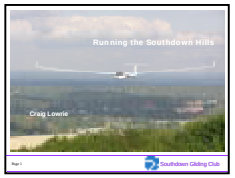
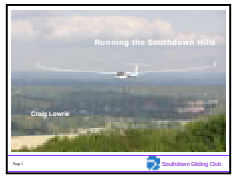
Running the Southdown Ridge
Agenda



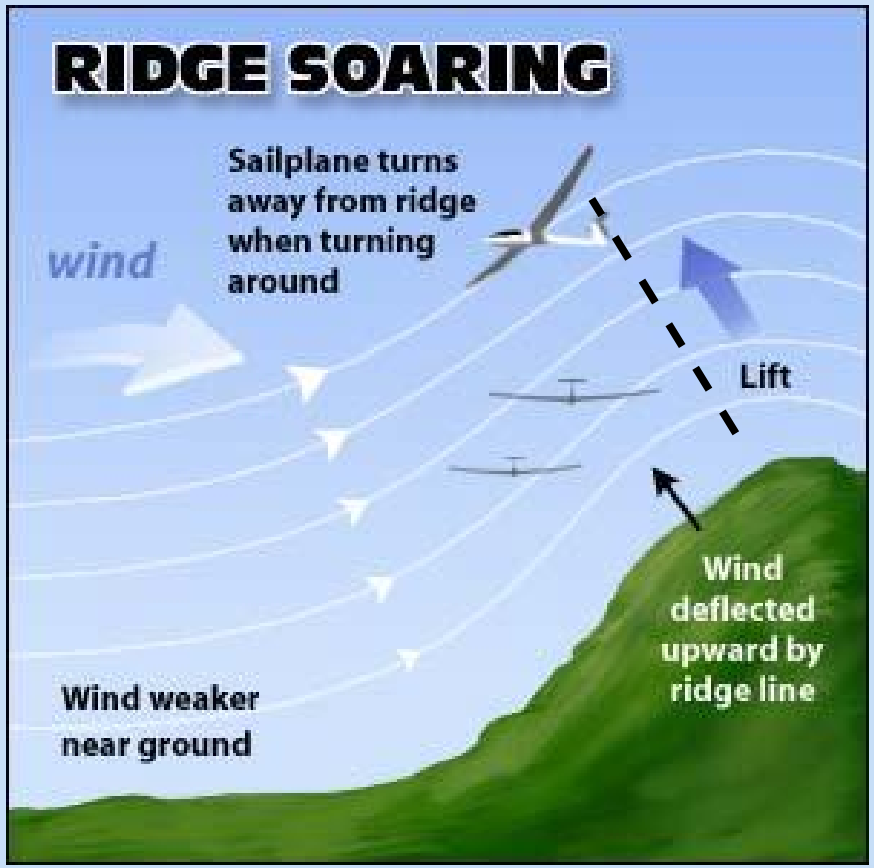
- Ridge Soaring – The Basics
- Overview of the Southdown Ridge
- Forecasting / predicting a good day
- Hazards to consider / avoid
- Going West
  - Key Gaps and techniques (Amberley / Bignor / Duncton)
- Going East
  - Key Gaps and techniques (Truleigh / Devils Dyke / Lewis)
- Flight log of Butser / Eastbourne
- Video footage of same route

- Task choices in different wind directions
- Using the ridge to extend thermal flights

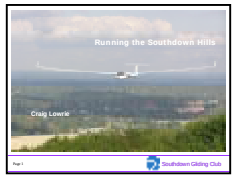
Ridge Soaring – Understand the Basics



- Slope lift is the ‘oldest’ form of soaring
- Our local ridge is central to the history of worldwide gliding development
  - In 1909 at Amberley the first example of gaining height was recorded
  - Gordon England flew a glider designed by Jose Weiss
  - The designers daughter flew at Parham in the mid 80’s
- Our ridge is 500-700’ high and can generate lift to 1200-1600’
- The position for *best lift* moves out from the hill as you gain height



