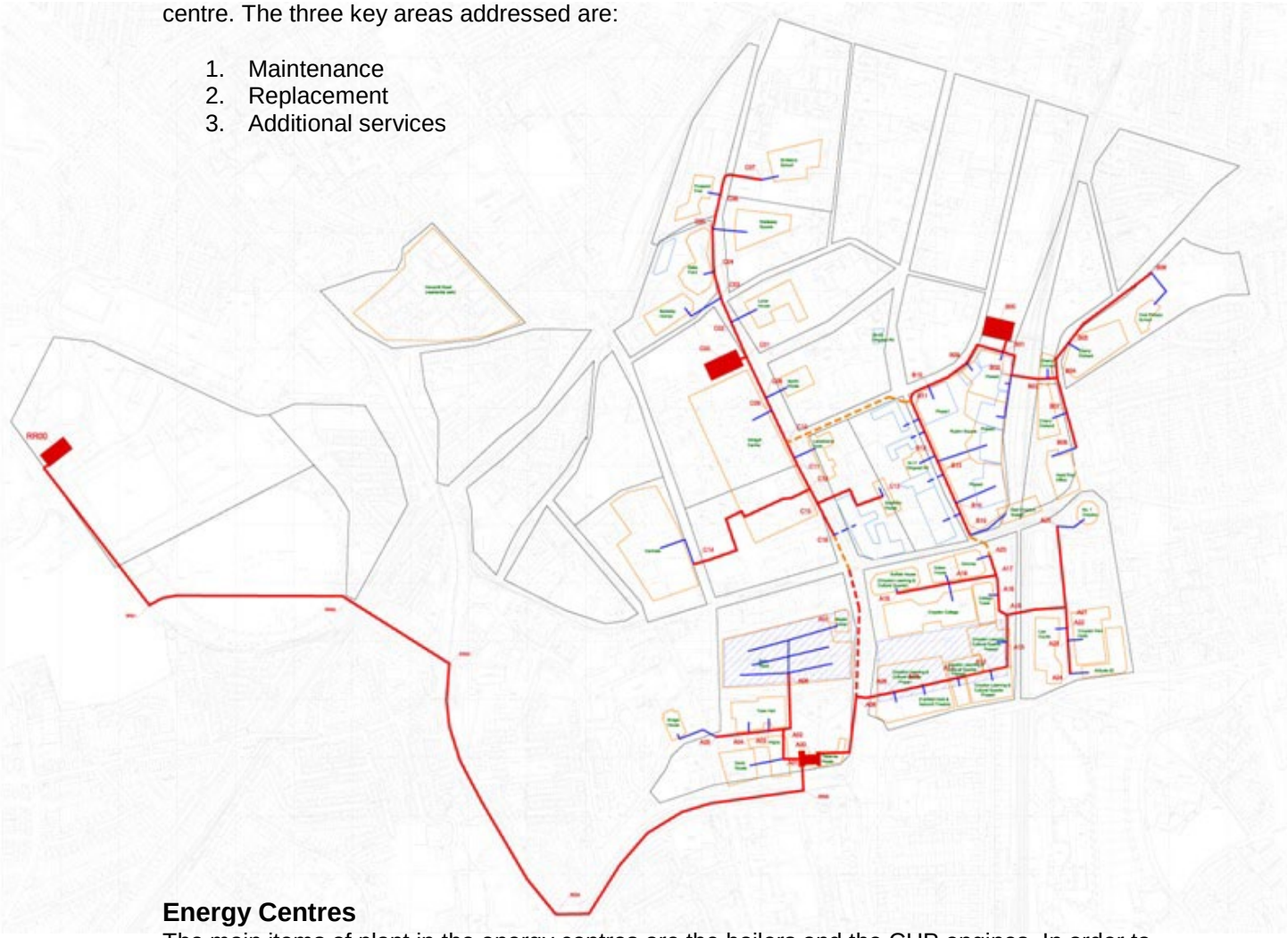
Section K

Consider the long term maintenance and replacement of existing and provision of new services within the pipe distribution network.

