

Logica Armchair Treasure Hunt 2008

The Solution

The theme this year was The Royal Parks.

The Treasure Location

The treasure was buried just outside of Bushy Park, in a small park area known as Hampton Court Green. It is a triangular area with roads on two sides.



You can see that I had prepared for a large number of finders:



The Word Search Grid

In order to find the treasure you needed to reassemble the 49 5x5 letter grids back in to a large Wordsearch grid. It should look like this:

b	t	o	w	e	r	o	f	l	o	n	d	o	n	g	a	c	n	m	j	k	i	u	p	h	v	y	s	q	q	y	s	x	h	u	
x	z	i	v	z	c	p	g	m	j	d	f	e	r	k	b	t	w	a	b	w	r	t	g	h	e	r	k	i	n	a	m	d	l	p	
c	s	t	p	a	u	l	s	c	a	t	h	e	d	r	a	l	j	x	y	f	f	y	x	j	q	v	q	z	m	z	k	g	r	u	
i	i	o	b	u	v	g	k	v	b	w	j	q	m	f	z	l	b	u	c	k	i	n	g	h	a	m	p	a	l	a	c	e	o	w	
s	w	w	y	d	x	s	o	y	p	d	z	n	e	q	h	v	j	j	h	f	x	e	t	v	t	f	n	q	x	p	z	s	y	b	
c	m	e	u	l	g	i	x	r	i	l	g	u	r	d	b	d	k	s	z	p	k	w	x	n	c	q	y	m	f	j	v	o	a	t	
j	t	r	v	m	h	r	o	y	a	l	a	l	b	e	r	t	h	a	l	l	c	s	n	q	w	k	p	z	g	f	u	i	l	u	
f	z	b	i	g	q	k	t	n	c	w	s	d	y	o	d	h	m	p	j	x	j	c	p	v	x	m	d	y	s	v	l	n	i	w	
q	e	r	e	z	h	k	o	f	f	u	b	u	h	k	o	g	g	e	w	z	q	o	n	s	d	m	b	p	y	v	e	x	n	t	
i	t	i	x	y	j	j	w	c	r	p	d	b	v	m	s	m	a	d	a	m	e	t	u	s	s	a	u	d	s	z	i	k	s	g	
c	c	d	k	f	q	h	e	z	i	h	g	q	p	v	r	w	l	y	b	o	n	d	l	x	o	f	e	x	h	n	y	c	w	t	r
v	b	g	j	p	q	u	r	k	t	u	k	f	h	a	m	l	e	y	s	j	z	a	j	f	b	v	q	m	g	n	e	z	i	c	
p	p	e	w	o	w	f	z	n	z	o	i	g	c	n	b	v	x	y	i	q	x	n	i	k	l	t	u	s	t	j	e	s	u	t	j
h	l	x	h	y	q	r	v	k	h	e	b	r	o	t	g	p	w	m	p	d	g	d	r	m	o	b	f	b	w	f	t	y	u	v	
l	j	x	c	a	q	z	c	z	o	q	k	e	g	e	a	v	k	h	x	j	w	y	x	m	u	r	l	e	n	p	e	f	t	i	
n	d	i	r	l	p	f	u	m	t	d	j	g	h	r	w	q	c	e	n	o	t	a	p	h	v	s	z	l	z	b	r	b	i	a	
s	k	v	o	y	k	c	j	e	w	q	e	u	o	x	f	f	x	u	g	q	r	j	c	g	d	y	f	w	d	s	b	o	i		
w	a	k	b	v	h	n	z	m	l	m	l	n	h	s	v	k	a	m	t	p	z	d	i	j	q	c	p	a	y	x	q	p	n	e	
x	g	y	t	g	j	i	m	u	z	d	h	t	k	s	v	b	c	w	u	u	e	f	v	f	r	w	b	s	o	k	u	h	o	l	
z	r	c	t	r	a	f	a	l	g	a	r	s	q	u	a	r	e	y	m	x	p	p	j	i	j	m	x	t	y	i	a	n	n	d	
d	q	c	o	g	z	e	w	h	v	l	v	c	h	w	g	m	h	a	r	v	e	y	n	i	c	h	o	l	s	b	r	b	z	d	
k	x	p	w	i	m	b	l	e	d	o	n	a	f	f	x	j	p	t	q	j	z	y	m	g	k	g	u	y	z	q	e	u	p	s	
j	k	s	e	f	x	d	q	o	n	w	v	n	b	k	b	o	c	v	i	q	w	i	l	x	d	l	s	j	s	k	p	u	f	m	
t	y	h	r	z	z	h	g	c	g	c	t	a	p	m	j	f	d	y	w	x	l	v	q	u	k	i	n	o	o	b	u	n	v	l	
l	i	q	b	y	f	j	d	c	x	m	g	l	i	w	t	p	a	d	d	i	n	g	t	o	n	s	t	a	t	i	o	n	t	r	
o	z	k	r	h	z	p	s	a	m	h	t	k	c	f	b	j	w	y	y	v	v	l	w	x	x	q	j	u	q	k	b	m	h	c	
n	s	z	r	g	u	n	u	n	f	e	h	k	r	e	f	s	z	b	o	g	c	o	m	w	q	x	p	b	y	y	d	p	e	v	
d	q	j	w	m	c	j	x	a	b	b	e	y	r	o	a	d	v	f	h	g	z	n	k	p	l	i	l	i	s	z	p	k	o	s	
o	f	g	u	h	j	r	x	r	v	c	a	m	e	w	g	q	q	u	t	m	c	d	i	h	w	v	f	g	d	x	u	p	t	j	
n	y	s	l	z	y	r	z	y	s	u	r	j	a	x	l	p	k	c	w	u	k	o	m	i	v	h	f	b	e	h	v	b	w	m	
e	k	c	f	i	l	a	s	w	q	p	k	t	d	g	t	h	e	s	c	i	e	n	c	e	m	u	s	e	u	m	q	j	o	x	
y	q	d	j	z	a	x	h	p	g	l	r	l	f	r	v	p	f	b	x	b	z	g	d	v	a	i	n	q	k	t	y	j	w		
e	j	k	t	w	n	o	y	a	v	g	q	b	z	d	u	x	r	l	i	h	p	o	x	f	o	r	d	s	t	r	e	e	t	m	
s	f	c	b	a	t	t	e	r	s	e	a	p	o	w	e	r	s	t	a	t	i	o	n	h	l	q	c	z	m	y	k	v	g	j	
v	j	g	z	c	k	u	m	f	u	l	q	y	b	n	i	d	s	d	i	n	p	b	p	x	w	w	x	q	m	u	l	c	y	g	

