

# TOWER SURVEYS NEWS

Welcome to Tower Surveys' second newsletter.

In this newsletter, we have included a snapshot of projects from around the UK with the view of showing you some of our specialist services and depth of expertise.

I hope you enjoy the read.

*Nick Downes, Director*



## TWYXCROSS ZOO - EAST MIDLAND ZOOLOGICAL SOCIETY

Tower Surveys have recently finished survey works for the new 'Attenuation Pond' and 'Wetlands' at Twycross Zoo.

Twycross Zoo opened its new Welcome Centre 'Himalaya' in March 2010. This includes an exhibit of charismatic, endangered snow leopards. In order to satisfy Environment Agency requirements, an attenuation pond was created to receive runoff water from the hard standing areas before being discharged into a brook running alongside the zoo site. The pond will be planted with native aquatic species along with stabilising plants around the banks.

The zoo hosts up to half a million visitors each year and so there is a high demand on the sewage treatment system. Changes to the Environment Agency's regulations meant that the zoo either had to install a larger and much more expensive treatment plant, or look to a more sustainable method to treat effluent.

The zoo worked with the Wildfowl & Wetland Trust to create a series of 19 ponds running west to east across the lower boundary of the zoo's car parks. The first six of these are reedbeds, the first of which receives water from the existing treatment plant. Water then flows from the reedbeds through a system of polishing ponds which provide additional treatment, and finally to two large storage lagoons. Water levels are managed by discharging excess water into a brook running along the south of this complex. In the future, water will be recycled from the final pond back to the zoo site for filling exhibit pools, irrigation, and flushing WCs and urinals.

The Wetlands have already attracted native birds, insects and mammals including swans, moorhens, dragonflies, a hobby, common blue butterflies and a kingfisher. The zoo will work with other wildlife organisations and community groups to design an area, which will encourage a diverse number of different species, hopefully including the reintroductions of some threatened species. The site aims to be interesting, enjoyable and informative for visitors of all ages.

Further details of all exhibits can be found at [www.twycrosszoo.org](http://www.twycrosszoo.org)

## CCTV VOID INSPECTIONS FOR AMCO



Tower Surveys have been working in partnership with Opus International Consultants for client Amco to complete condition assessments of Viaducts, some of which are 150 years old.

Searching for voids, the client drills core holes into the viaduct structure. Once located, trained Tower PTS personnel insert CCTV equipment on a lance through the drilled hole, typically 75mm in diameter, capturing the footage on a recording unit. This footage is then processed and a detailed structural condition survey is completed.



Into the void

Detail revealed by CCTV inspection, previously hidden from sight for over a hundred years, enabling meaningful structural inspections to be undertaken.



Still picture from inside a void at Rendlesham Viaduct

## TOWER SURVEYS CONTACTS

### The North

nick.downes@towersurveys.co.uk  
0800 0855309 or 07786 560433

### The Midlands

tony.clifton@towersurveys.co.uk  
0115 9601212 or 07786 560429

### The West

paul.vane@towersurveys.co.uk  
01782 667550 or 07786 560466

### Wales

tawanda.mutiwanyuka@  
towersurveys.co.uk  
0115 9601212 or 07786 560451

### London/Home Counties

scott.anderton@towersurveys.co.uk  
01908 399780 or 07786 560427

### The South

nick.downes@towersurveys.co.uk  
0800 0855309 or 07786 560433

### Underground Service Location - Countrywide

jes.galtress@towersurveys.co.uk  
07789 687873

## SURVEYING SERVICES

Tower Surveys is a Chartered Surveying company offering integrated and innovative surveying solutions. Our services are carried out using technically excellent people employing current techniques and state of the art technology; systems designed to enable speed, accuracy, reliability and savings for our clients.

Our services include:

- 3D Laser Scanning
- Boundary Dispute Resolution
- CCTV Surveys
- Geographic Information Systems
- Measured Building Surveys
- Setting Out
- Survey Control Networks
- Topographic Surveys
- Track Geometry and Infrastructure Surveys
- Underground Utilities Surveys

## ENVIRONMENT AGENCY FRAMEWORK - SURVEYING SERVICES

Tower Surveys have been re-awarded a place on the Environment Agency's Midlands Framework for Surveying Services. Part of the Environment Agency's corporate strategy, 'Creating a better place', states that they will "use the best science to analyse and map the probability of flooding". One of the ways of meeting this aim is to make sure the topographic and hydrographic survey data used is fit for purpose. Tower Surveys have a proven record of accomplishment in the provision of such mapping services, all work is carried out to the 'National Survey Specification', which provides essential technical detail, particularly for the larger and more complex survey projects.

## GIS SPECIALIST DOWN UNDER

Tower Surveys' GIS team recently travelled to Australia to assist colleagues with the design of an Asset Data Collection and Management System. The project involved detailing and tagging all features along a 42km section of cycleway and footpath running adjacent to the western M7 Motorway.

Aerial mapping was used to produce the base mapping for the shared cycleway, footpath and adjoining routes. Infill mapping and missing data was collected using RTK GNSS units.

Asset data included such items as safety barriers, noise walls, fencing,



Collecting data along the M7 Motorway

kerbs and landscape areas. This spatial data was linked to the asset identity tags and asset register; along with other important detail, these data sets were ultimately used as part of an asset management plan.

One particularly pleasant part of this project was all the cycling!

## PREPARATIONS FOR THE POPE'S VISIT

Tower Surveys were pleased to be involved in the preparations for the Pope's recent visit to the UK.

Ahead of the 1,200 coaches and more than 65 thousand pilgrims expected to attend Pope Benedict XVI's visit to Cofton Park in Birmingham, the final site preparations were being undertaken when an "unusual depression" appeared in one of the parade areas. Although the depression was only small it needed to be investigated to determine if there was a major void hidden beneath the surface which could cause a catastrophic failure.

Ground probing radar and electro location equipment was used for this investigation. No voids were detected in this area and the search was extended to cover other areas of interest, some 3.7km of orthogonal sections at nominal 10m centres were surveyed. Having checked the



Ground probing radar

Papal processional route twice using different radar settings, we were happy to give the all clear and the visit went ahead as planned.

## FREE Tower Coaster or Mouse Mat

Email your details to:  
mousematorcoaster@towersurveys.co.uk  
and let us know what you think of our  
newsletter.