This section of the report should be read in conjunction with the Croydon Decentralised Energy Study plan. Here we look at the life-cycle of the pipe distribution network in terms of the plant in the energy centres and the pipework network distributed around Croydon town centre. The three key areas addressed are:

1. Maintenance
2. Replacement
3. Additional services



Energy Centres

The main items of plant in the energy centres are the boilers and the CHP engines. In order to address maintenance, the ESCo company would retain responsibility for plant maintenance. This may be contractually backed off by them with arrangements, warranties etc. with the plant manufacturers.

Energy centre location and plant selection would be chosen and designed by or in collaboration with the ESCo company. The strategic location of the energy centre would be selected for ease of access for plant replacement, the plant selection would promote common manufacturers and modularisation for ease of parts replacement and energy centre management.

Provision should be made for future plant and plant replacement with new plant installation strategies in place. With modularised plant items selected and space provided in the energy centre space layouts and configurations provision should be made for energy centre capacity change for expansion and contraction to respond to the energy load life-cycle.

Distribution Network

Taberner House to C-CURV

There is an existing underground services corridor between Taberner House basement and CCURV. The connection is made through pipework suspended from the ceiling of the services corridor. This corridor will provide access for maintaining pipework, replacing pipework lengths and has capacity to support additional services if required.

C-CURV PSDH

We would propose that the new C-CURV building design for the basement plantroom and service corridor provision accommodates pipework to traverse across it to serve Davis House, the Town Hall and Mid-Croydon from Taberner House. i.e. the pipework service routes currently being proposed in the basement of the C-CURV PSDH building are oversized to cater for the connection back onto the Taberner House energy centre and across through to Mid-Croydon.

C-CURV to Mid-Croydon

The route between the PSDH building and Park Place runs in the road/ pavement up Fell Road and across Katharine Street. Although direct access to this pipework from above would mean digging up the road there would be good access from either end from the PSDH basement to the South and the Park Place underground car park to the North.

Energy Zone 1 to Energy Zone 3 Link

The interlinking of energy zones would be part of the Wellesley Road green energy spine with interconnecting pipework running up Park Lane next to or through the underpass. More detail of the Wellesley Road green energy spine is given later in this section.

Taberner House to Wellesley Road

To carry pipework across Queens Gardens we would propose an accessible concrete trench. This trench would have a wet side and a dry side for services with lift up access panels along its length. This would provide flexibility to pick up the various types of services proposed for the Wellesly Road green spine.

Queens Gardens to College Green

The proposed route across Park Lane is the current pedestrian subway, which goes from Queens Gardens to the front of Fairfield Halls. This would form a subterranean service tunnel with walk through access and spare services capacity provision.

College Green Distribution

Once in the underground car park below College Green pipework would distribute at high level to the base of the Croydon Learning and Cultural Quarter energy risers. This pipework network would be easily accessible and with the clear eights offered through the car park there would be spare room to run services to provide additional capacity.

College Green to the Law Courts

If services are allowed to be under-slung below the Hazledean Road bridge over the railway line these exposed services would be reasonably accessible. Once East of the railway line services would need to be buried in the roads.