I've highlighted the landmarks yellow and the N/S/E/W markers in green - there's no other significance in those colours. I'll cover the pink over the next few paragraphs.

Having reassembled the grid, you needed to answer most of the questions. I reckoned that answering most of them would suffice to help with the next stage. The answers would help you to trace a route around the grid which would spell out the algorithm needed to decode the final route instructions. A clue to this if you didn't guess it was the AAEIH cypher text, which using the Rail Fence Cypher (note the rails above/below the letters) decodes to A MAZE WITHOUT WALLS.

Each of the 40 answers started with an N, S, E or a W, which indicated the direction to move around the grid. To be precise one of the words in each answer started N/S/E/W, for example "Close Encounters of the Third Kind". The key to solving this was to spot how essential N/S/E/W was, and I laid many hints for the compass points and relied on you observing that N/S/E/W frequently occurred as initial letters of surnames, for example in the answer "Michael Eavis". I counted approximately 23 out of 40 answers that should start N/S/E/W in this traditional/proper sense as opposed to one of the other words. In some

cases N/S/E/W was quite obvious, but some of the answers were deliberately ambiguous and you needed to find the 'correct' answer, for example Q17 (Hungarian name days) had several possible answers but only Nora started with N/S/E/W.

Having ascertained the direction of travel it was necessary to move the number of letters corresponding to the number of letters in the N/S/E/W word, for example 'encounters' would move you 10 letters to the right (East). A hint for this was "THE SIZE IS IMPORTANT" (more about that later), and the number words (four, tre, etc) that were the same length as themselves.

The starting point was at $x=24$, $y=23$. This could be derived from the two Vigenère cyphers in maroon lettering, where I provided the cypher text and the [random] keys to decode them. They decypher to XTWENTYFOUR and YTWENTYTHREE. I chose this starting point as this year is the 23rd hunt in 24 years, though I didn't expect anyone to spot that. I figured that if you weren't able to determine the starting point there were not too many possibilities given that the route covers an area of 24×28 out of 35×35 letter squares and that the recovery of only a fragment of plain text would narrow it down significantly.

