



Mogden Sewage Treatment Works

Residents' Liaison Meeting

09 May 2007



Agenda

- 18:00** Site walk-around
- 19:00**
1. Apologies
 2. Odour improvement project
 3. Odour
 4. Mosquitoes
 5. London Borough of Hounslow presentation
 6. Working for a cleaner Thames
 7. Further points raised by residents
 8. Communication
 9. Any other business and date of next meeting
- 21:00** Meeting closes



Odour Improvement Project

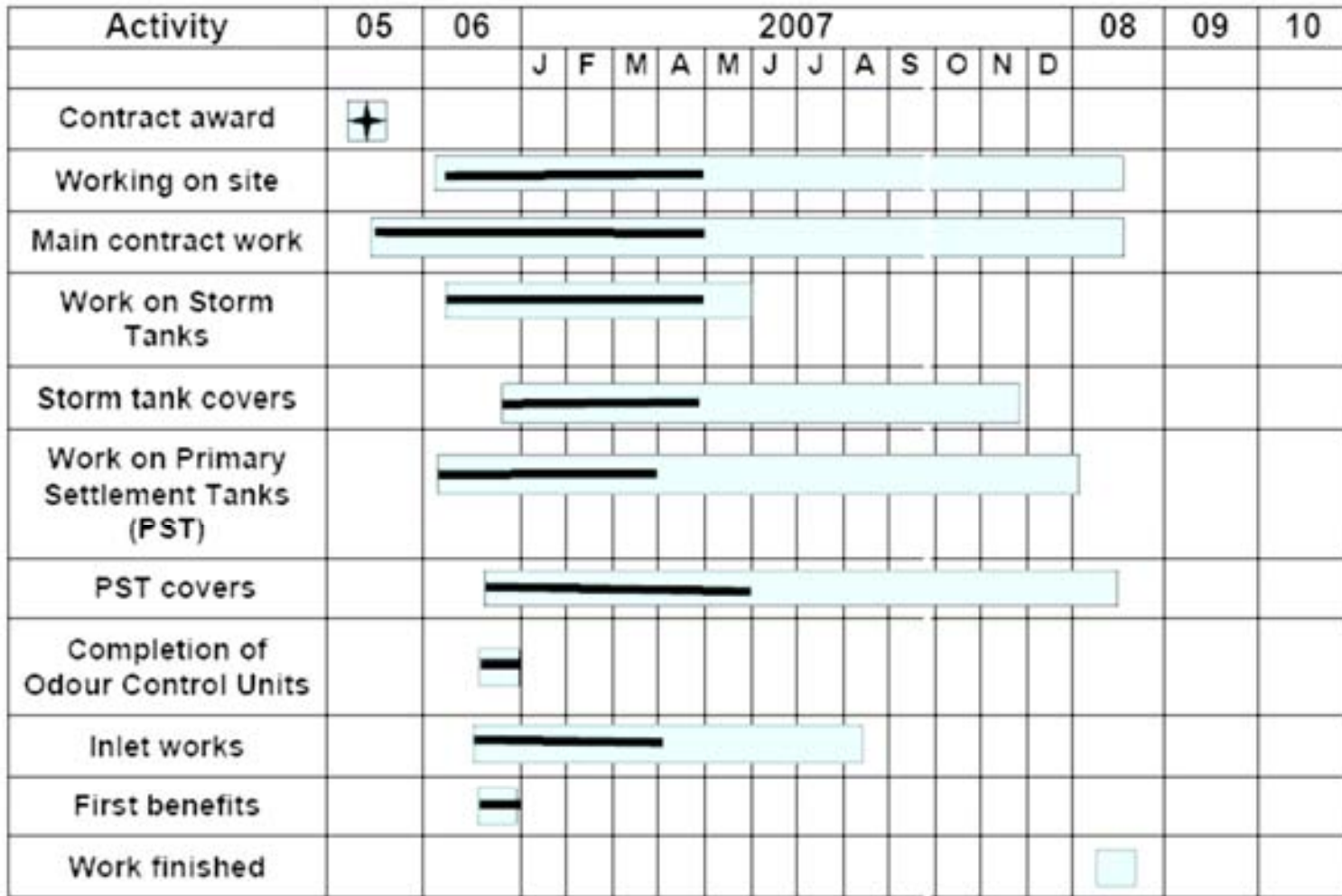
Odour Improvement Project





■ Scope of work:

- Cover key parts of the treatment process, including:
 - Inlet works (East and West side of Mogden)
 - Primary settlement tanks (East side)
 - Two storm tanks (East side)
- Independent tests have been used to decide what areas of the site to cover
- Install equipment to extract and treat the odorous air from the covered areas:
 - Two new odour control units (East and West side)
 - Designed to robustly comply with the requirements of the odour abatement notice.

Progress to date



 Progress
 Proposed delivery dates

Completion is required by August 2008 and we will complete by this date.

