Civic Engineers

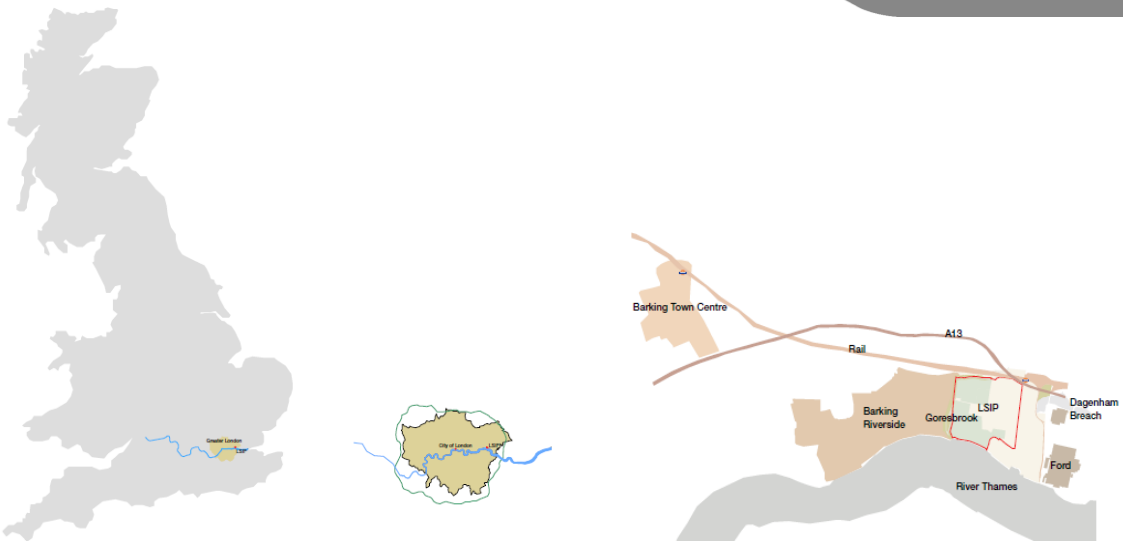
London Sustainable Industries Park

SuDS Construction Guidance Case Study

1st November 2017

The London Sustainable Industries Park

Dagenham Dock, RM9



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Vision in completed form.

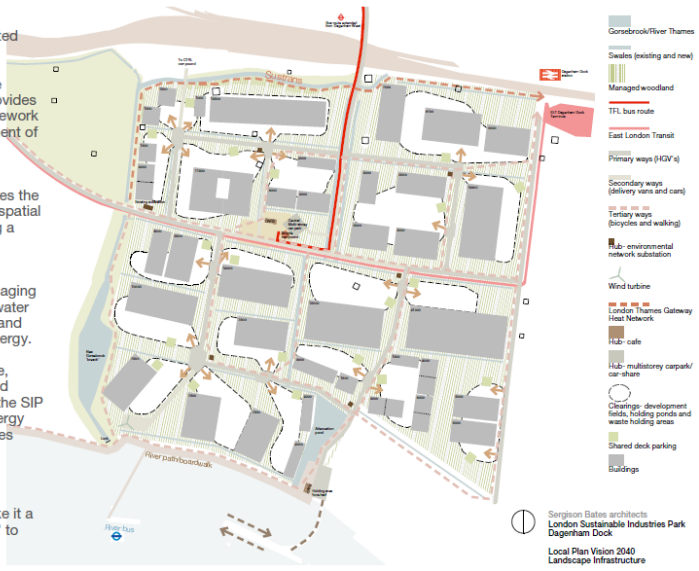
A new landscape infrastructure provides an enabling framework for the development of the SIP.

