

Daylighting Constable's Branch Hill pond

Concept design proposals for Redington Frogna! Neighbourhood
Forum in support of the Greater London Authority's Greener City
Fund grant application, September 2018

The wider vision: project phases

- **Phase 1** – cultural daylighting through marking the route of the Cannon Stream and other headwaters of the lost river Westbourne
- **Phase 2** – daylighting Constable’s Branch Hill pond for wildlife
- **Phase 3** – daylighting the Cannon Stream through creation of a rain-scape along its original route

- This grant application is for **Phase 2** of this wider project vision.

Restoration of Constable's Branch Hill pond

“Daylighting” the stream by rainscaping in garden space, and using down-pipe disconnections

Capture road and field runoff for pond to support groundwater

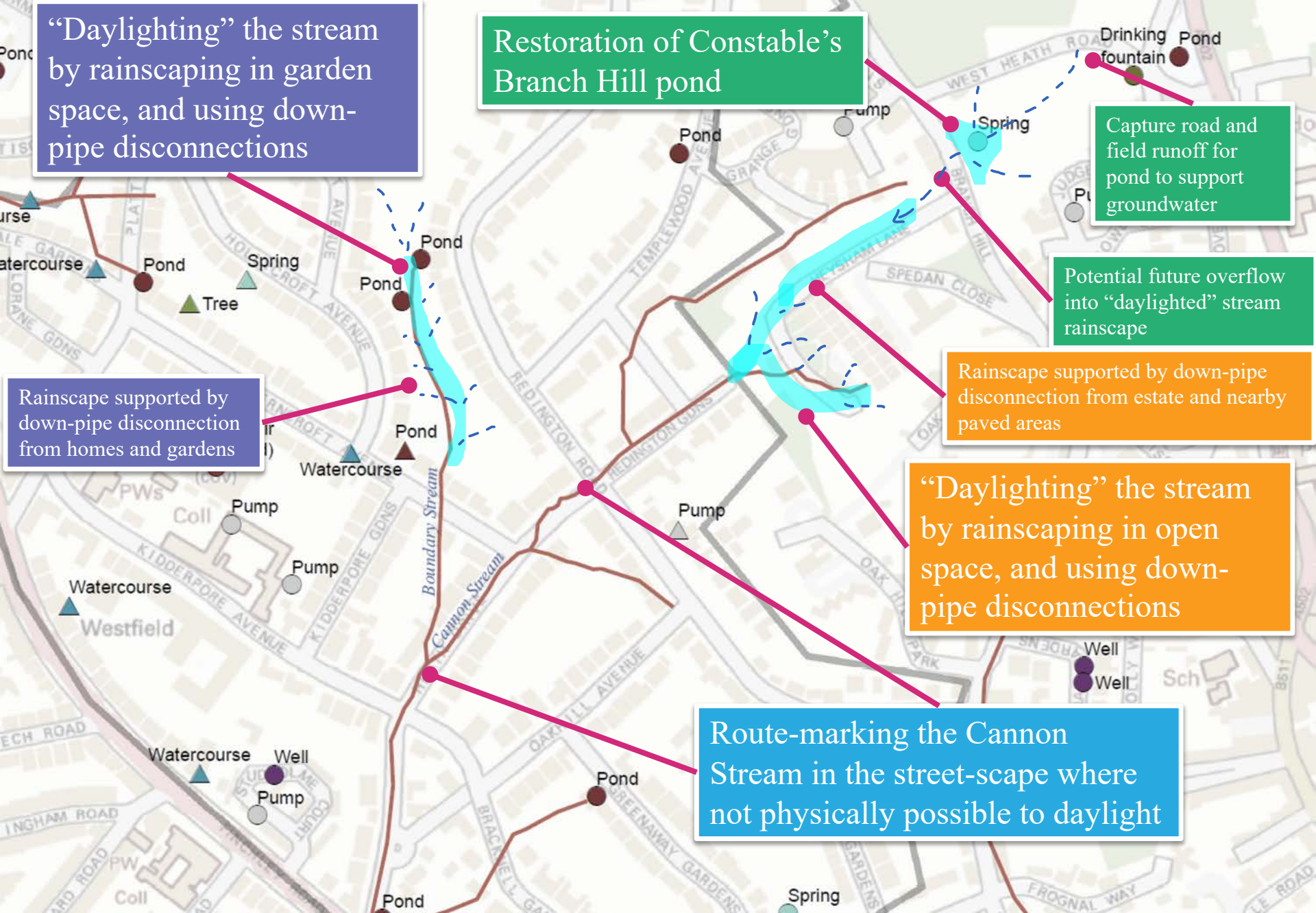
Potential future overflow into “daylighted” stream rainscape