Works completed

- West Side Odour Control Unit operational
- East Side Odour Control Unit operational
- Air extracted and treated from the following:
 - First primary settlement tank
 - First storm tank
 - Inlet works (parts thereof)
 - East side greenhouse building
- Storm tank cleaning system completed in 3 out of 4 tanks



Storm Tanks Progress



Tank	Priming System		Tank Cleaning System		Cover
	Installed	Commissioned	Installed	Commissioned	Installed
1	✓	✓	✓	✓	
2	✓				
3	✓		Existing	Existing	
4	✓	✓	Existing	Existing	✓
5	✓		Existing	Existing	
6	✓	✓	Existing	Existing	
7	✓	✓	✓	✓	
8	✓	✓	✓	✓	
Overall	100%	63%	75%	75%	50%

Storm Tank 1 Cleaning System



Storm Tank 4 Cover



Storm Tank 5 Work in Progress



Grit Channels 5 & 6



Secondary Settlement Tank 2



West Works Pre-Aeration Lanes

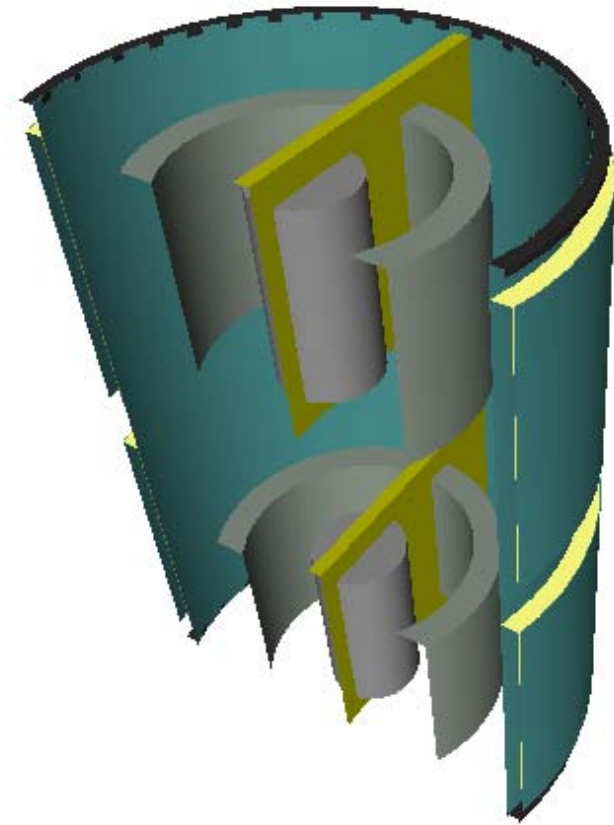




Noise – Odour Control Unit

- Noise survey to confirm source and effect of the noise
- Work on the East Odour Control Unit to mitigate the noise will commence in the middle of May.
- Specially designed and manufactured stack silencer
- Essential health and safety provisions are being made to facilitate the installation of the stack silencer
- Expected completion: End of May