The route around the grid covered forty letters and started where it finished (ie Start==finish; where 'Start' was unintentionally auto-capitalised by Microsoft). It spells out: "IIFIVEDECTWOKNOUGHTEIGHTMIDSQUAREMODXXVI"; this tells you that the seed is 25122008 (Christmas Day), that the algorithm is Mid-Square method (as developed by John von Neumann) and that you need to perform Mod 26 on the resultant output. Applying the output of the algorithm as a Vigenère shift to the letters at the bottom of each page results in:

"leavingthefountainheadforthenearestgateturntoyourrightand
continuetobendtotheleftcontinuealongthewayfortwohundred
andtwentypacesuntilyoureachanotakethewaytoyourrightandfol
lowitforninetythreerailingspassingacardinalpointandthenafur
therthirteenrailingsheadperpendiculartoyourrightacrossthee
xpansetowardsthetalltreewhatyouarelookingforisbeyondprotec
tedtreethreetothefenceatthemeetingpointoftwofallentreesund
ertheivy".

[The 'cardinal point' in this context was the Cardinal Wolsey pub☺] Determining that the correct park was Bushy from the pictures on the last page would lead you to start from the Diana Fountain to the treasure buried in the small park ('The Green') just outside of Bushy Park, which technically is also covered by the Royal Parks regulations so could be considered a mini-Royal-park.

<http://www.streetmap.co.uk/oldmap.srf?x=515449&y=168911&z=110&sv=515449,168911&st=4&ar=Y&map=oldmap.srf&searchp=oldsearch.srf&lm=0>

I also provided a 'fast' route to the treasure. You could decipher the text at the bottom of the pages using the pseudorandom number generator middle-square method once you'd worked out, or guessed, that that's what was used, provided you either brute-forced the cypher by trying all possible seed values or you used the Christmas day seed value which I had hinted at in a couple of places. I considered that brute-force was feasible, even though I'd deliberately not provided any clue as to the length of the seed.

Front Page

The quote "...when a man is tired of London, he is tired of life, for there is in London all that life can afford.", is by Samuel Johnson and deceptively tries to point you towards the hunt being themed on London - which it isn't really.

The large green square (the squares get everywhere!) contains eight stars representing the eight parks, and in the middle is the superfluous word Christmas ... so the key to the mid-square cypher was on full view for anyone to see. The main function of the stars was to fill the top and bottom halves of the square to make the space look less obvious.

I intended to award bonus points to anyone who found the treasure on Christmas day, though nobody managed to find it on that day. This was partly to draw attention to Christmas day being important to the hunt and partly to encourage you all to do treasure hunting rather than sit around eating, drinking and watching the Queen's speech.

The Forty 'Formal' Questions:

1. Which character appears in Noisy, Silly and Chatterbox?

Answer: A **Worm**, from the Mr Men series of books. In these three books he is simply referred to as 'worm'. Evidently there is a 'Walter Worm' (in Mr Small), but I cannot find proof that these are the same worm. This is one of the questions that came to mind while reading to my children.

West 4.

2. What do each of Charlwood, Bocking and Sandwich possess?

Answer: A **Windmill**. These villages were chosen out of the countless number of villages with windmills because their Wikipedia entry didn't make the windmill as prominent as others.

West 8.

3. Who appeared in the Band Aid 20 video and at Live 8 but didn't perform?

Answer: Birhan **Woldu**, http://en.wikipedia.org/wiki/Birhan_Woldu and others, the Ethiopian girl shown in the 1985 Live Aid videos starving and near to death.

West 5.

4. Which tube station is between Green Park and Hyde Park Corner on the Piccadilly line?

Answer: Down **Street**. Now disused. Next time I travel on that line I'll have to remember to look out for the bricked up section.

South 6.

5. Who followed WH, PT, JP, TB, PD, CB, SMC and PMG?

Answer: Christopher **Eccleston** - Dr Who actors.

East 9.

6. Who was the first New Zealander to appear on a banknote during his or her lifetime?

Answer: **Edmund** Hillary.

East 6.