Rainscape supported by down-pipe disconnection from estate and nearby paved areas

“Daylighting” the stream by rainscaping in open space, and using down-pipe disconnections

Route-marking the Cannon Stream in the street-scape where not physically possible to daylight

Rainscape supported by down-pipe disconnection from homes and gardens





Branch Hill pond – ceremonial source of London’s lost river Westbourne, and the spring-water rising in this area fed the Cannon Stream which flowed down through Redington Gardens. It was originally a spring-fed pool formed by excavating sands, and eventually filled in the 1880s. It is famous for appearing in numerous Constable paintings. It has a small contributing runoff area in public open space which is semi-improved grassland. In winter, the location of the former pond is indicated by boggy ground, which is either collecting surface water or indicative of shallow groundwater. This land is owned by the City of London Corporation.



Blue shading indicating the potential pond location

Concept design for the pond

- Wildlife pond for amphibians and insects, including dragonflies, planted to encourage wildlife, with a section of the bank to be accessible to allow for children's pond dipping.
- The size of the pond will be dependent on hydrological conditions and it may be of greater value, ecologically, as well as visually.
- The pond may dry out during summer and it may be better to have a smaller pond that retains water. Further investigations will be required.
- The pond will be unlined to connected with the groundwater flow and excavated to a maximum depth of 1m, with shallow slopes.
- The detail of flow paths will be finalised, following ground investigations.
- Water run-off will be onto the Heath, but some field drainage may be required to route the flow below ground, depending on ground investigations.
- QR code on wooden post to explain ecology and history; notice board on West Heath Road or Branch Hill.