East OCU Discharge Stack





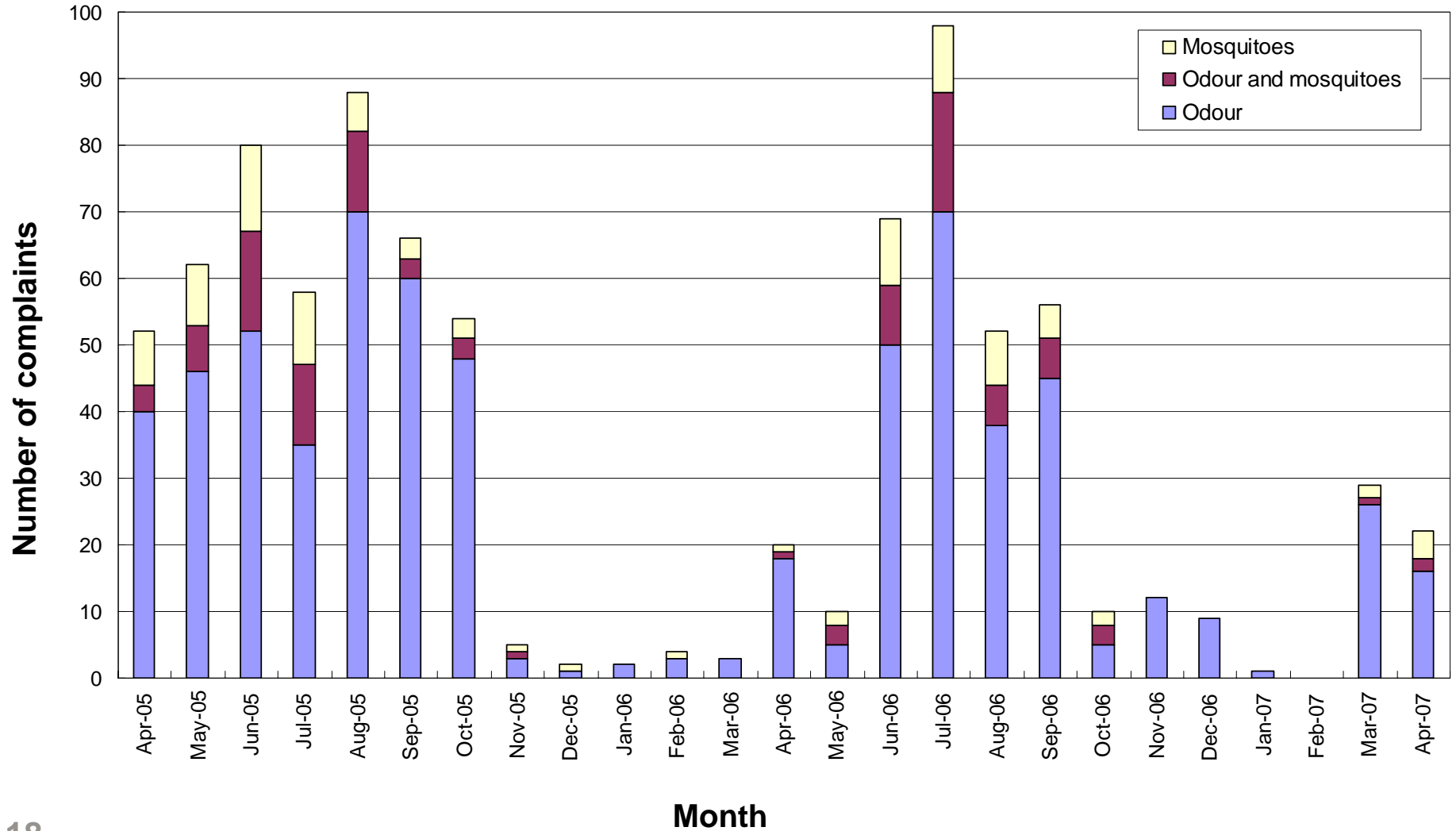
Odour



Operation of Mogden - Update

- Informative email notifications sent to residents*
 - 5 proactive notifications:
 - Odour improvement project works (x3)
 - Site maintenance works (x2)
 - 1 reactive notification:
 - Thermal Oxidiser (Southwest of the site)

Complaints Received at Mogden





Mosquitoes



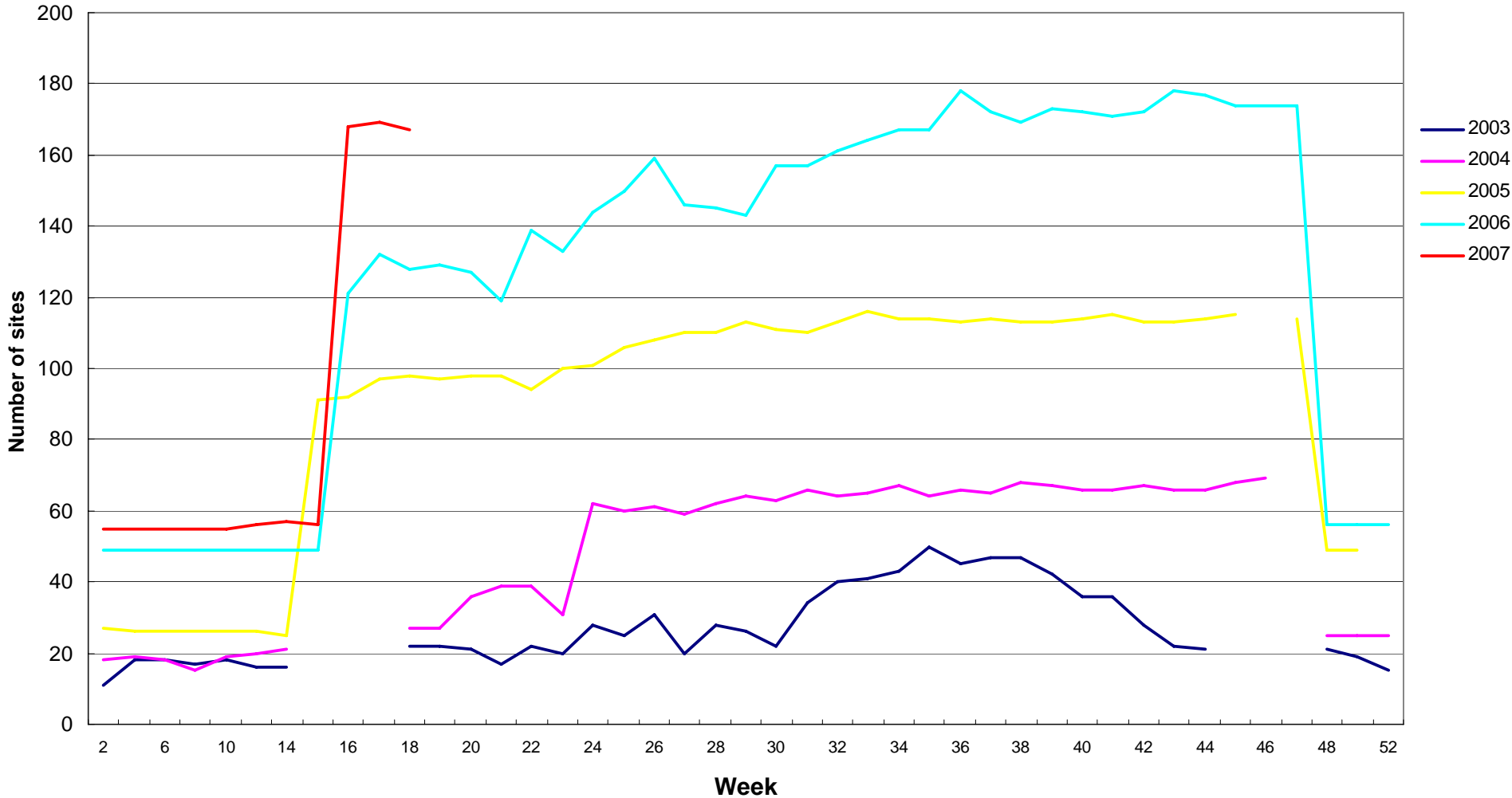
Surveying and controlling Mosquitoes at Mogden

