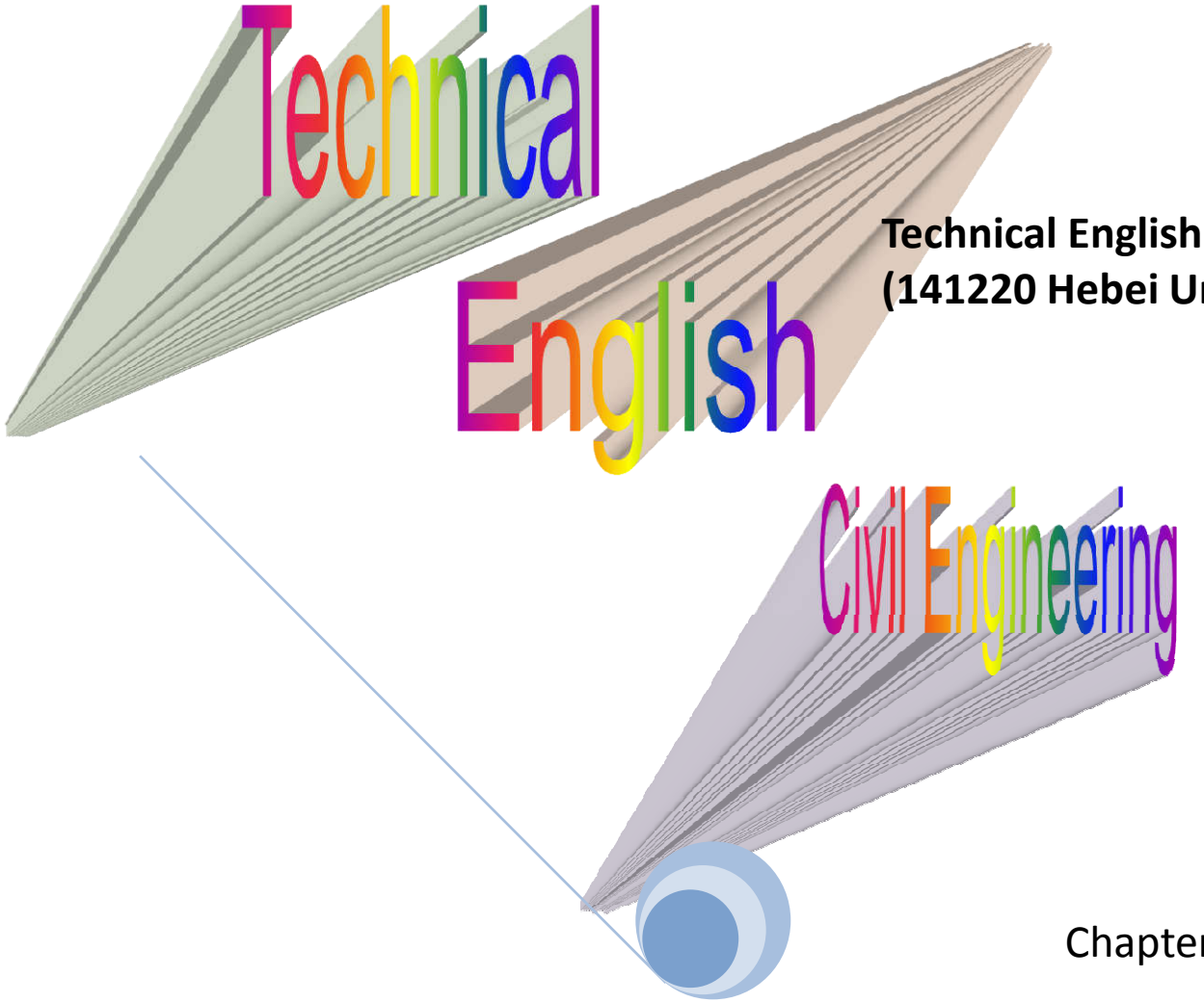


Technical English in Civil Engineering
(141220 Hebei University)

Chapter 03 Reading

Dr. Xingzheng Wu 吴兴征

E-mail: xingzhengwu@gmail.com

大业未竟 长路漫漫！

xingzhengwu@163.com

Wu @ Dundee

The Tay rail bridge disaster revisited P38

Forensic engineering a reappraisal of the Tay Bridge disaster P44


2006 7 7


DISCOVERY POINT
Conference & Events
Gift Shop and Cafe
Exhibitions
Open Daily


DISCOVERY


RRS DISC


PEDESTRIANS
& CYCLISTS
DIVERSION


Dundee
Dual carriageway


Welcome to
University of Dundee
UNIVERSITY
PRECINCT
University
of Dundee
Open Day
University of Dundee
Smalls Wynd


UNIVERSITY OF
DUNDEE
Main Entrance


WE'RE ... SCOTTISH UNIVERSITY
OF THE YEAR AGAIN!
2016 AND 2017

Fulton Building Dundee University


LOADING ZONE

Geotechnical centrifuge modelling at the University of Dundee.

M.C.R. Davies, T.A. Newson and M.F. Bransby, University of Dundee, School of Engineering, Dundee, Scotland, United Kingdom, DD1 4HN. m.c.r.davies@dundee.ac.uk

The Dundee Geotechnical Centrifuge Research Centre was opened in June 1999 only two years after the formation of the Dundee Geotechnical Engineering Research Group. The geotechnical centrifuge is an Actidyn C67-2 machine which has a 7 m diameter fixed beam equipped with a swinging platform that can support a payload of 1.5 tonnes with dimensions of 1 x 0.8 x 0.8 m. The speed range of the machine is 38 – 208 rpm, which gives the facility a performance of 150 g/tonne. Models are monitored with up to 80 instrumentation channels and by both video and digital cameras. The data acquisition system, which uses an onboard computer, permits monitoring of both monotonic and dynamic events.

