



**Royal
HaskoningDHV**
Enhancing Society Together



Connecting River Restoration Thinking to Innovative River Management
6th Edition | 27-29 October 2014 | Vienna
Integrated with the final event of the SEE River project



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



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



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



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



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



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



The solution

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



The solution

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



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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