7. Which dog was the only to be officially enlisted in the Royal Navy?

Answer: Just **Nuisance**, http://en.wikipedia.org/wiki/Just_Nuisance

North 8.

8. In 2007, whose event had too much water and the following year perhaps had too much Z?

Answer: Glastonbury - hosted by Michael **Eavis** (or Emily). 2007 was rather wet, and 2008 had the controversial appearance of Jay-Z. Like many people I didn't bother to watch him, though apparently he was quite popular.

East 5.

9. Which former tennis player bonded?

Answer: Pam **Shriver**, who married George Lazenby and is now divorcing him. I'd found this question well before the news of the divorce broke so it was less obscure than I'd originally hoped for. Another possible answer was Vijay Amritraj who appeared in Octopussy, but no points for that answer as not N/S/E/W.

South 7.

10. Which metal has the highest melting point of all the non-alloyed metals?

Answer: Tungsten or **Wolfram**. I hoped that you'd write down Tungsten rather than Wolfram ☺ Only Wolfram or W accepted.

West 7.

11. Who is leader of the Brotherhood in 2707?

Answer: Brother **Samuel** in the recent film The Mutant Chronicles.

http://en.wikipedia.org/wiki/The_Mutant_Chronicles

South 6.

12. What is approximately 88,775,244,090 microseconds in duration?

Answer: A Martian solar day or **Sol**. Just 'Day' was not acceptable as a correct answer.

South 3.

13. If Ulley=75, then where is 2?

Answer: **Welford**-on-Avon. Adding the alphabetic letter values for Ulley gives 75, and as most people found AA or B are not villages in England - hence a bit a lateral thinking was necessary to see that hyphenated names would subtract down the letter values down to 2. It was necessary to do what I did and look through the index to an atlas of England. Nobody got this question.

West 7.

14. qbun qum nby molhugy iz nby ziohxyl iz nby ulgwbucl nlyumoly bohn?

Answer: **wiigvm**. This is a simple Caesar cypher that asks "what was the surname of the founder of the armchair treasure hunt?" The answer is, of course, Coombs, which doesn't start with N/S/E/W, but encoded using the same cypher yields wiigvm. I only accepted 'wiigvm' as the correct answer. This replaced the Logica question this year. Whether we

get a Logica and/or a Pablo question in subsequent years is for the individual setters to decide.
West 6.

15. Which Rose was delivered on a Monday?

Answer: **Sunday** Rose - Nicole Kidman's daughter born in July and given the name Sunday despite being born the previous day. Evidently she was named after Sunday Reed, but it was a good newspaper headline for a day. But what day was Sunday Reed born on, I hear you ask? The answer is:

October 1905						
M	T	W	T	F	S	S
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

<http://www.people.com/people/article/0,,20211126,00.html> and others.
South 6.

16. What are Bump, Elmer, Shep and Nelson?

Answer: Fictional **elephants**.
East 9.

17. In Hungary, what might you be called if you celebrate 11th July?

Answer: **Nora**. This relates to Hungarian Name days, which are celebrated by Hungarians as much or more than their actual birthday. There are several answers for this question, including Lili - but Nora starts with N/S/E/W so that's the only one that I accepted.
North 4.

18. Who was the first actress to receive a millions dollars for a single film?

Answer: **Elizabeth** Taylor, in Cleopatra. It was important to answer this with her full forename rather than the abbreviation Liz.
East 9.

19. Which French museum is housed in a former railway station?

Answer: Musee D' **Orsay**. Another easy question that needs some lateral thinking because there is no obvious N/S/E/W word, unless you are in France in which case you are looking for N/S/E/O words.
West 5.

20. What is the surname of the TV chef with eleven forenames?

Answer: Clarissa Theresa Philomena Aileen Mary Josephine Agnes Elsie Trilby Louise Esmerelda Dickson **Wright**.
http://en.wikipedia.org/wiki/Clarissa_Dickson_Wright
It had to be her surname because one of her forenames starts with an E.
West 6.

21. Who was knighted in a zoo in August this year?

Answer: **Nils** Olav. http://en.wikipedia.org/wiki/Nils_Olav, a penguin with his own Wikipedia entry as well as a title.

North 4.

This is a statue of Nils at Edinburgh Zoo which I visited earlier this year.