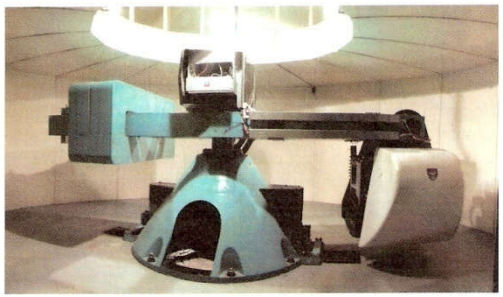


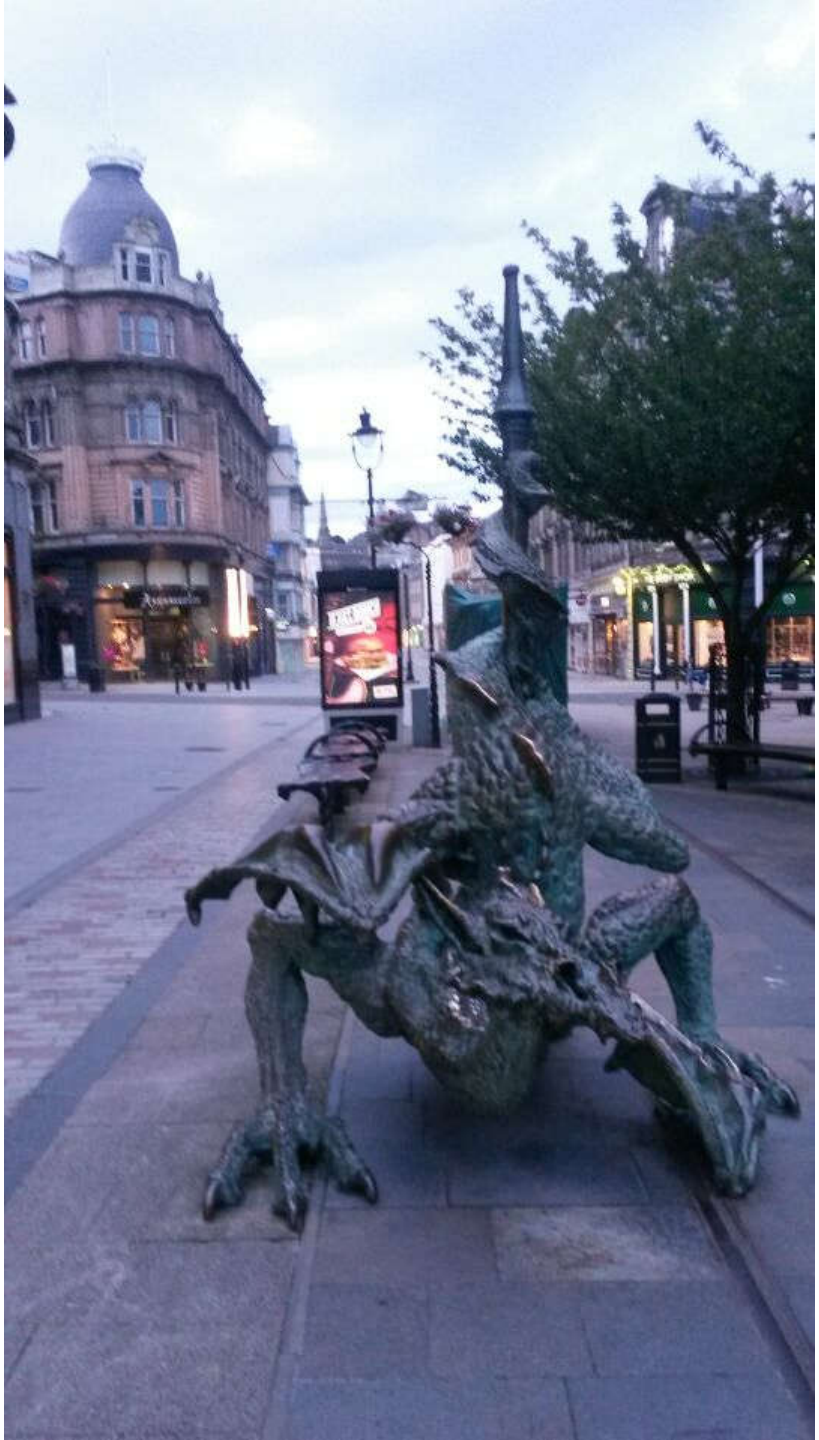
Figure 1.The Dundee Geotechnical Centrifuge

The research interests of the group fall into four primary areas: Fundamental Behaviour of Soils, Geo-environmental Engineering, Ground Improvement, and Soil-Structure Interaction. There is also interaction between each of these areas. The research philosophy concentrates on understanding the fundamental mechanisms involved in the geotechnical processes and then combining physical modelling, analysis and numerical modelling in order to solve the engineering problems.

A distinctive aspect of the group is the wide range of collaborative research in which investigations are conducted at the interface between Geotechnical Engineering and other branches of engineering and science. Collaborative projects involve mining, military, chemical, medical and structural engineering, together with earth sciences. This research is funded by the European Union, the UK Research Councils, research organisations (e.g. the Transport Research Laboratory) and industry. Since the opening of the Dundee Geotechnical Centrifuge Centre investigation have included:

Soil Nailing - Investigation of the performance of soil nailed systems at both serviceability and ultimate limit states, and the changes in these with time. Figures 2 and 3 show the development of pore water pressure in a soil nailed slope - following construction in three lifts - and the resulting change in axial load in a nail during both the construction and inundation phases of the test, respectively.

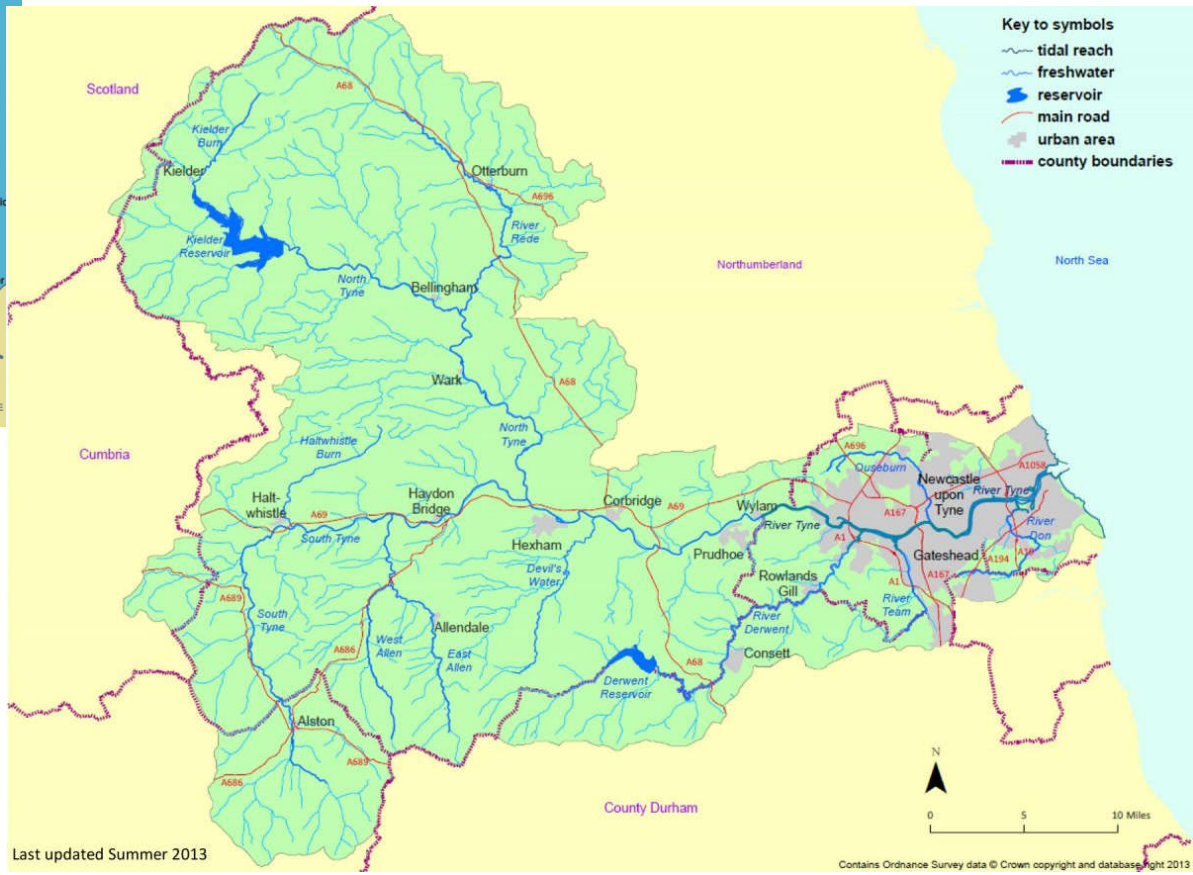

WEST
studio



Chap03 Dundee, Scotland 8 minutes
Chap03 History of Sir Thomas Bouch (Tay Rail Bridge)
Dundee 00 15 minutes