- Strict year-round programme to survey and control mosquitoes
- Summer surveying and treatment programme began mid-April 07:
 - Weekly surveys
 - Target summer breeding sites
 - Mosquito treatment:
 - Less than two days after the weekly survey
 - Controls regular breeding sites and ad hoc sites as identified in the surveys
 - Spraying near standing water

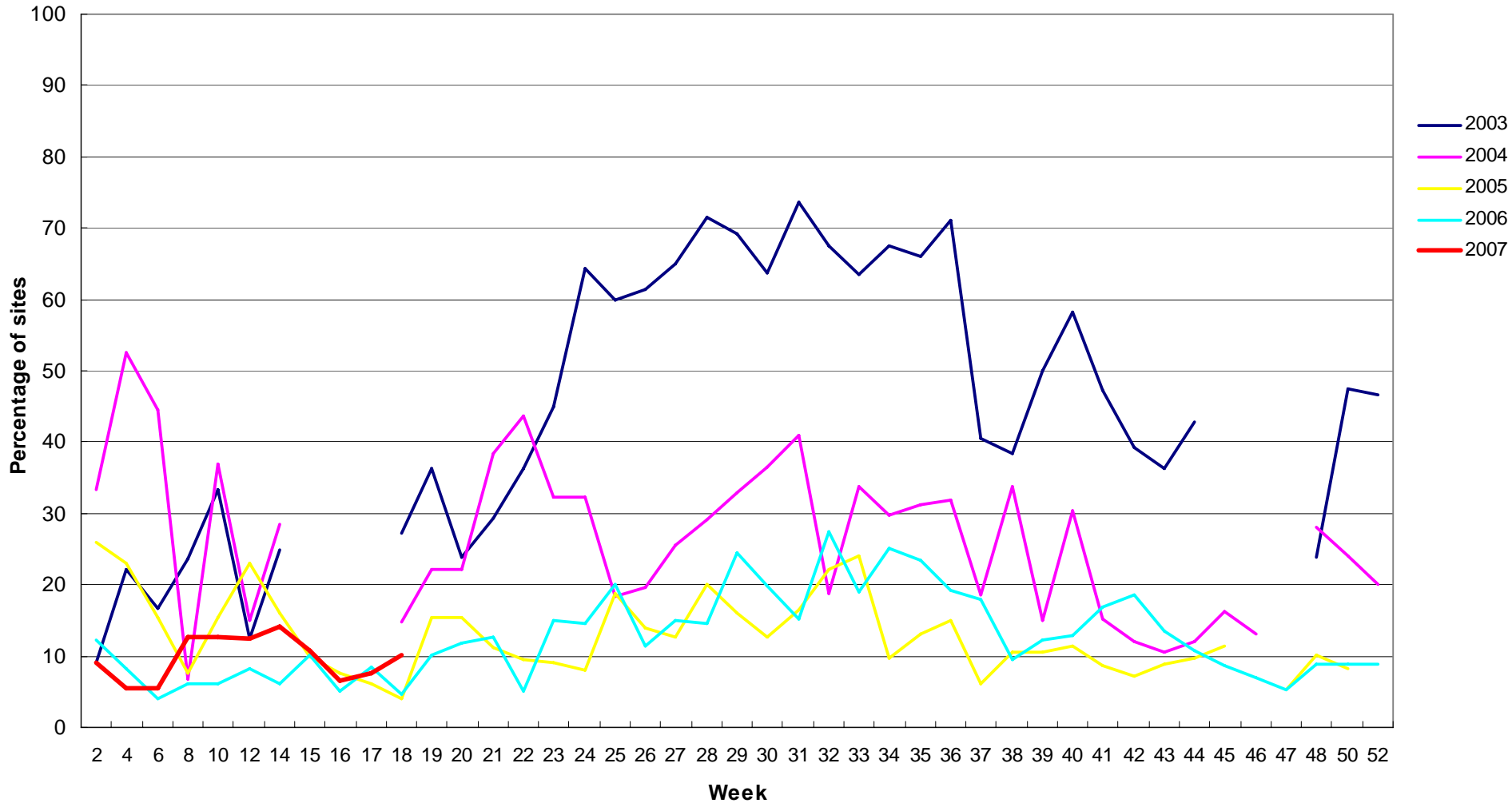
Methods of mosquito control at Mogden

- Physical
 - Site housekeeping: Removing mosquito breeding sites
- Biological
 - Spraying mosquito larvae with a bacteria
- Mechanical
 - Using ultraviolet insect traps
- Chemical
 - Controlling adult mosquitoes with pesticides