22. Which of these is the answer to this question - covertness, gyroscopes, nanosecond or temptation?

This was either a very easy or impossible question depending on whether you'd worked out that answers must contain a word starting N/S/E/W. I was amused to see this question asked on Yahoo! Answers -

<http://answers.yahoo.com/question/index?qid=20081217220048AATyPAz>, asked by 'Robin T' (along with another five 'difficult' questions).

Answer: **Nanosecond**

North 10.

23. Which singer-songwriter had a actor father famous for a knife attack and a mother who died in the Twin Towers disaster?

Answer: **Elvis** Perkins. http://en.wikipedia.org/wiki/Elvis_Perkins.

East 5.

24. Who gained siblings Tutti and Todd in 1966?

Answer: **Skipper**. Tutti and Todd were dolls in the Barbie range. Barbie was born in 1959, joined by sister Skipper in 1964, and Tutti and Todd in 1966. Therefore both Barbie and

Skipper are correct but Skipper starts with N/S/E/W so that's the only answer accepted. I wrote this question while wandering around a Barbie exhibition (with my family, and my mind wandering).

South 7.

25. Which island was visited by over 1 million people in 1907 despite being only a few tens of acres?

Answer: **Ellis** Island. Ellis Island was the immigration station near New York and handled considerable numbers of 'visitors' considering its tiny size.

East 5.

26. Who in 2007 invested in a skull and crossbones tie, white trousers and a stripy shirt rather than a more conventional morning suit?

Answer: Rod **Stewart**. <http://news.bbc.co.uk/1/hi/entertainment/6897017.stm>

South 7.

27. If you start in a state, take out the key to the door, and then knock on the door what do you have?

Answer: Legs **Eleven**. Bingo calls. In a State (28), Key to the door (21), Knock on the door (4). $28-21+4=11$. There are many variations of bingo calls but these ones seem consistent across references. [http://en.wikipedia.org/wiki/Bingo_\(UK\)](http://en.wikipedia.org/wiki/Bingo_(UK)) and

<http://www.bingo-lingo.net/bingocalls.htm>

East 6.

28. Which actress is nicknamed oil?

Answer: **Nicole** Kidman. This is an anagram and, coincidentally, the second Nicole Kidman question.

North 6.

29. Which Welsh town prefixed its name in 1835 to distinguish it from a place of the same name in Dorset?

Answer: **Welshpool**. Yes, they also lost the 'e' at the end.

West 9.

30. Who, to his horror, was going to be called Gus, but instead chose Richard with a surname from the band he was listening to at the time?

Answer: **Stephen** King. According to the FAQ on his website at <http://www.stephenking.com/faq.html>, his pen name was to be Gus Pillsbury, which he didn't like, so he became Richard Bachman. When phoned by his publisher he was reading a book by Richard Stark and listening to "You Ain't Seen Nothin' Yet" by Bachman Turner Overdrive.

South 7.

31. Which British politician won a Nobel Prize in Literature?

Not a difficult question - but one I had to find at the last moment to correct an error in my grid.

Answer: **Winston** Churchill.

West 7.

32. Which Hollywood bassist was big in Japan?

Answer Holly Johnson who was a bassist in 'Big in Japan'. Holly's birth name is **William**, which according to Wikipedia [so must be correct!] is on his passport.

West 7.

33. What attracts a rating between N24 and N55?

Answer: **Neodymium** Magnets. Magnets also fit in with the N/S/E/W subtheme.

North 9.

34. In which film was a five-tone motif used as a communication device?

Answer: Close **Encounters** of the Third Kind. I really struggled to find a decent question for this answer and failed dismally. I needed a long E word, decided on Encounters but the film is too well-known for anything obscure enough for ATH hunters with Google at their service.

East 10.

35. Where is 20 minutes away from 50 07 41 N 5 31 07 W?

Answer: **St** Mary's in the Scilly Isles. I was hoping that you'd all start measuring 20 minutes of arc away. I wrote this question while on holiday in Cornwall, sitting in the nearby supermarket car park, watching the helicopters take off.

South 2.

36. Which race horse was named after the owner's home?

Answer: **Numbersixvalverde**. Evidently there are many racehorses named after their owner's home, but probably not many with the 17 letters needed here. Rather than publish a clarification I figured that I'd wait to see how many hunters queried it because by time they had reached Q36 they'd have a pretty good idea what they were looking for.