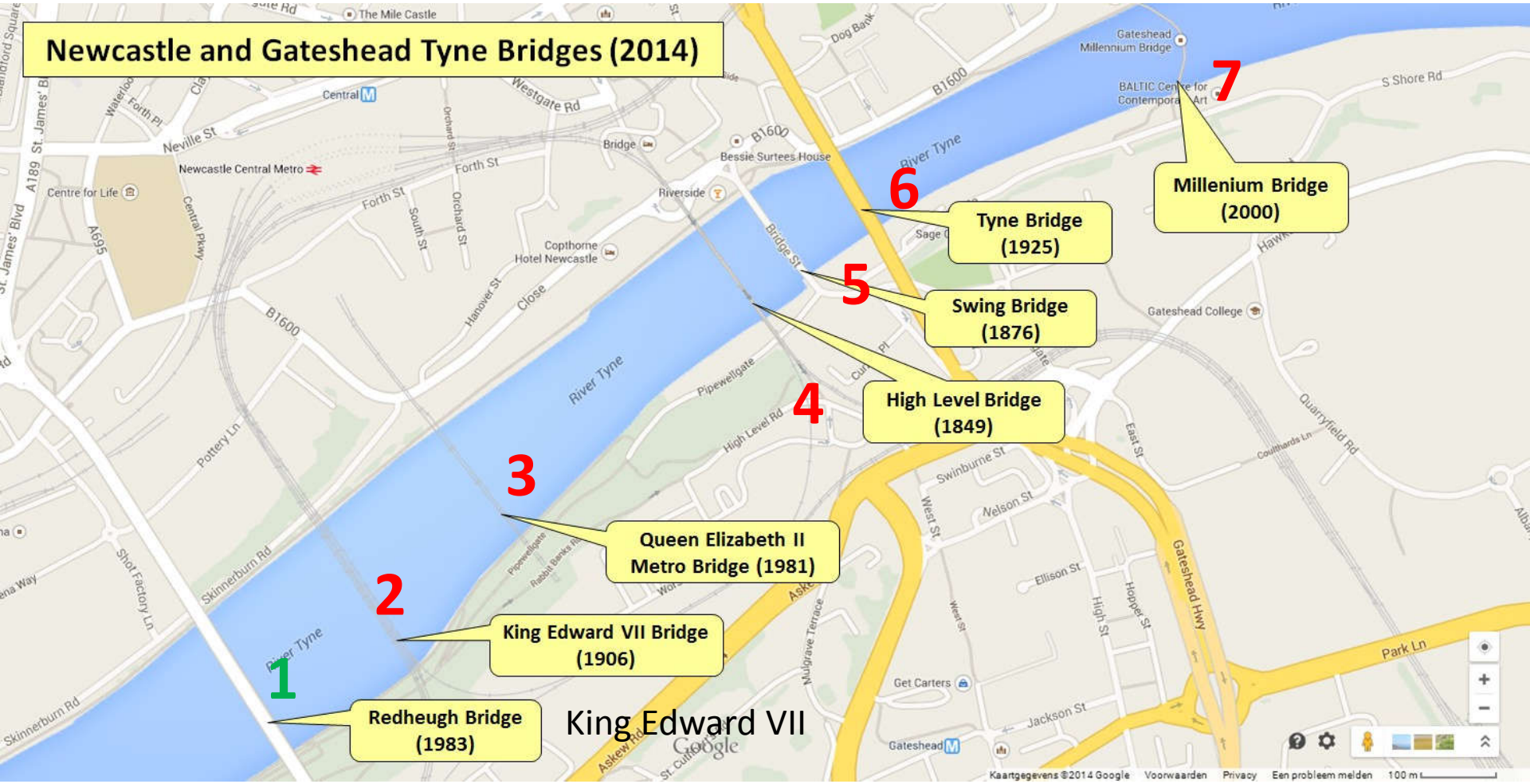
Gateshead Millennium Bridge—an eye-opener for engineering

catchment_map



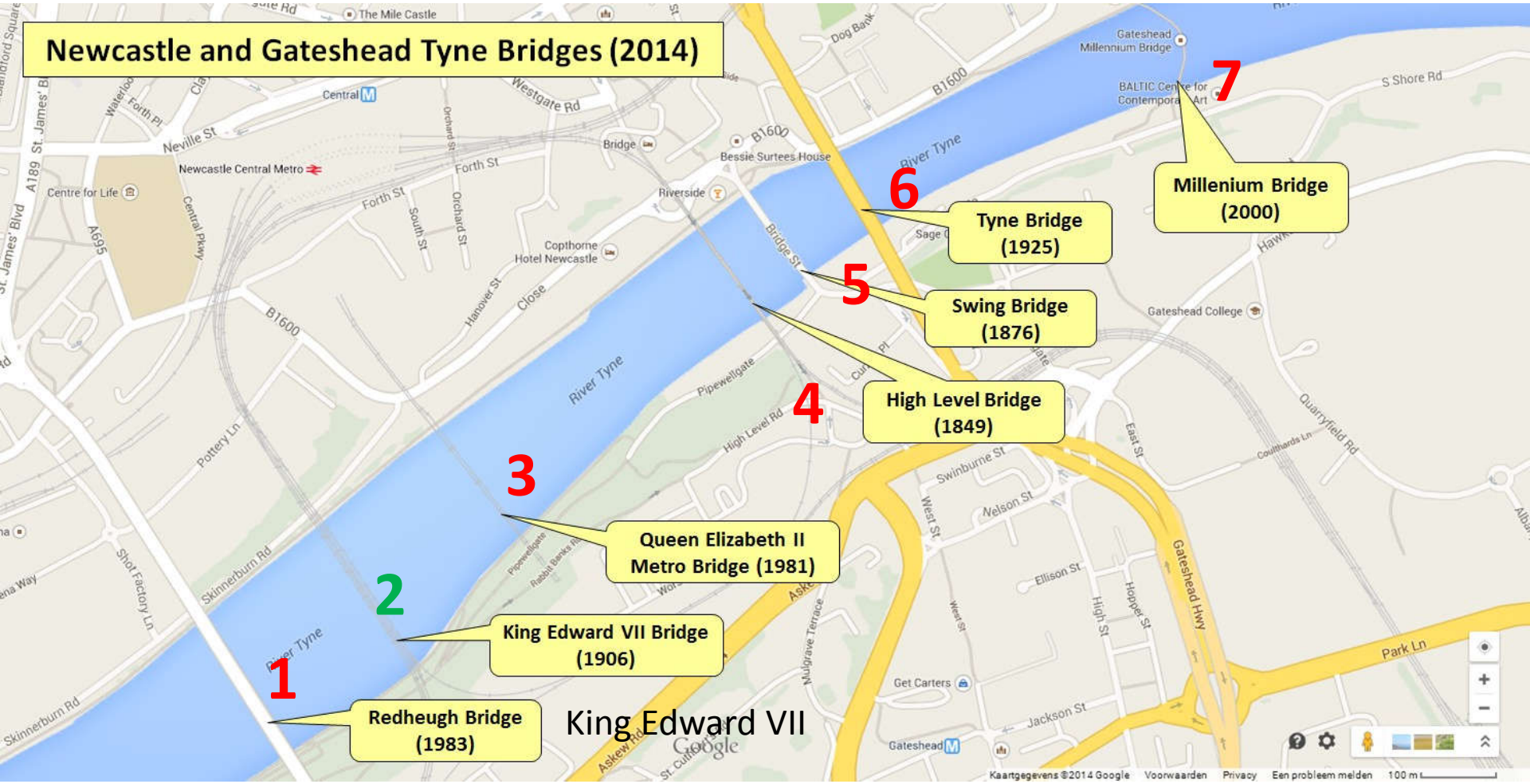
Newcastle-upon-Tyne


NORTHUMBERLAND
Newcastle Airport (NCL)
Whitley Bay
TYNE AND WEAR
North Shields
South Shields
Wallsend
Wylam
Newcastle Upon Tyne
Jarrow
Ryton
Hebburn
Blaydon
Gateshead
Rowlands Gill
The Boldons
Sunderland
Washington
COUNTY DURHAM
Chester le Street
Houghton le Spring
Seaham
©World Guides