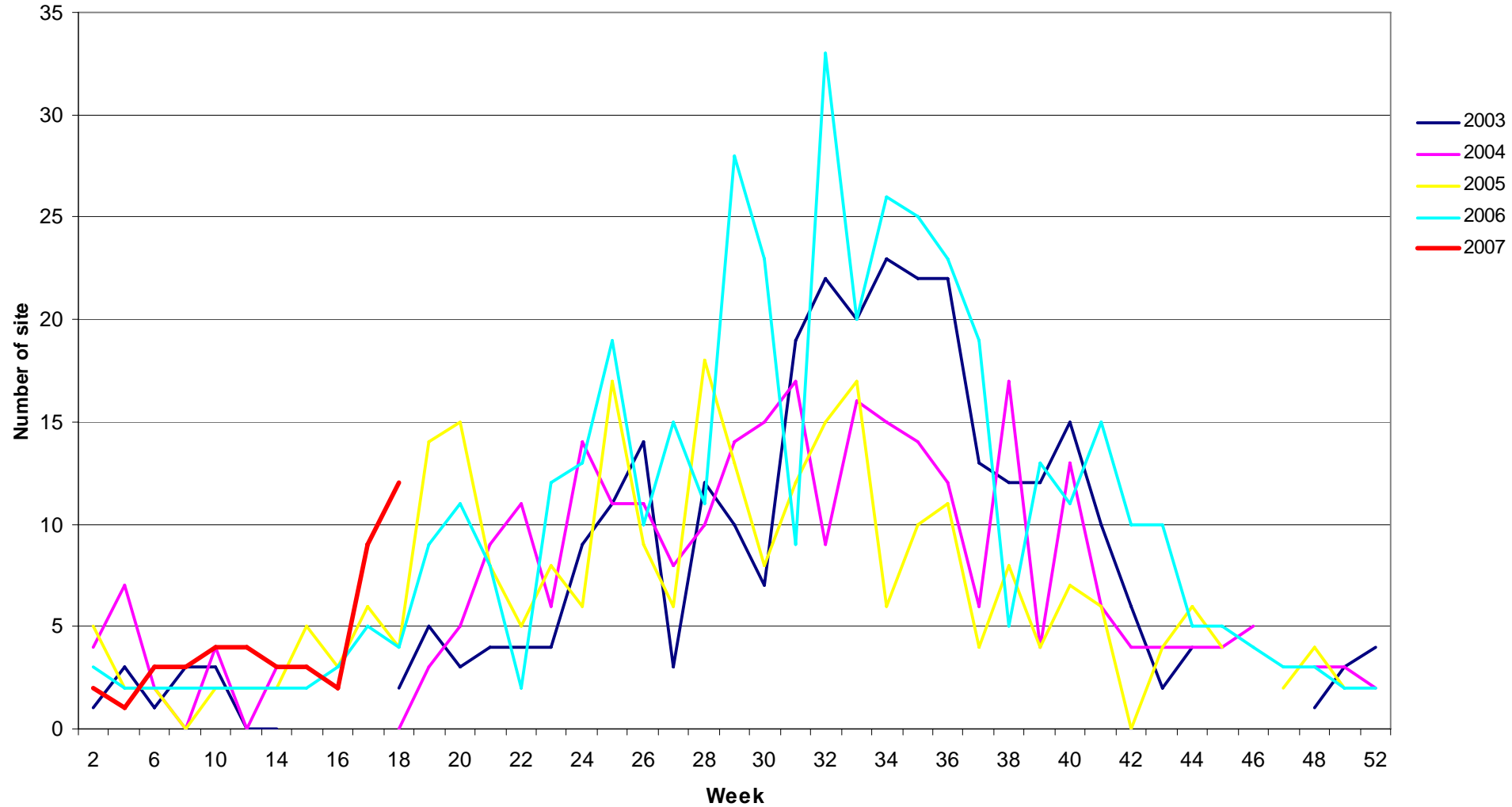
Number of sites inspected for mosquitoes at Mogden



Percentage of sites surveyed found to contain Mosquito activity



Number of sites where larvae have been found



Mosquito project 2007



- Project scope:
 - Target the main over-wintering sites:
 - digester galleries, aeration galleries, main pumping station drywell, power house basement and pumping stations 4 & 5.

- Project aim:
 - To physically alter sites to reduce the number of places where mosquitoes can breed and to make control work easier