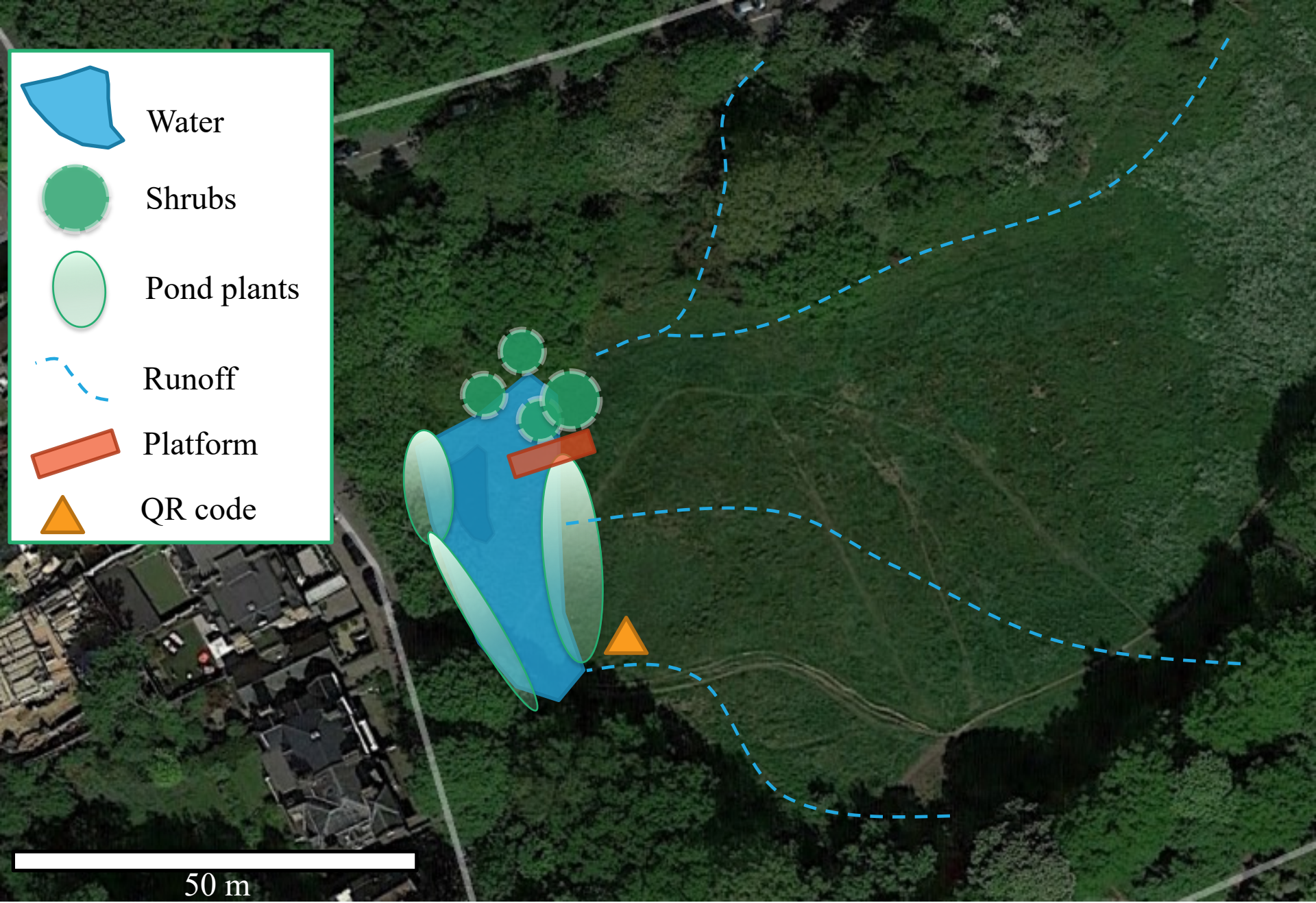
Constraints and risks

- The pond is to appear as wild and natural as possible.
- Shallow pond design for safety. Educational use will require engagement with Hampstead Heath's Learning Team. All visits by children to be supervised by teachers.
- Risks posed through antisocial behaviour and dogs, so will prevent access to dogs through inner and outer fencing, concealed by tall plants and grasses, growing between the two fences.
- Ensure no increase in flood risk, and no impounded water. Road run-off is to be avoided.
- Verify potential overflow connections – to a daylighted stream through Branch Hill woods, or to the combined sewer
- Water quality dependent on quality of runoff to pond.



Google Earth

ARUP



Design phase

- Engage stakeholders (Thames Water, highways authority, planning authority, and the landowner City of London Corporation) and confirm planning permission requirements.
- Hydrology investigation for groundwater quality and quantity, and rainwater balance.
- Detailed specification, in conjunction with City of London Hampstead Heath, and tender for contractor for build.
- Fencing is to fit with the landscape and be as unobtrusive as possible.
- Specify native wildlife planting plan suited to target ecology and pond size.

Construction phase

- Excavation of approx. 200 m³ soil (assuming average 0.5m depth), and redistribute material on site. Excavated soil to be reinstated on the ground, and no material will need to be disposed off-site.
- Shallow slopes, leading to small deeper zone for wildlife refuge
- Install planting with City of London Hampstead Heath.
- Creation of runnels through field to capture rainwater and grass spillway, planted with wildflowers to allow water to leave the pond in the event of a storm.
- A wooden fence around the perimeter will protect the pond from access by dogs and foxes and an inner metal stock fence with netting.
- Install simple wooden post with QR code to link people to a web-page with information about the history and ecology of the site and Constable's paintings of the pond.
- Erect notice board on West Heath Road or Branch Hill.

Operational phase

- Design, with City of London ecologists, engineers and conservationists, as an unmanaged system, to appear as non-intrusive as possible, eg grass spillways, as at other Heath ponds. City of London expertise to be utilised, including for advice on planting.
- Assess flooding risk
- Ensure no / minimal maintenance requirements
- Small fund for replanting during establishment phase
- Engagement with schools and art schools to develop interest in the Heath's ecology and the paintings of John Constable.
- In this way appreciation of Branch Hill Pond will be promoted for future generations.