1 Redheugh bridge newcastle
1983

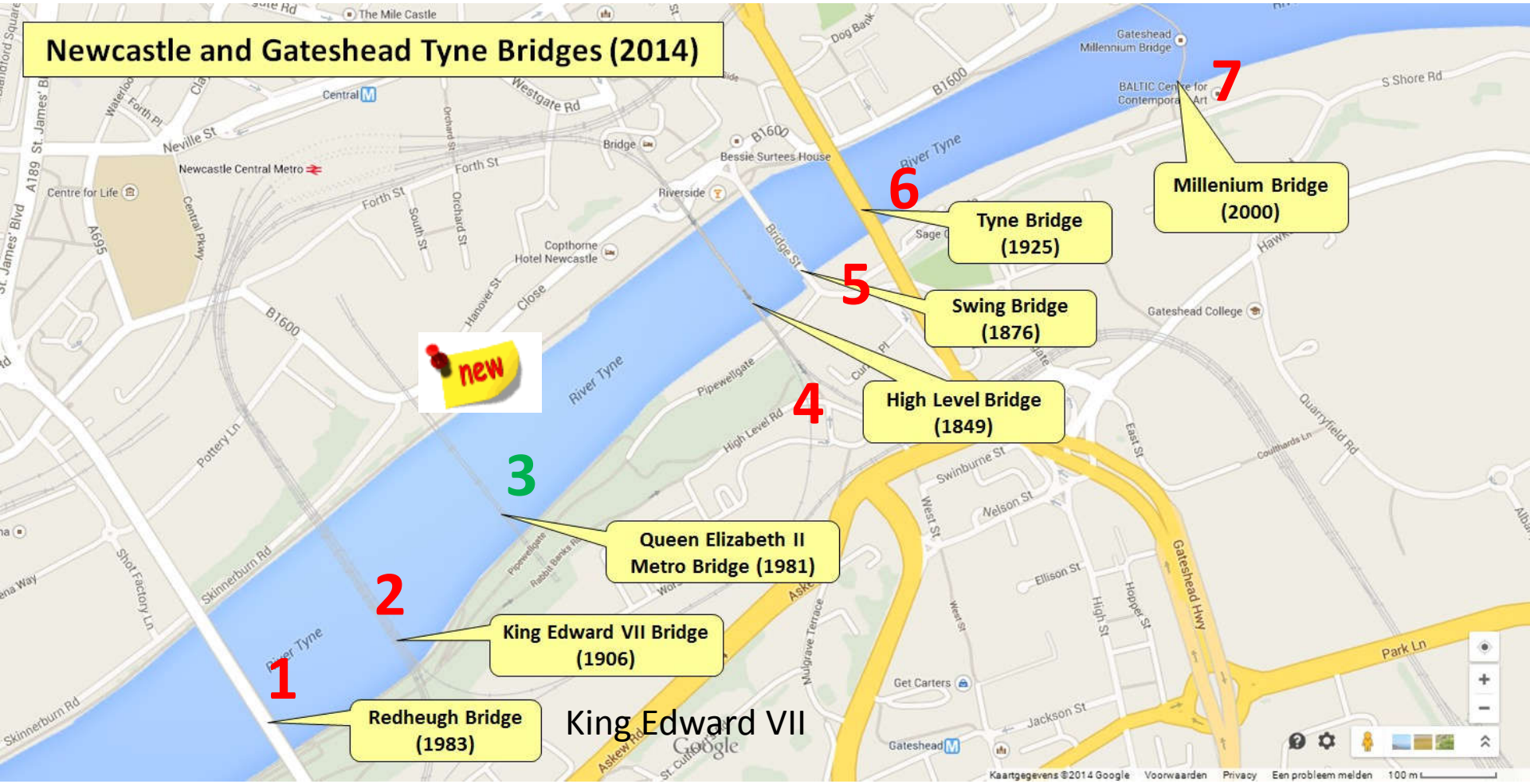
1 Redheugh bridge 1983



2 King Edward VII Bridge
1906

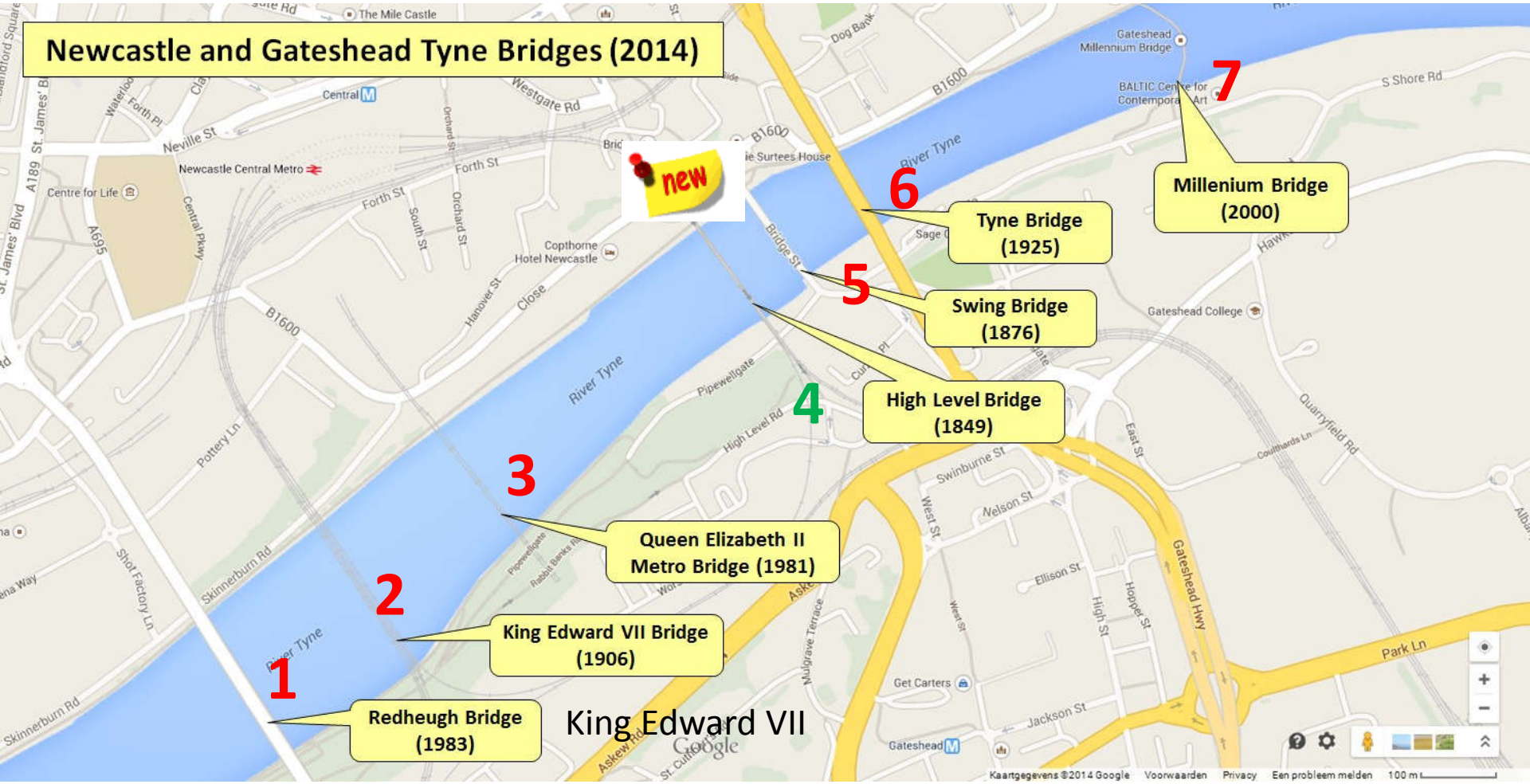