North 17.

37. Which hit single followed a prayer and preceded twenty-one seconds?

Answer: **Eternal** Flame. This is the hit single that was a hit in 1989 by The Bangles (following Like a Prayer by Madonna), and covered in 2001 by Atomic Kitten (preceding 21 Seconds by So Solid Crew).

East 7.

38. Who admitted to Anne that she had a co-presenter earlier?

Answer: Valerie **Singleton**, who admitted to Anne Robinson on The Weakest Link that she had a brief relationship with Peter Purves. A question of more interest to older ATH hunters

...

South 9.

39. Which Sheffield born actor has a tattoo proclaiming 100% support for his football team?

Answer: **Sean** Bean. OK, OK, OK, I now know that this question was in last year's ATH.

Oops!

South 4.

40. Which Place totals 405?

Answer: **Number** Place. Number Place is the original, or possibly just an alternative, name for the modern Sudoku. I didn't accept 'Sudoku' as a valid answer. Totalling the digits sums to 405.

North 6.

If you total the sum of N/S/E/W you get:

North=64

South=64

East=71

West=71

Therefore you finish where you start, on the letter I at coordinates (24,23).

Page 2

Park	St James's Park
Park sights/history	Pelicans - as photographed by me
	Henry Eighth
	Dalmatians (parts of 101 Dalmatians was filmed there)
	Guards Memorial adjacent to Horseguards parade
	Boy Statue
London Landmarks	Tower of London, from The Towers Of London band (Donny Tourette and co)
	Abbey Road - Three albums produced at the studios (Al Stewart, Year of the Cat; The Bends Radiohead; Be Here Now, Oasis)
	The Oxo Tower (Barcode is of Oxo Cubes, 5000175411187 in EAN13 encoding). I was delighted to hear that some hunters took their copy of the treasure hunt down to the local supermarket for scanning.
	New Scotland Yard (Bobby Charlton, Constable painting, Potato Peeler; all names for police)

Page 3

Park	The Green Park
Park sights/history	HWV 351 - Music for the Royal Fireworks first performed in the park. Händel-Werke-Verzeichnis catalogue numbers are to Handel what the Köchel (K) number are to Mozart's works.
	Constance Fund Fountain (picture of twisty fountain)
	Canada Memorial (angular modern looking piece)
	Three coloured circles, these colours are those of the three underground lines (Piccadilly, Victoria, Jubilee) that intersect at Green Park station.
	Charles II
London Landmarks	Battersea Power Station - picture of butterfly with dogs, sheep and pigs which represent the tracks of Pink Floyd's Animals

	album, which features a picture of the power station.
	London Zoo - two picture of penguins. Blackfooted and Rockhopper species which can be found at the zoo.
	The Ark ("201 W6 8BN", which is its address)
	Royal Albert Hall (tqacnc etc, encoded using a Caesar shift).

Page 4

Park	Bushy Park
Park sights/history	Cardinal Wolsey
	General Eisenhower - who was based at Bushy Camp during WWII.
	Picture of deer - a resident of Bushy Park. That one was looking at me suspiciously as I took the photo.
	Harewarren, Old and Middle were old names for the original sections of the parks that were later merged.
London Landmarks	London Eye (the LONDON lettering that looks like an I)
	The Royal Institution - This years Christmas lecture was called "Hi-tech Trek - The Quest for the Ultimate Computer".
	Big Ben - Semaphore flags Red/yellow without the poles
	Centotaph (11 11 11; 11 th hour of the 11 th day of the 11 th Month)

Cypher lvmqxa etc - encoded using Vigenère cypher

"sometimes it is not the winning that matters but playing fair learning from what you did and using that to your advantage next time" using the key 'thames'. I made it long enough to be breakable using standard crypto analysis methods and would reveal that the key was 'thames'. It was to tell you was that breaking the cypher didn't give you anything worthwhile other than the key (thames) which could be used 'next time' ... meaning it would help you later deciphering something. Playing Fair is an obvious hint that the Playfair cypher would be used.

Notus - the south wind in Greek mythology. Supposed to draw attention to compass points being important but unfortunately a number of hunters found the Wind connection a more interesting lead to follow.

TSAE - east backwards. Supposed to indicate to you that an East answer would move you to the left in the main grid. I later realised that it should have been TSEW - I've always got East and West back to front. Doh!