- Project started in March 2007

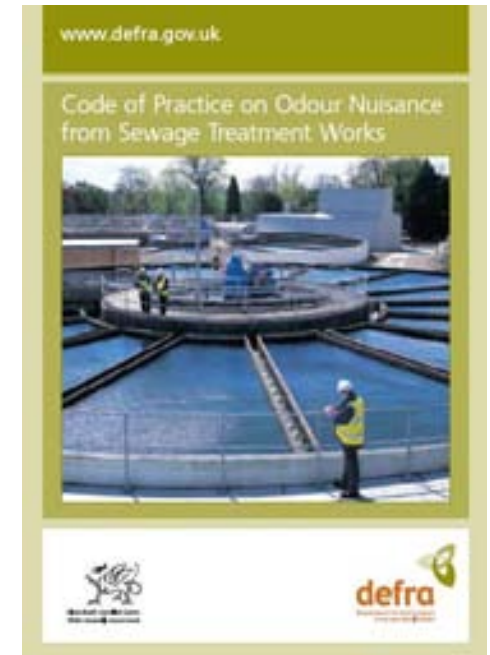
London Borough of Hounslow

Michael Mehta

Pollution Control

Table 1. Relating odour offensiveness to statutory nuisance

The 'FIDOL' factors determining offensiveness	Factors determining Statutory Nuisance ¹²	Comments
Frequency (How often an individual is exposed to odour)	Frequency (How often an individual is exposed to odour)	Even an odour with quite a pleasant hedonic score can be perceived as a statutory nuisance if exposure is frequent. At low concentrations a rapidly fluctuating odour is more noticeable than a steady background, i.e. is an aggravating factor.
Intensity (The perceived strength of the odour, proportional to concentration)	Level of odour	Factors are equivalent
Duration (The length of a particular odour event. Duration of exposure to the odour)	Duration	Factors are equivalent
Offensiveness (relative)/character (Offensiveness is a mixture of odour character and hedonic tone at a given odour concentration/intensity)	Type of odour	An odour need not be offensive to constitute a statutory nuisance. Odour from sewage treatment works may be experienced as offensive because of its source
Location (The type of land use and nature of human activities in the vicinity of an odour source. Tolerance and expectation of the receptor.)	The characteristics of the neighbourhood where the odour occurs	Factors are essentially equivalent
	The sensitivity of the complainant	Statutory nuisance uses the concept of the average, reasonable person



Source: Code of Practice on Odour Nuisance from Sewage Treatment Works, Defra, 2006, www.defra.gov.uk