2 King Edward VII Bridge 1906

Virgin_Voyager_on_King_Edward_VII_Bridge



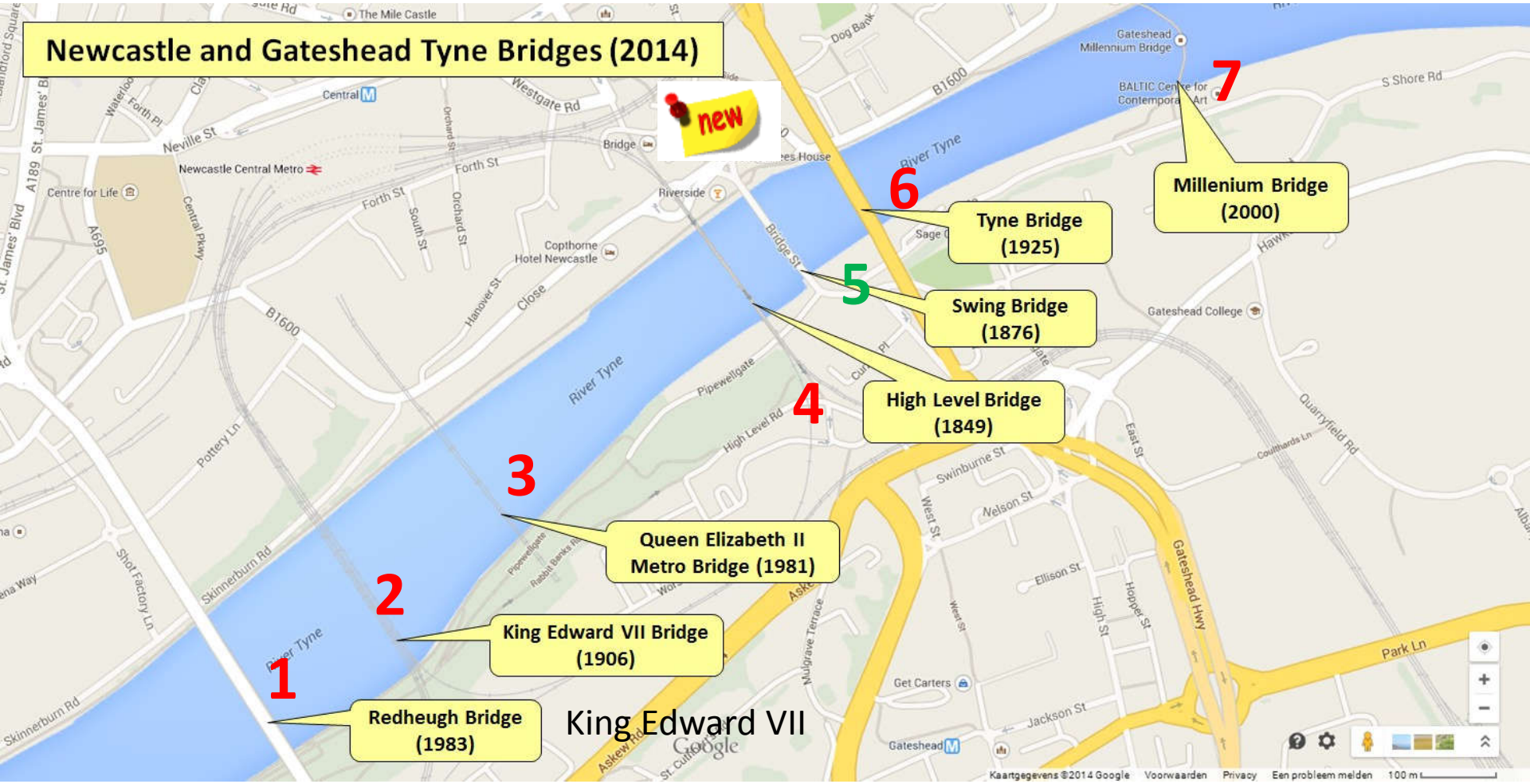
3 Queen Ellizabeth II Metro bridge newcastle
1981

