Restoring Wandle Park

Incorporating river restoration into a multi-use urban environment

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Structure of this presentation

- Introduction
- Project drivers
- Partnership approach
- Challenges
- Solutions
- Scheme successes
- Lessons learned

To replace this image click on ‘Change Image’ in RHDHV Tools on the tool bar above
The River Wandle

- General characteristics
  - Located in south London
  - Spring fed
  - Mixed chalk and clay catchment
  - Relatively steep gradient
  - Important trout fishery

- Human development
  - 18th century mills (textiles and tobacco)
  - Urbanisation

- Extensive modifications
  - Impoundments
  - Straightened channels
  - Culverts
  - Poor water quality
Wandle Park

- Close to Croydon town centre
  - Important industrial town
  - Growing population

- Created in 1890
  - Formed from two water meadows
  - Recreational activities
  - Boating lake
  - Band stand

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Wandle Park

- Increasing urbanisation
  - Reduced in size
  - Last remaining green space
  - River Wandle culverted following issues with low flow and water quality

- Underused asset
  - Uninspiring landscape
  - High crime rate and antisocial behaviour

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Drivers for the restoration scheme

- Reducing flood risk
- Improving the park for people
  - Creating multi-functional space
  - Engaging with local communities
  - Recreating historic landscape
  - Designing out crime
- Improving the park for nature
  - Natural river processes
  - Biodiversity
  - WFD

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Partnership approach to delivery

- Delivery by multiple agencies
  - London Borough of Croydon
  - Environment Agency

- Integrated design team
  - Royal HaskoningDHV
  - LDA Design

- Initial funding from the Mayor of London (Help a London Park)
  - Feasibility
  - Outline design

- Heritage Lottery Fund (€2m)
  - Detailed design
  - Implementation
Challenges

- Complex urban environment
- Significant challenges
- Contaminated land
  - Historic landfill
  - Constraint on channel alignment and use of material
- Integrating river restoration into landscape design for wider park
  - Need to balance cut and fill volumes
  - Existing trees within park

To replace this image click on 'Change Image' in RHDHV Tools on the tool bar above.
Challenges

- Existing buried services
- Early engagement with statutory undertakers
- Sewer diversion

- Flood risk management
  - Cannot increase flood risk
  - 72% blockage at downstream end
  - Improved hydrology to better represent catchment inflows

To replace this image click on ‘Change Image’ in RHDHV Tools on the tool bar above
The solution

- Nature Driven Design of new river channel
- Fixed flood channel
- Low flow channel allowed to meander
- Seeded gravels

To replace this image click on ‘Change Image’ in RHDHV Tools on the tool bar above
The solution

- Use spoil to enhance landscape
- Capping layer
- Contaminated material retained on site

To replace this image click on ‘Change Image’ in RHDHV Tools on the tool bar above
The solution

- Integrate river into park landscape
- Asymmetrical inflow structure
A successful restoration scheme

- Environmental benefits
  - Improved biodiversity
  - Contribution towards WFD delivery

- Societal benefits
  - Increased visitor numbers
  - Improved “sense of place” and connection with local community
  - Reduced crime
A successful restoration scheme

- Future plans
- Café
- Community events (community garden)
- Sharing lessons learned with other schemes
Lessons learned

- Not relying on buried service maps – often inaccurate – out by several metres
- Underestimate time required to liaise with statutory undertakers – some project delays caused by this
Any questions?

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