Picture of John von Neumann - who developed the Middle-Square method for generating pseudo-random numbers, which was used to encode the final instructions (bottom of most of the pages) for finding the treasure. This was a very big hint and I very nearly didn't include the photo because I thought that anyone who recognised him would crack the encrypted instructions in a matter of hours.

Four - one of a set of number words where the length was equal to the word. These were hints that the length of something (ie the answers) was important.

Page 5

Park	Hyde Park
Park sights/history	Henry VIII
	Rotten Row - picture with paved area behind a low fence.
	Tyburn Tree - “-y--r- -r--” (hangman!).
	Picture of the Great Exhibition which was in Hyde Park.
	Statue of The Huntress fountain.
London Landmarks	Picture of Buckingham Palace
	BT Tower - Open 1966, Bombed 1971, Closed 1980 - strictly speaking these are the dates of the public restaurant.
	Gherkin - anagram of the first letter of the foods, Glycerine, Honey, Egg, etc.
	Trafalgar Square. Trinary encoded 101002100 etc. A=1, Z=26. The 2 is the delimiter between characters and leading zeroes are suppressed. The main clue to the leading zero suppression is that with the exception of the final 2 each is followed by a 1.

Album cover - Golden Earring's N.E.W.S album, intended to hint that the compass points were important ... though unfortunately if you find the lyrics for the title track N.E.W.S. they contain the line “Four directions of the wind and a four-way misery”, which again sent some hunters off in the wrong direction. Incidentally, the song is available on Youtube - but is pretty bad. Apologies to Golden Earring fans, but Radar Love is so much better! Just four teams found this.

Page 6

Park	Kensington Gardens
Park sights/history	Queen Caroline, wife of George II, who shaped the gardens to their present form
	Cartoon is The Cow Pock, which was in reference to the Edward Jenner Smallpox vaccine which was thought by some to cause them to sprout cowlike features. There is a statue of Jenner in Kensington Gardens.
	Emit Files - anagram of Time Flies
	Low-quality picture of man is John Hannington Speke, the explorer, who has an obelisk dedicated to him in Kensington Gardens.
London Landmarks	Canary Wharf - the chopped-up and rearranged letters
	Oxford Street. 05 Westlife, 06 All Saints, etc, these are the ‘stars’ who switched on the Christmas lights for that year.
	Tower bridge - an odd angle photo.
	The O2 (in the grid a THEOTWO, bottom-right corner), 3.8 billions pints, etc, are vital statistics for the ex-Millennium Dome.

Picture of girl and boy with herringbone background - Marvin and Tamara who had a minor hit with 'Groove Machine', followed by their single 'North, South, East, West' which was a good hint for ATH2008 but a bit of a flop in the charts. Only five teams spotted this one.

The Bus. It is irrelevant that it is a 137. What is important about it is that it is a Plaxton Pointer Bus run by Compass Bus - all of which should be another N/S/E/W hint.

AAEIHUW etc - The lines above and below are supposed to look like rails, to suggest that it is a cypher using the Rail Fence cypher. It decodes to A Maze Without Walls. This is to tell you that the large grid is a maze to be navigated.

Page 7

Park	Regent's Park
Park sights/history	Eve of Epiphany - Twelfth Night - as performed at the Open Air Theatre in 2008 and also the first play performed there.
	Prince Regent
	John Nash
London Landmarks	Paddington Station - silhouette - which took me ages to copy from a colour map and then change all the pixels to black/grey.
	Marie Grosholtz - aka Madame Tussaud.
	Lan crete sang - anagram of Regents Canal
	51.510352 -0.130256 - pretty much in the middle of Leicester Square.

Zephyrus - the West wind.

Vier - german four - another word the same length as itself.

Sahbcgdvfrst and nhystgensop - when used in conjunction with the words of the same length on the final page could decipher each other using Vigenère to give you xtventyfour and ytventythree. These were the starting coordinates in the assembled grid - the letter I.

14379264 - if you take the square root of this number you get 3792, which are its middle digits. This was to reinforce the idea of the middle-square method, even though the choice of 3792 as a seed would be useless (repeating itself for ever). I deliberately didn't want to give an example using an 8-digit seed because I didn't want to give away the length of the seed that I was using in the main instructions. (NB I later tried to find an eight-digit example and couldn't find one.