3 Queen Elizabeth II Metro Bridge



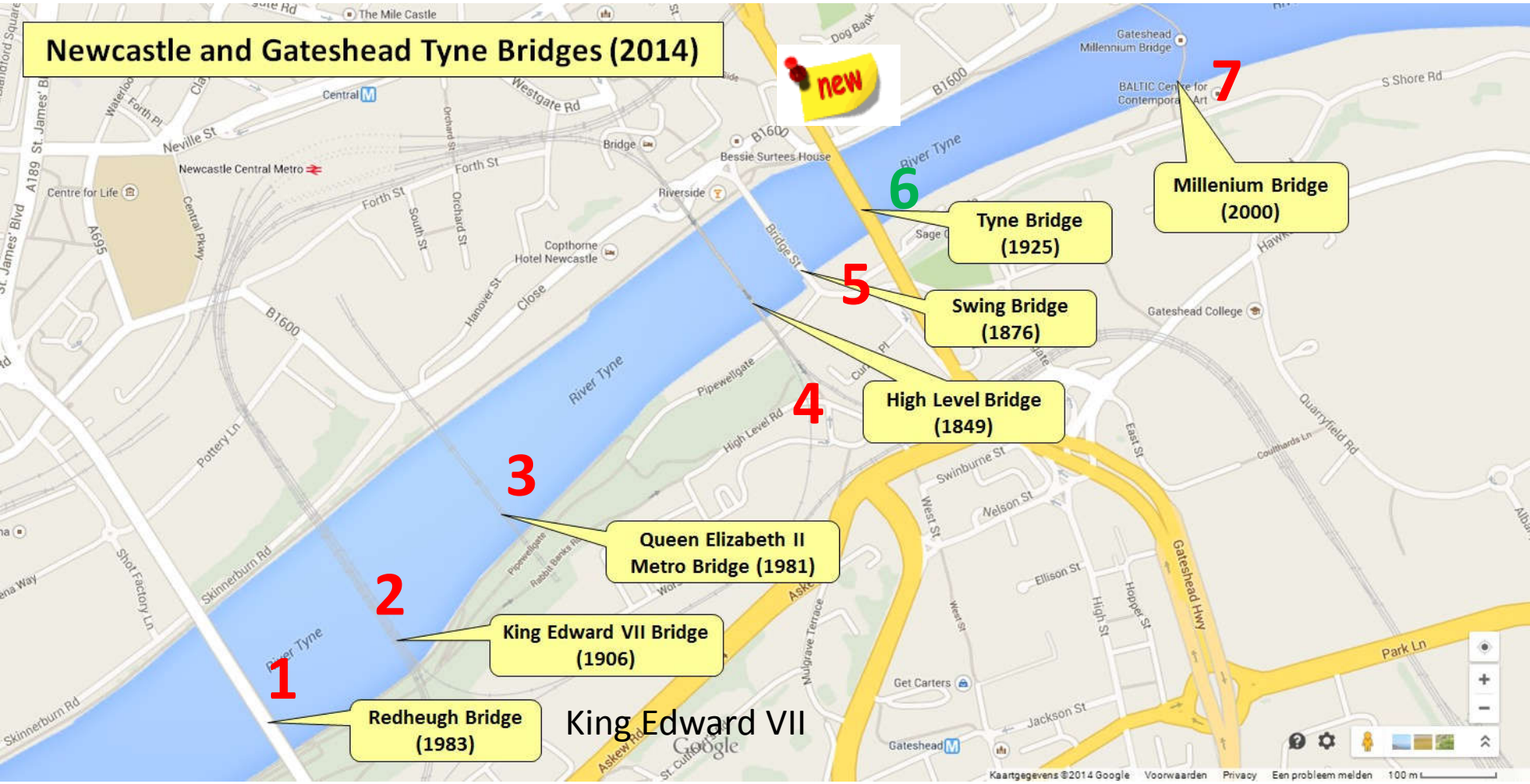
4 High level bridge newcastle
1849

4 High Level Bridge, Newcastle upon Tyne



5 Swing bridge newcastle
1876

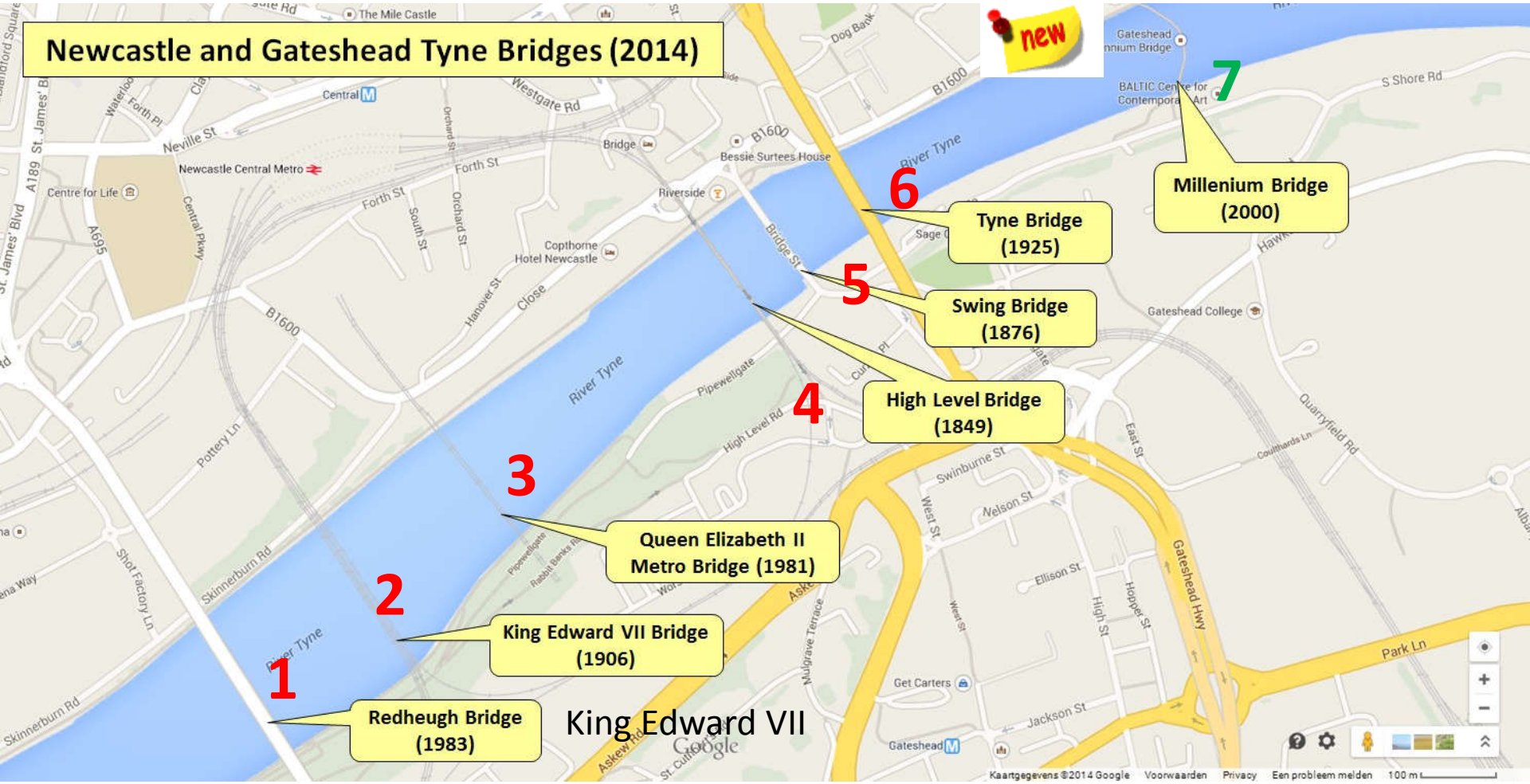
[5 Swing Bridge (Gateshead)](#) 1876



6 Tyne bridge newcastle
1925

6 Tyne Bridge (Newcastle upon Tyne, 1928)

sydney harbour bridge



7 Millennium bridge newcastle
2000

7 Millenium Bridge 2000

Cassie Building
Newcastle University
5 September 2013

Chap03 Newcastle upon Tyne - Tyne Bridge - Millennium Bridge 2 minutes

Chap03 The bridges of the River Tyne at Newcastle 3 minutes

Chap03 Tilting Opening Newcastle Gateshead Millennium Bridge - Elapsed time 1 minutes

