

AFPCN Conference

KATRINA – What lessons for
Europe?

Paris

February 23rd 2006

HURRICANE KATRINA 5 MONTHS ON

A talk by Professor Brian Lee based on
a tour of the
New Orleans area
18th & 19th January 2006

First Louisiana Landfall – Buras on
the Mississippi Delta to the south
east of New Orleans – 11.00am
August 29th 2005

Final landfall – near Slidell on the
Louisiana/Mississippi border –
18.00 pm 29th August 2005

The result – extensive flooding in
New Orleans and wind and storm
surge damage to the coast to the
east

Levee Failure – ASCE evidence to
the US Congress in November
2005

“What we found in the field was very different than we expected , given the media reports. Rather than a few breaches in the floodwalls in the city caused by overtopping we found literally dozens of breaches throughout the many miles of the levee system. “

Wind Speeds

- NHC report dated 20th December 2005 admits that Katrina wind speeds were initially overrated
- Most of the metropolitan area of New Orleans experienced winds of only Hurricane Category 1, if that.

Saffir - Simpson Hurricane rating Scale

- Category 1
 - Wind Speeds* 32 – 41 m/s
 - Storm Surge 4 – 5 feet
- Category 2
 - Wind Speeds 42 – 48 m/s
 - Storm Surge 6 – 8 feet
- Category 3
 - Wind Speeds 48 – 57 m/s
 - Storm Surge 9 – 12 feet

* Wind Speeds defined as 1 minute mean speed at 10m above open sea surface

New Orleans Downtown Area

Evidence of flying debris damage caused by rooftop gravel

Very similar scenario to Hurricane Alicia in Houston 1983 – reported then by Ashan Kareem

Investigation now being carried out by Elizabeth English, LSU, HRC.

Near the Louisiana – Mississippi
state line

Note the conditions of the storm surge , very similar in height to the Indian Ocean tsunami in December 2004

Waveland, Mississippi

Gulfport, Mississippi

Biloxi, Mississippi

New Orleans, off Elysian Fields
Ave, going North

New Orleans, the Lower Ninth Ward

meanwhile.....

Lessons....

- Lessons for politicians and decision makers,
- Lessons for engineers, constructors and designers,
- Lessons for insurance companies,
- Lessons for people living in areas at risk