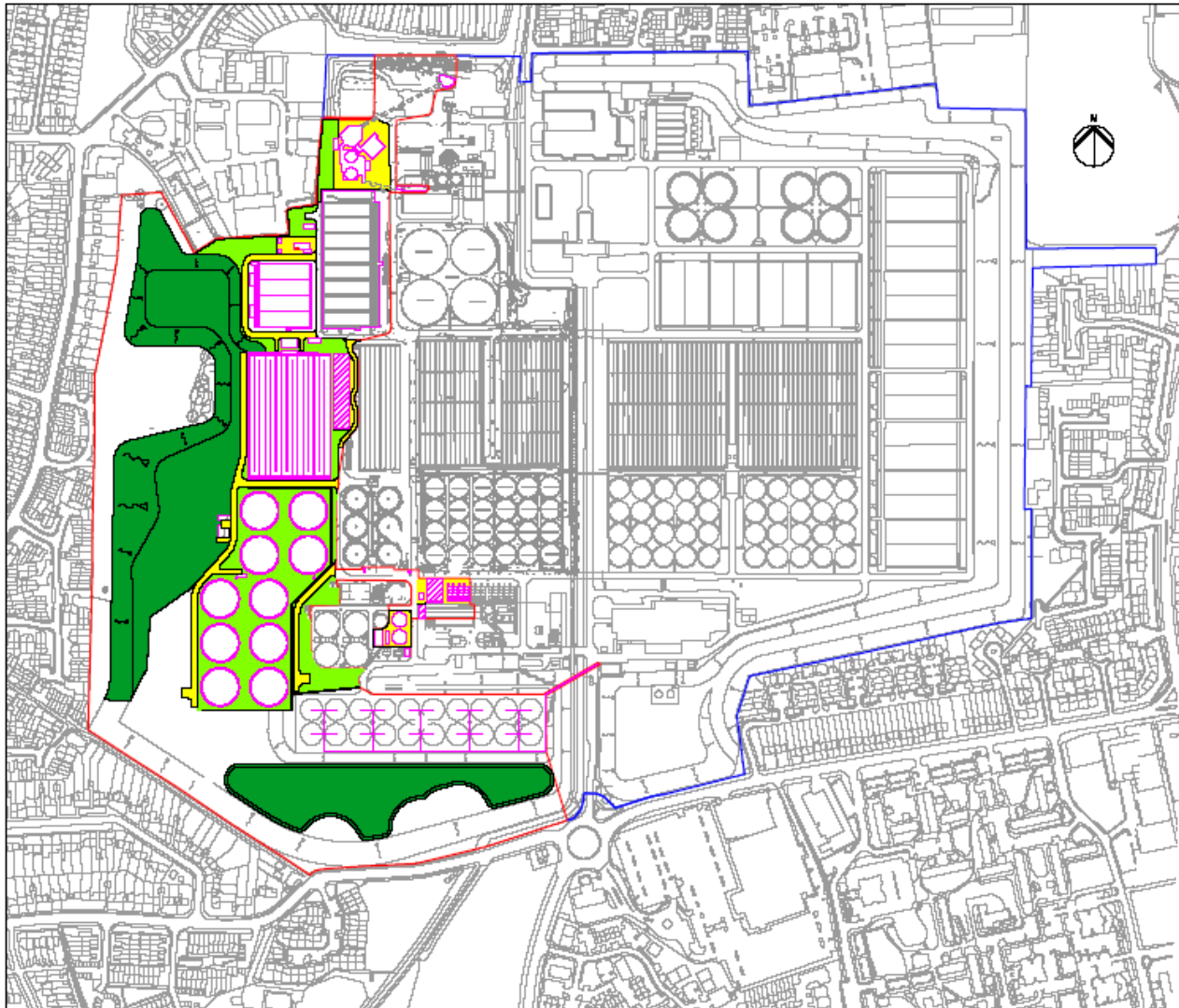
Working for a cleaner Thames



Working for a Cleaner Thames

- Proposed site improvement works:
 - Increase the amount of flow that can be fully treated
 - Less use of storm tanks
 - Includes new covered inlet works, covered primary tanks and new aeration lanes.
 - Odour control of the new works
- Reduce the likelihood of overflows from the works to the River Thames
- To help boost oxygen levels in the tidal Thames
- Improving the water quality and the habitats for aquatic life

Preferred Solution for Mogden



Key:

-  Area of development.
-  Other land in applicants ownership.
-  Buildings.
-  Site roads / hardstanding.
-  Above ground structures.
-  New & re-profiled embankment.
-  Soft landscaped areas.
-  Earth retaining wall.



Working for a Cleaner Thames

■ Timescales:

- Planning application: Summer 2007
- Proposed construction date: Spring 2008
- Complete and operational: Spring 2012

■ Public displays:

- Isleworth Public Library (21st, 22nd, **24th May 2007**)



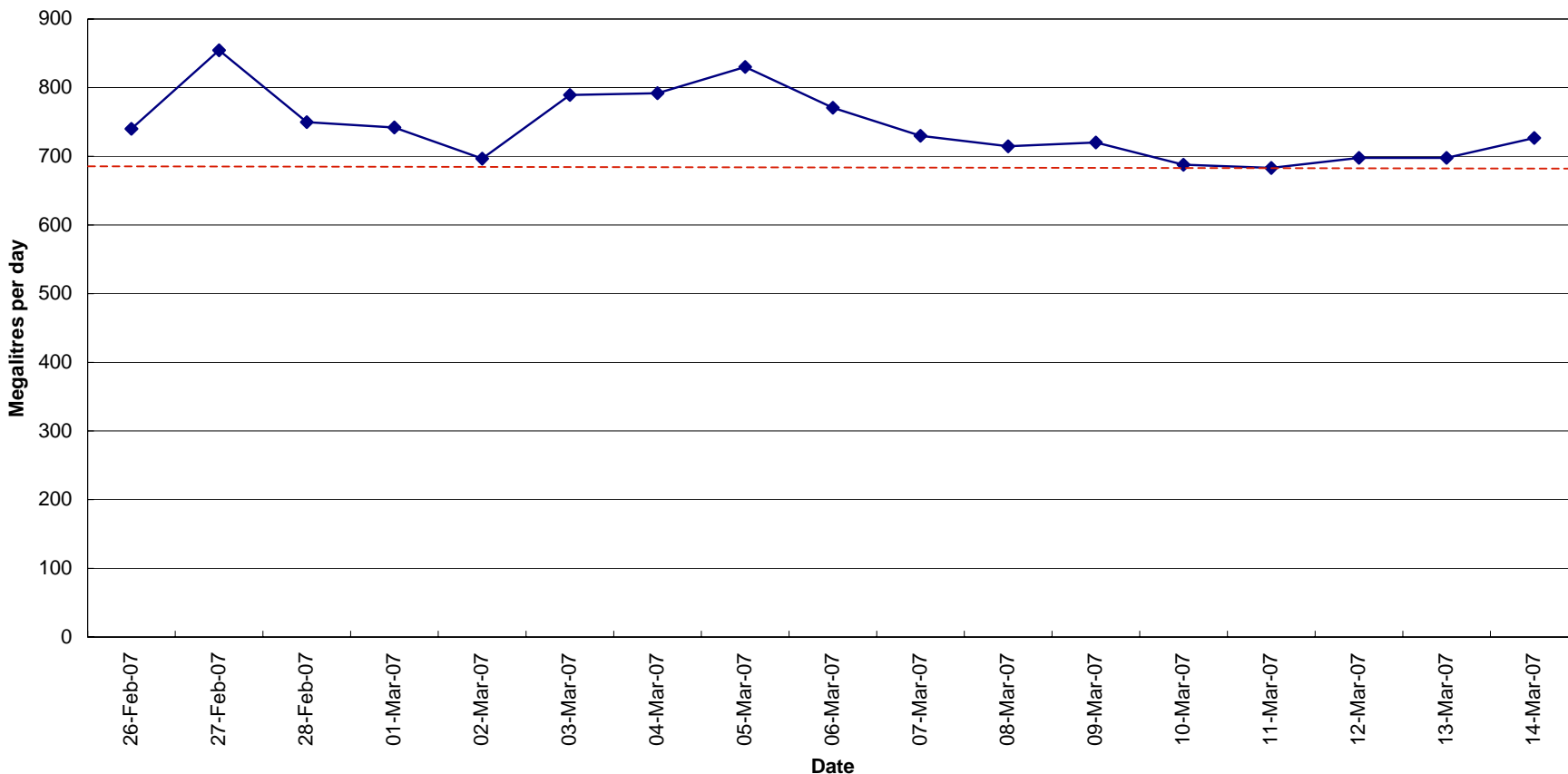
Further points raised by residents

Storm tanks

- Frequent use of the storm tanks at the end of February to beginning of March 2007.
- Period of heavy rainfall followed by drier weather
- Mogden was receiving high flows
 - High rainfall
 - Large catchment area
- Peak flow capacity reached