Becoming a civil engineer P69

Chap03 Civil Engineering
Motivational Video 4 minutes

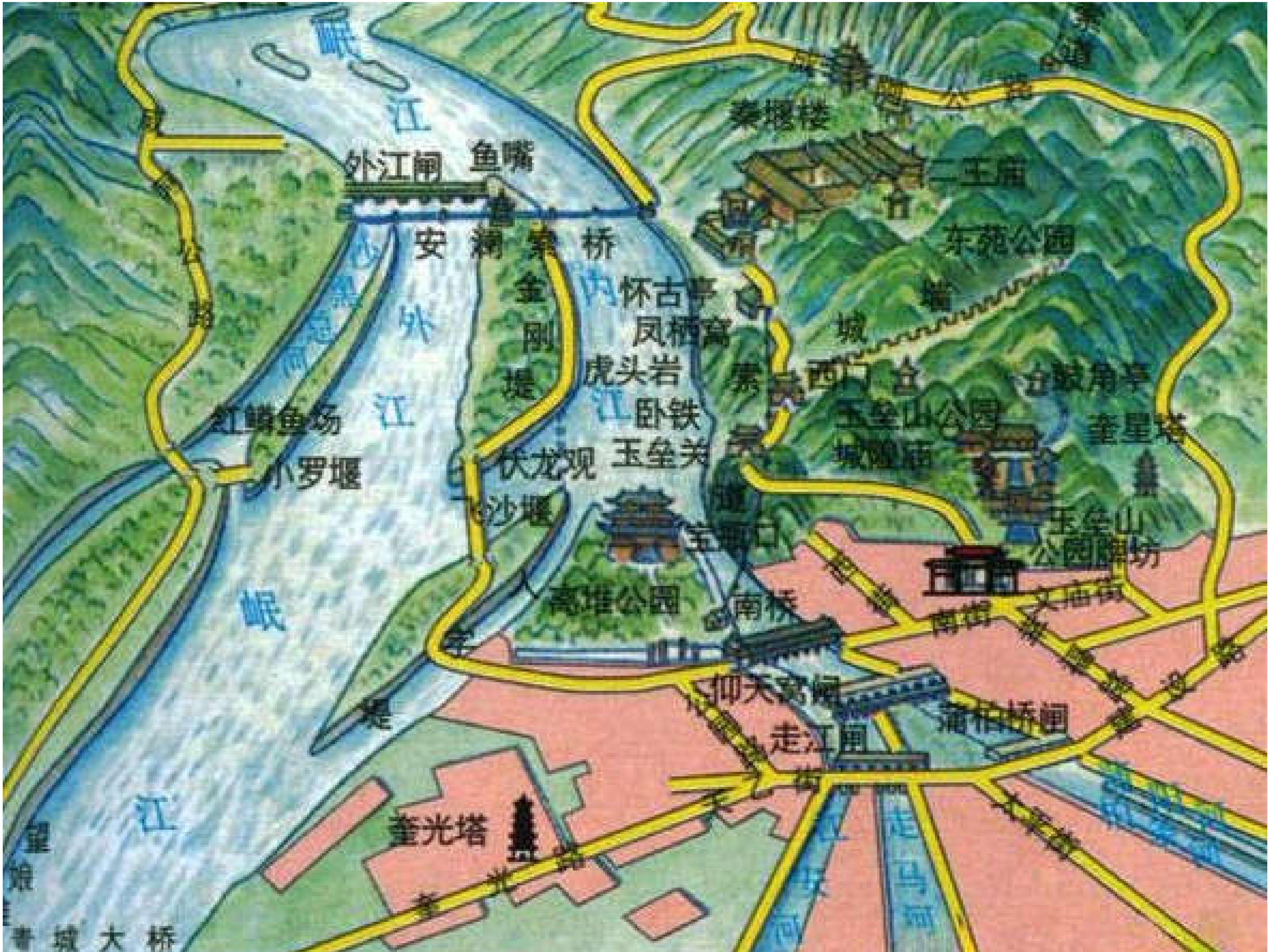
Becoming a civil engineer

Chapter 01 Civil Engineering Landmarks and Legends

By Mau ST Maalouf S


QINGHAI
SICHUAN
Yangtse
Yalong
Dadu
Min
Chengdu
Yangtse

dujiang weir diversion irrigation project


岷江
外江闸
鱼嘴
安澜索桥
秦堰楼
二王庙
东苑公园
怀古亭
凤栖窝
金刚堤
内江
外江
虎头岩
卧铁
玉垒关
红鳟鱼场
小罗堰
伏龙观
飞沙堰
宝瓶口
离堆公园
南桥
玉垒山公园
城隍庙
奎星塔
玉垒山
公园牌坊
文庙街
南街
仰天窝闸
蒲柏桥闸
走江闸
奎光塔
走马河
岷
江
城大桥

Chap03 Dujiangyan from Chin to China 6 minutes

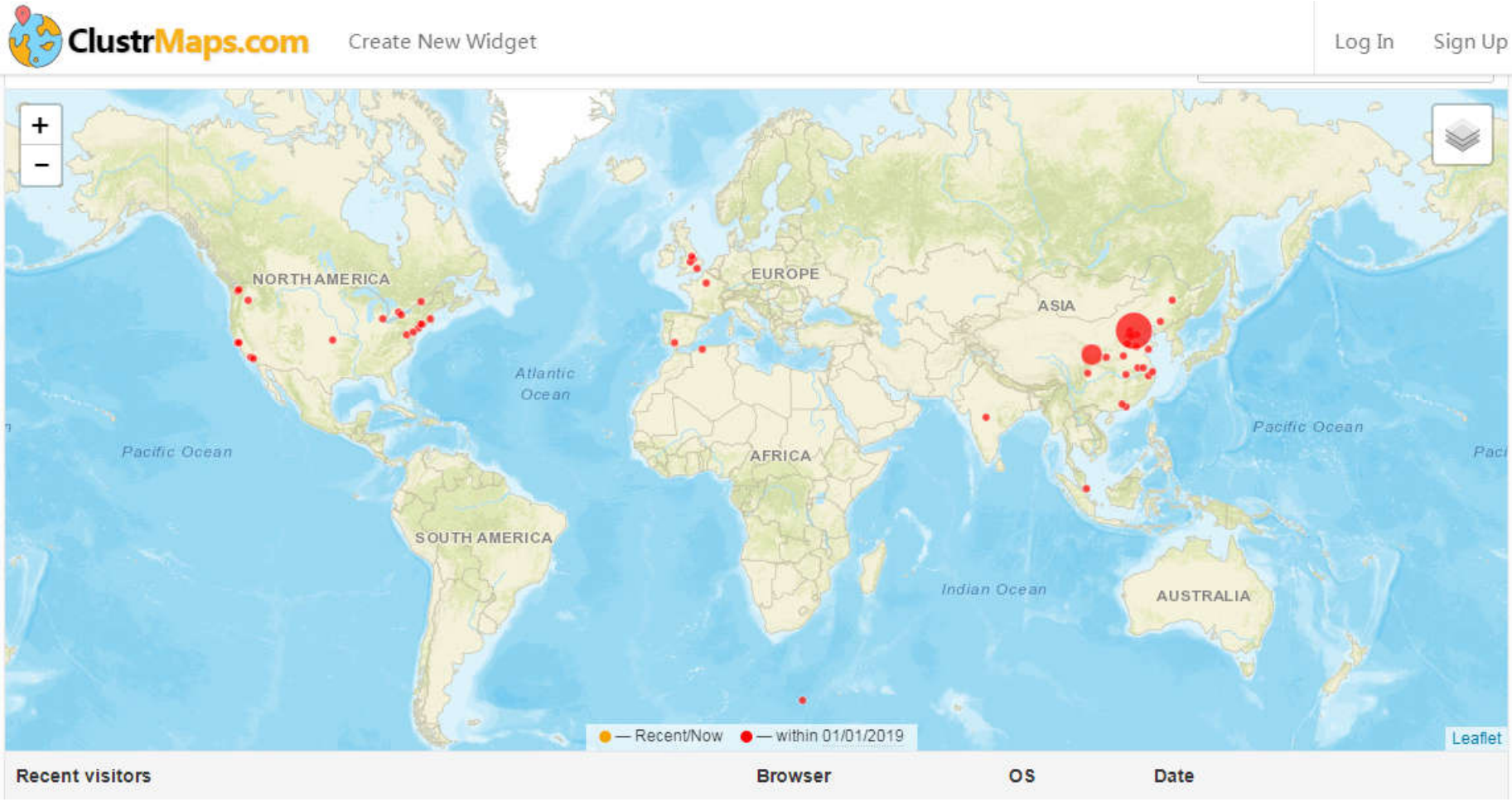
Chap03 Dujiangyan Irrigation System 00 12 minutes

Chap03 世界最古老的水利工程，古人智慧的结晶都江堰工程原理详解 4 minutes

Chap03 zhaozhou bridge.mp4 4 minutes

The North Sea surge and east coast floods of 1953 **P85** **too difficult**

Coastal Flooding in the United Kingdom 1953 and Now **P91**


ClustrMaps.com
Create New Widget
Log In
Sign Up
NORTH AMERICA
EUROPE
ASIA
AFRICA
SOUTH AMERICA
AUSTRALIA
Atlantic Ocean
Pacific Ocean
Pacific Ocean
Indian Ocean
— Recent/Now
— within 01/01/2019
Leaflet
Recent visitors
Browser
OS
Date