Along Lansdowne and Dingwall Roads

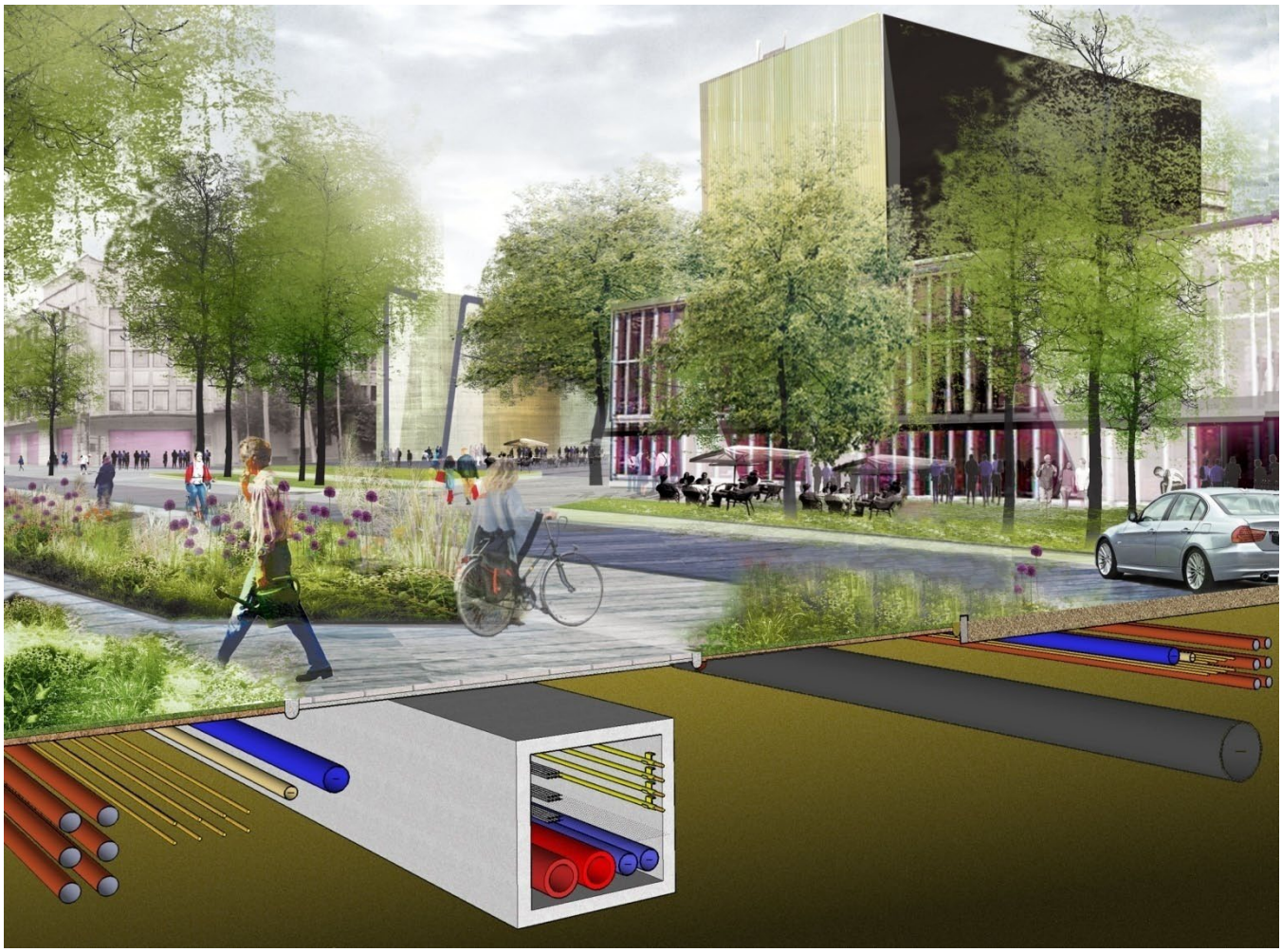
Rather than running pipework in the pavement along Landsdowne Road, the preference would be to come to run it across the Ruskin Square development. If some arrangement with the developer could be made then an accessible services trench could be proposed down the West side of the site.

Ruskin Square to Cherry Orchard Road

As part of the proposals for a bridge over the railway line to the North of East Croydon station we have proposed a pipework link crossing integrated within the structure of the bridge. If this requirement can be incorporated in the design then provision can be made of access pull out panels and platforms etc.