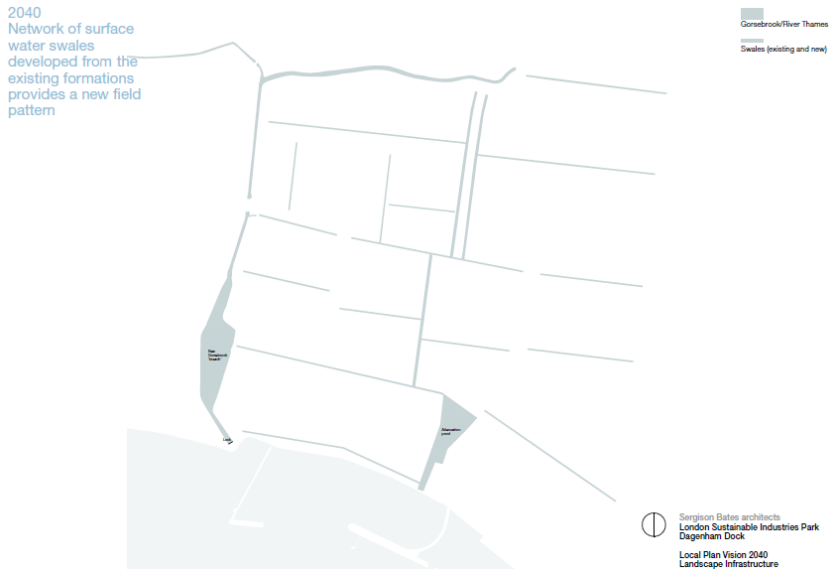
The landscape infrastructure gives the SIP a visual and spatial identity providing a 'green' setting.

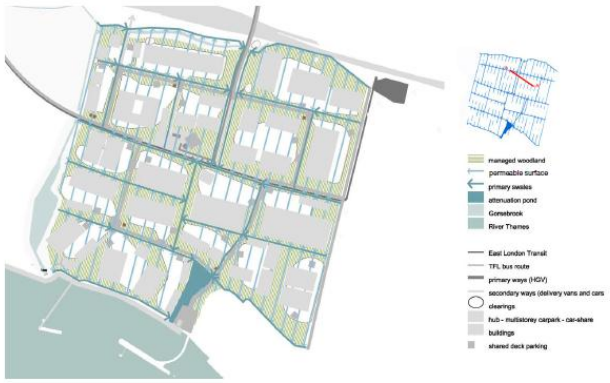
The SIP is self sustainable, managing its own surface water drainage, waste and distribution of energy.

The infrastructure, brand identity and management of the SIP facilitate the synergy between industries within the site.

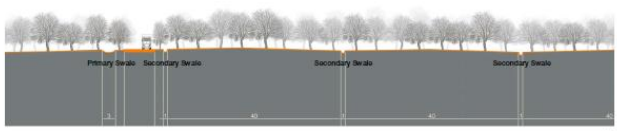
The treatment of thresholds and connections make it a 'good neighbour' to adjacent developments.







Section A A'