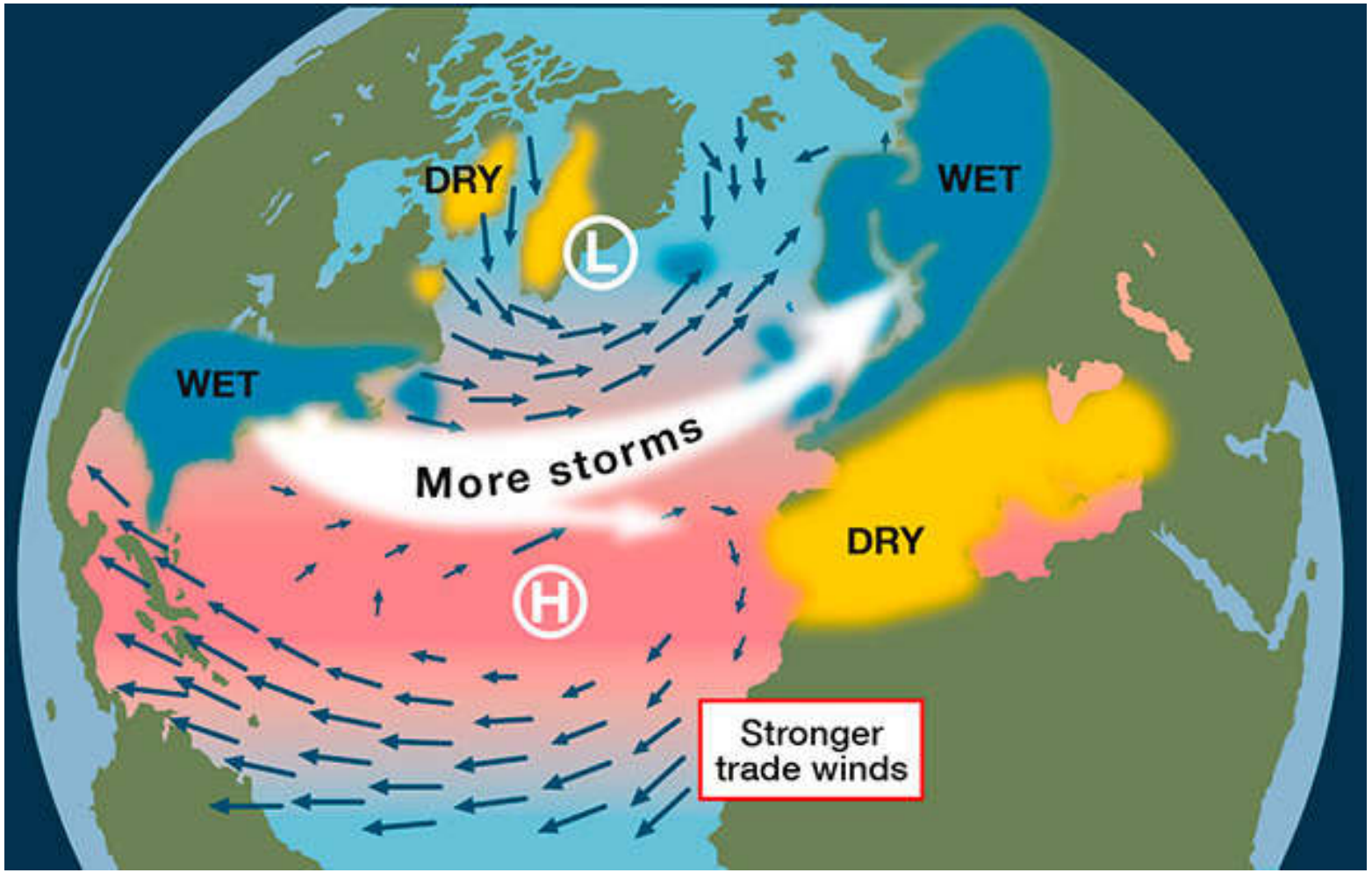
北大西洋濤動是北大西洋的一種天氣現象，即冰島低壓和亞速爾群島高壓之間海平面氣壓差的波動。通過冰島低壓和亞速爾群島高壓的波動，它控制了西風的強度和方向以及橫跨北大西洋的風暴路徑的位置。它是北極振蕩的一部分，並且隨著時間的推移而變化，沒有特定的周期性。 NAO是在19世紀末20世紀初通過幾項研究發現的。

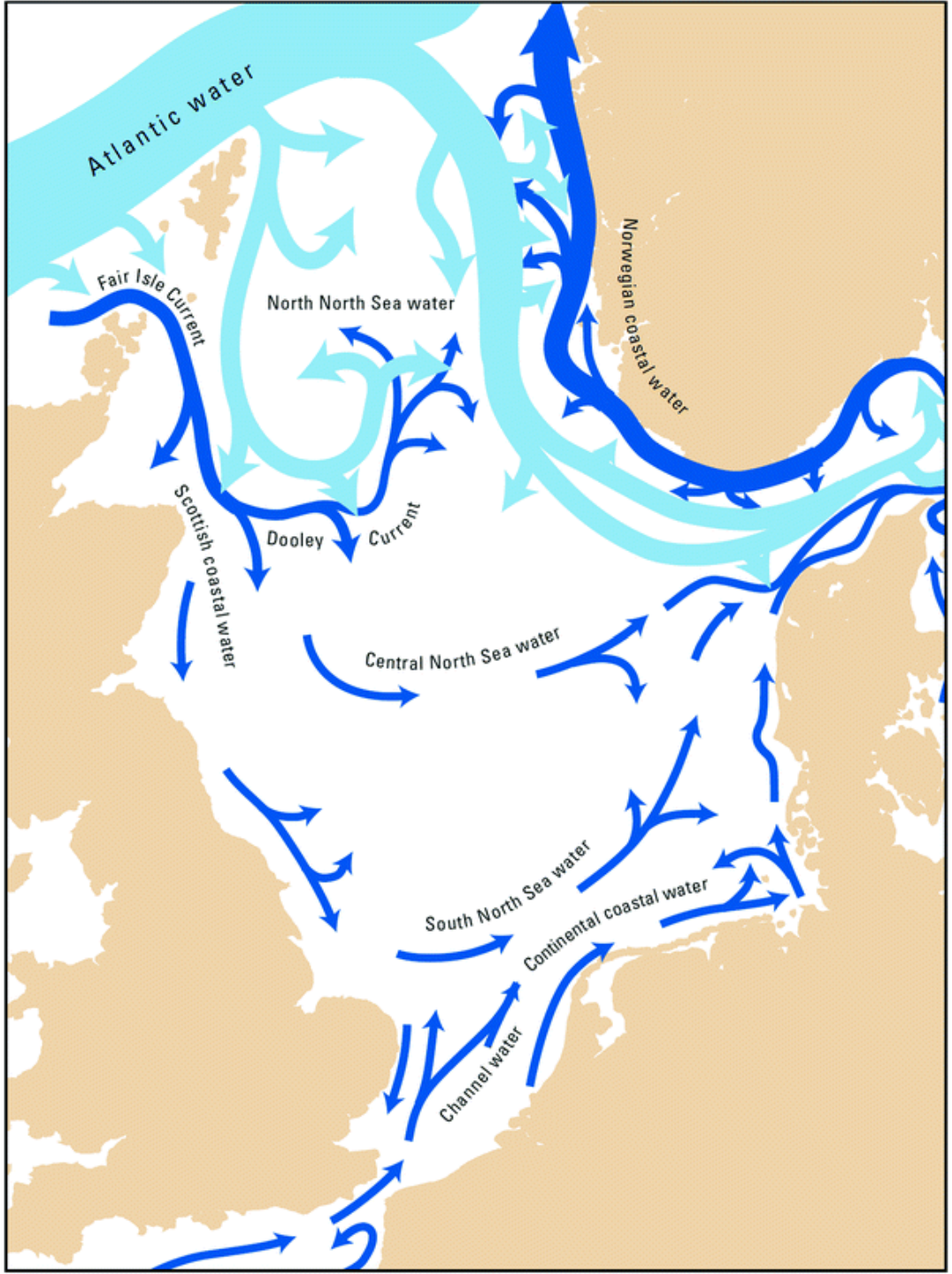
The **North Atlantic Oscillation** (**NAO**) is a weather phenomenon in the North Atlantic Ocean of fluctuations in the difference of atmospheric pressure at sea level (SLP) between the Icelandic Low and the Azores High. Through fluctuations in the strength of the Icelandic low and the Azores high, it controls the strength and direction of westerly winds and location of storm tracks across the North Atlantic.[1] It is part of the Arctic oscillation, and varies over time with no particular periodicity.

https://en.wikipedia.org/wiki/North_Atlantic_oscillation

The NAO was discovered through several studies in the late 19th and early 20th centuries.[2] Unlike the El Niño-Southern Oscillation phenomenon in the Pacific Ocean, the NAO is a largely atmospheric mode. It is one of the most important manifestations of climate fluctuations in the North Atlantic and surrounding humid climates.[3]

How the North Atlantic Oscillation affects European and Atlantic




Atlantic water
Fair Isle Current
North North Sea water
Norwegian coastal water
Scottish coastal water
Dooley
Current
Central North Sea water
South North Sea water
Continental coastal water
Channel water

The end

文件名格式：班级 学号 姓名 简略名称
邮件标题同文件名
Any questions please 发送至 xingzhengwu@163.com