Wellesley Road Green Energy Spine

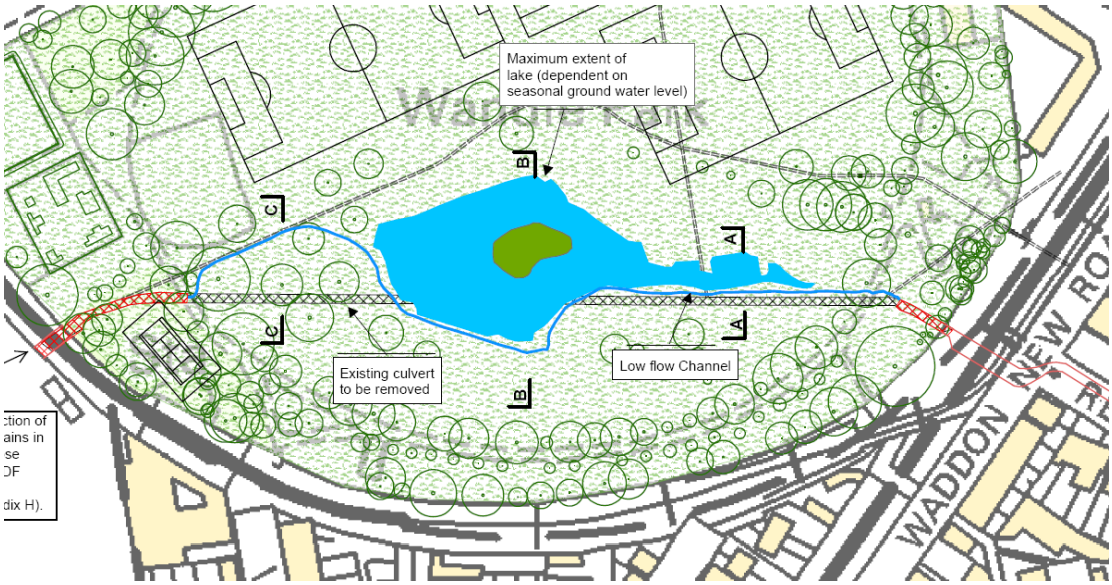
The Wellesley Road green energy spine will be integrated within the masterplan proposals for Wellesley Road. A multi-service trench with potential for both wet and dry services will run down the centre of Wellesley Road, with access panels along its length.

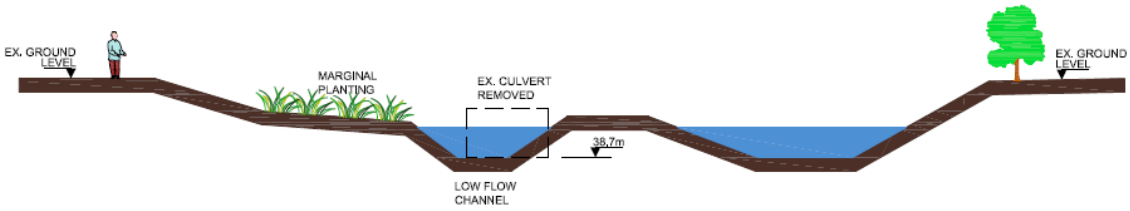


Rolls Royce Power Station Connection

Roll Royce to Wandle Park

The proposed pipework route from the Rolls Royce power station to the West side of Wandle Park would be along the side of the railway lines. These exposed services would be reasonably accessible.





SECTION A - A

Crossing Wandle Park

There is a proposal to use the River Wandle culverts crossing under Wandle Park as energy pipework corridors. At this point it is our understanding that the culverts are relatively small compared to their size further downstream and is not large enough for a maintenance person to walk down. Therefore lift off access panels will be required along its length.

Croydon Flyover

Once the pipework network has reach the elevated Croydon Flyover the pipework could potentially be run on the underside of the Croydon Flyover structure. These exposed services would be reasonably accessible.