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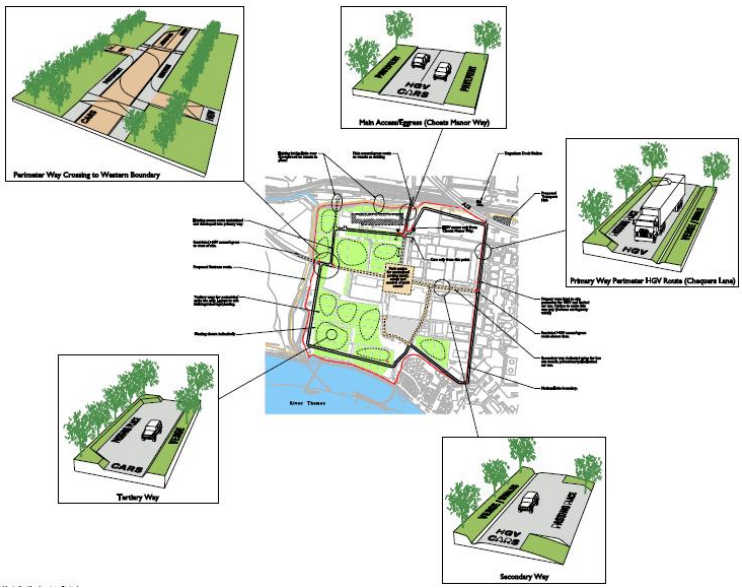
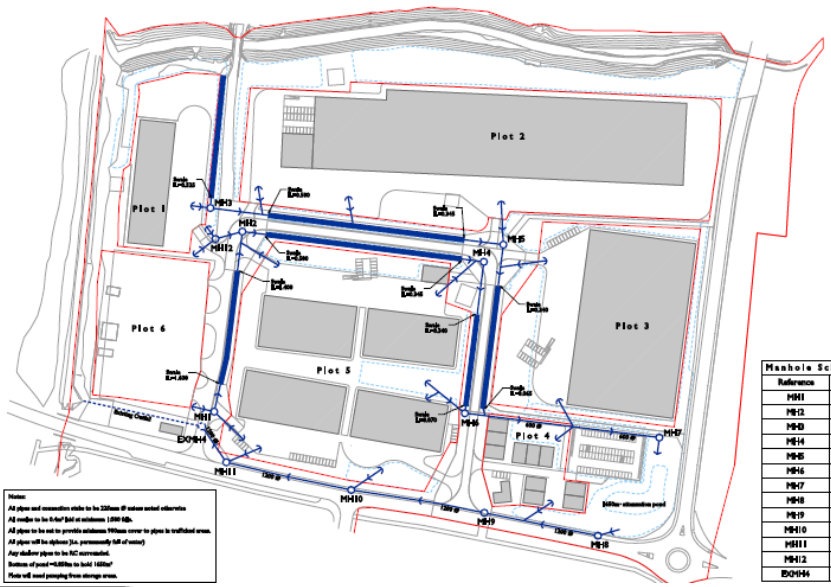
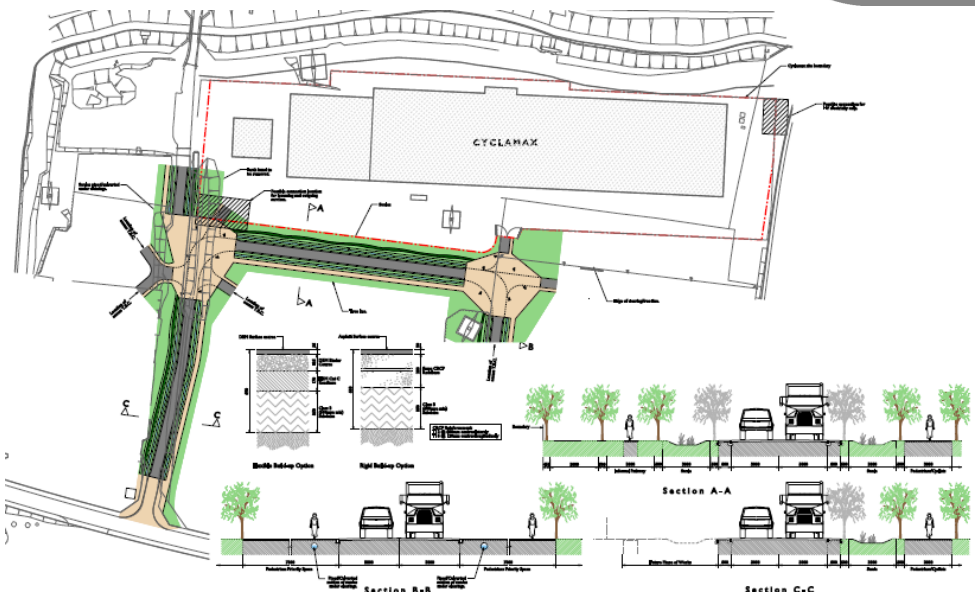




Manhole Schedule		
Reference	Cover Level	Invert Level
MH1	+0.230	+0.730
MH2	+1.900	+0.400
MH3	+2.000	+0.400
MH4	+1.720	+0.220
MH5	+1.720	+0.220
MH6	+1.540	-0.300
MH7	+1.500	-0.900
MH8	+1.300	-0.874
MH9	+1.440	-1.014
MH10	+1.940	-1.154
MH11	+2.400	-1.294
MH12	+1.900	+0.600
EXMH4	+2.440	-1.374



Planning Challenges:

- Some members of the team were sceptical about the approach to surface water drainage in particular.
- Modelling of the system to the satisfaction of the Local Authority involved many iterations and justification of the approach.
- There was a need to justify solutions avoiding guardrails etc.

Challenges during construction:

- Main contractor and sub-contractors did not initially understand the principles and questioned the design/information.
- Contractors did not recognise the proposed details and interpreted the details based on previous experience of more standard solutions.
- Importance of soils (both specification and installation) was not initially understood.

Measures adopted to overcome challenges:

- Case studies and precedent were relied on to demonstrate the suitability of the approach (difficult to find at the time!)
- Risk Assessments were undertaken to justify omission of guardrails based on precedents such as the canal network.
- Strong client leadership ensured that the concept was retained throughout the design and approvals process.
- The vision document was presented to the Contractor team such that they understood the aspirations and the design intent.
- “tool box talks” were held with the teams that were delivering the specific elements of the scheme with the importance of key details explained to them.
- A positive relationship with the Contractor resulted in on-going dialogue allowing conflicts and issues to be resolved straightforwardly.

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