Page 8

Park	Richmond Park
Park sights/history	Charles I
	1-9, 126-362 - yardage of one of the two golf courses within the park. Anyone remember ATH2006 ☺
	SSI NNR SAC - Site of Special Scientific Interest, National

	Nature Reserves and Special Areas of Conservation
	Henry Seventh
London Landmarks	Sudoku - when completed Wimbledon appears across the middle row. It's almost impossible to use a Sudoku of any difficulty in ATH with the online tools available that solve them in seconds ☺
	Photo of building is of Hamleys taken by me about 18 months ago - hence the blue sky and sunshine.
	RYYRY! and the red/blue pattern. This is St Pauls Cathedral coded using Baudot (strictly ITA2). The RYYRY! Is the sequence used at the start of a transmission as a synchronising mechanism.
	Building layout/map - is of the Science Museum.

Cinco - Spanish five - another word the same length as itself.

Page 9

Park	Greenwich Park
Park sights/history	Statue is of Wolfe
	Flamsteed House
	WIE - obviously the Prime Meridian which runs through the park. I often wonder whether the tourists there realise that it runs a little to the north and south of there as well ☺
	Humphrey, Duke of Gloucester
London Landmarks	A4 L A3216. At the L junction of the A4 and the A3216 is Harvey Nichols.
	C2 AE CE AF etc - this is UTF-8 encoded and results in “@ιZ hθTΣλ” - which is, of course, Ritz Hotel, with a bit of imagination. There are a few UTF-8 encoders on the internet such as this one: http://www.macchiato.com/unicode/convert.html
	Ship and Champagne - launch date of HMS Belfast.
	Anteros - encoded using Braille.

Boreas - the North wind.

%26 - meant Mod26 (as opposed to the ampersand character that it could also represent).

Tre - Italian three - another word the same length as itself.

Ekfbrthlhtfhafnwhnbghrpuhmge - Playfair encrypted text - using the ‘thames’ key from earlier it decrypts to ‘andsometimesthesizeisimportant’, which is to reinforce the size of something (answers) being important.

Page 10

Lots of 5x5 grids and a drawing of a man and a pointer dog. The dog is yet another pointer to using N/S/E/W. The dog isn't pointing at any square or letters in particular. One of the

problems that I had with the parks theme [future setters please note] is that with only eight it limited me to the amount of space available on each page. I wanted all of the 5x5 grids to be on the park pages but they simply wouldn't fit and I didn't want two pages per park as that would have been too many pages.

Page 11

This page mostly features things that you might find once you got close to the treasure site. Up until thirty minutes before publication of ATH there was an additional picture there, which was of a distinctive tree line against the sky, but at the last moment I decided to remove it as it was just too close to where the treasure was buried and a speculative hunter could have found it.

Start == finish. This indicated that a start position would be the same as the finish - in particular the route around the grid. This supposed to help you iron out the wrong answers and get the complete forty-character pseudorandom number generator algorithm. In most cases it led hunters off in the wrong direction looking for circular routes that existed in the parks.

kauwgzcsgig and qtdfpzbomjvx - these pair with the string on the Regent's Park page to give you xtventyfour and ytventythree.

The bus stop - this is the bus stop just opposite the Cardinal Wolsey pub. I carefully airbrushed out the numbers but forgot to remove the D, which some of you found from local online maps and gave me concern that not being the nearest bus stop to the park may lead hunters without the instructions to the bus stop and notice the line of trees at the other side of the green. My only hope was that most of you would think that the bus stop and the pub opposite were good candidates for a starting point rather than the reverse.

The lamp and No Trade Vehicles sign - amazingly some of you managed to find this picture on the internet as part of a picture of the entrance to the park. This particular photo was taken by me.

Man with arms outstretched [signalling a wide] and a wing = Widewing which was the callsign for Bushy Park during WWII.

Weddings Parties & Functions Catered For - is the sign opposite the park entrance.

The picture at the bottom of the playground was the one located near to the gate of Bushy Park. I looked on Google Earth and decided that it was identifiable but given that all the clues should lead you to Bushy Park anyway it didn't matter and in some ways would reinforce a feeling that the treasure was buried in the park somewhere close by - so close and yet so far!