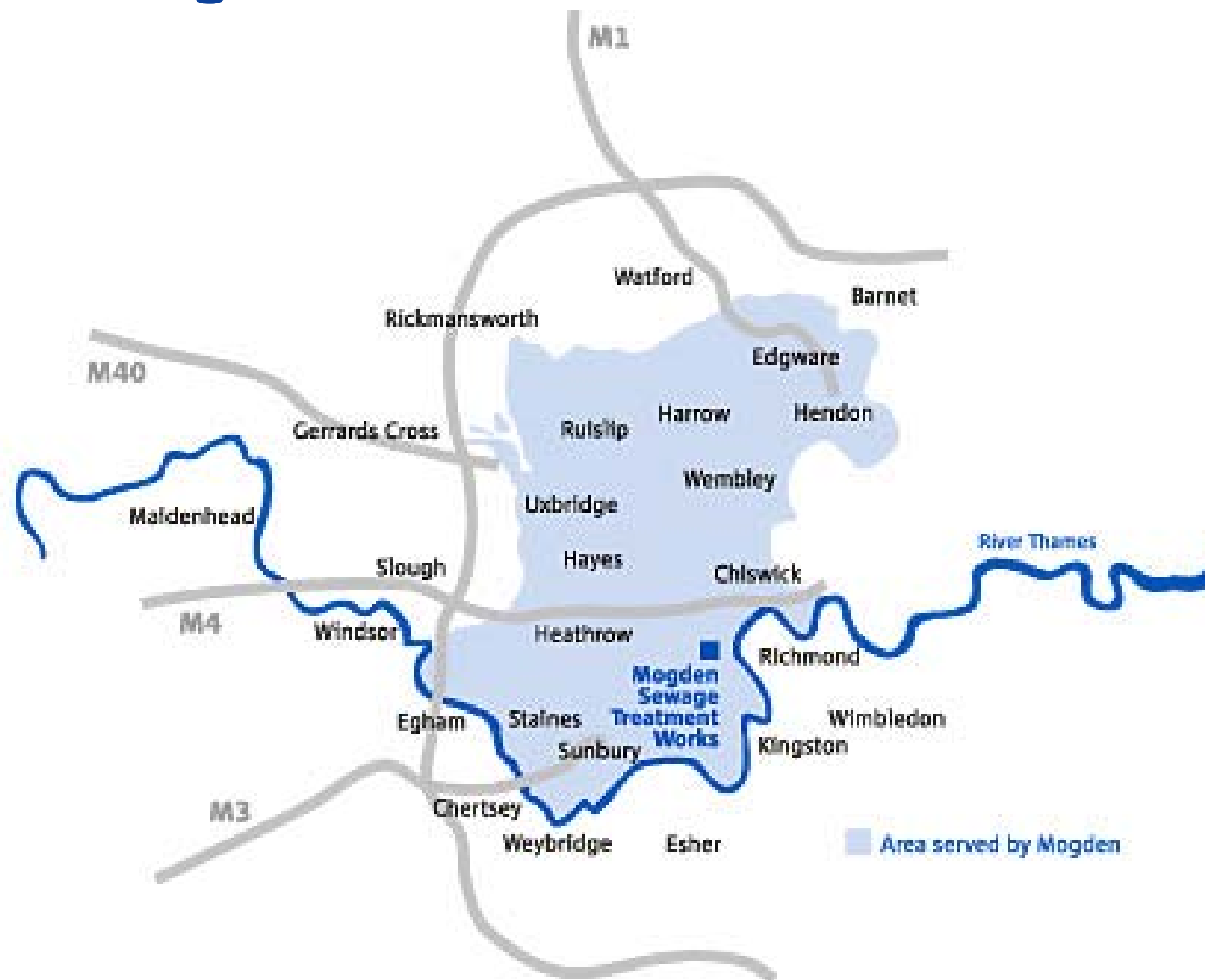
Mogden sewage treatment works Flow (26 February – 14 March 2007)



— Flow

- - - Peak flow capacity

Mogden catchment area



- Mogden serves over 1.8 million people

- Flow can travel over 20 miles



Communication

Communication



- Email notifications:
 - Informing residents of possible increase in odour

- Mogden newsletter:
 - Updating residents with progress on the odour improvement project
 - To be distributed in June 2007

- Mosquito campaign:
 - ‘Help control mosquitoes in your area’
 - To be distributed in May 2007

Communication



■ Contact us about Mogden:

- via the customer centre: 0845 9200 800
- through our website:
www.thameswater.co.uk/mogden
- by email: mogden@thameswater.co.uk
- by post: Thames Water, PO Box 436, Swindon, SN38 1TU

■ Visit our website:

- ‘Answers to your questions’ webpage
- Mogden weekly site log webpage
 - includes regular updates of the Odour Improvement Project





Thank you