Designed for inter-connection to existing CHW and DH networks
- Future expansion capacity

Poole Road Energy Centre (2018 Planning)



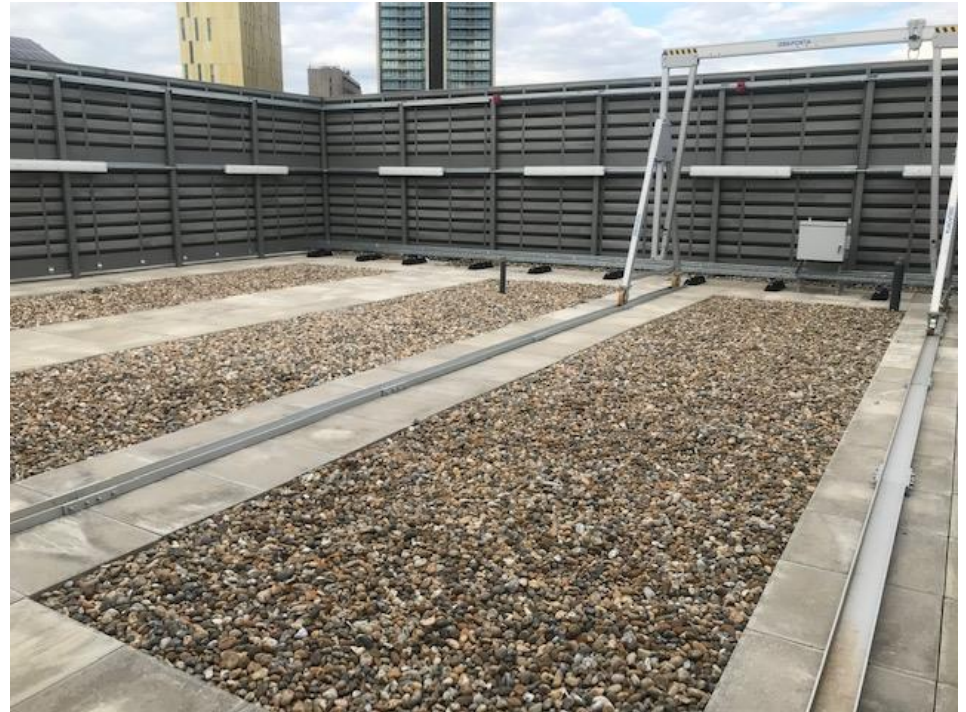
Poole Road - Completed August 2021



Future proofing



Future proofing



Future proofing