Southdown Gliding Club

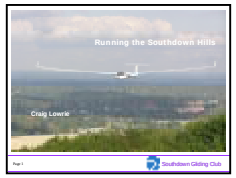


Where to find the lift

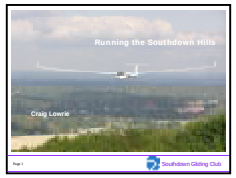
Eg: Chanctonbury Ring

Chanctonbury Ring – Northerly Wind

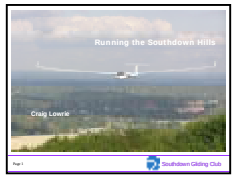
Chanctonbury Ring – North East Wind



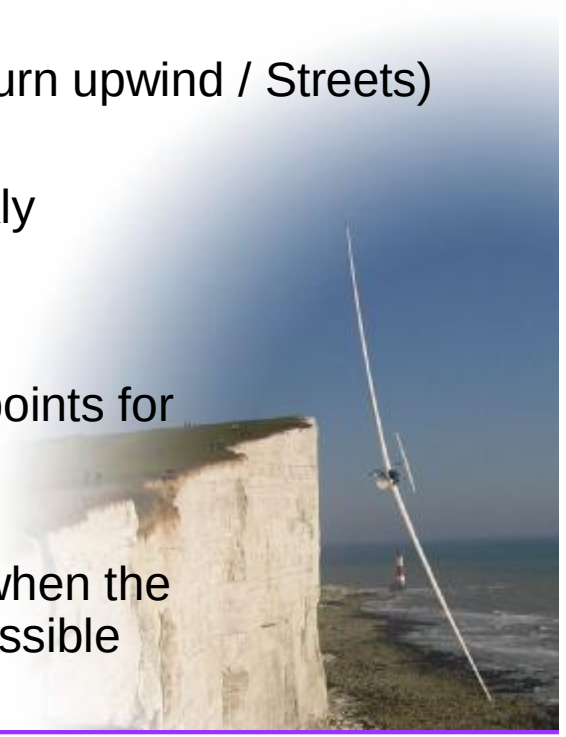
Chanctonbury Ring – North West Wind



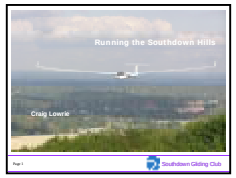
Ridge Soaring Fundamentals

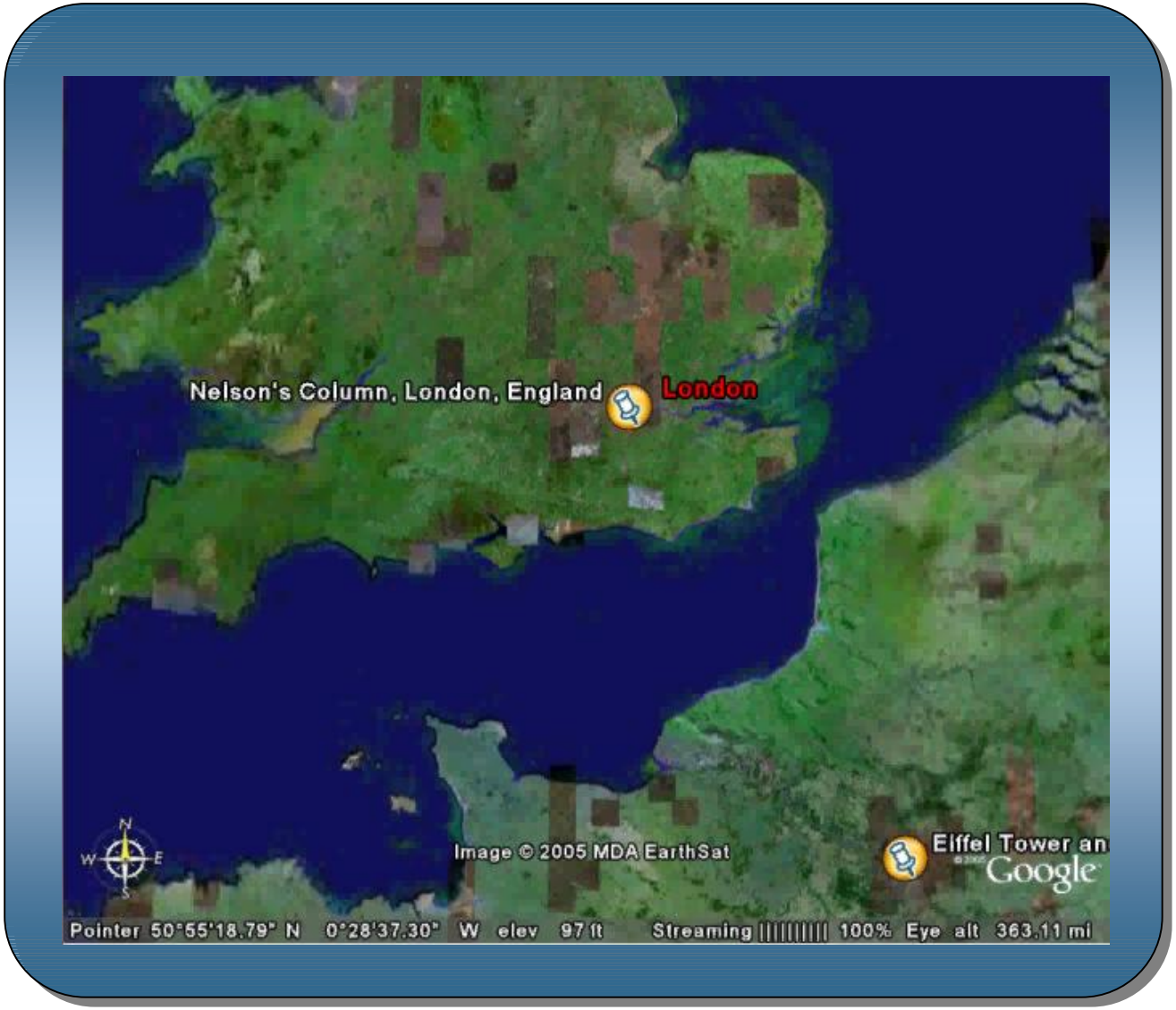


- Don’t expect just *any* bit of hill to work
  - It is critical to select slopes which *face* the current wind direction
- Don’t get stuck in one bowl if it doesn't seem to be working
- Aim to *minimize losses* :-
  - Fly accurately and at the right speed
  - Fly in the correct position for best lift
  - Pause briefly when encountering a thermal (Slow / turn upwind / Streets)
  - Try to turn promptly and in lift
  - Anticipate sink-holes and avoid them or transit quickly
- Consider outlanding options *early*
  - Pick fields on outbound that may be likely decision points for the return
  - Consider wind and slope as key selection factors
  - Roads at the base of the ridge are usually situated when the gradient begin to flatten – Land upwind of them if possible



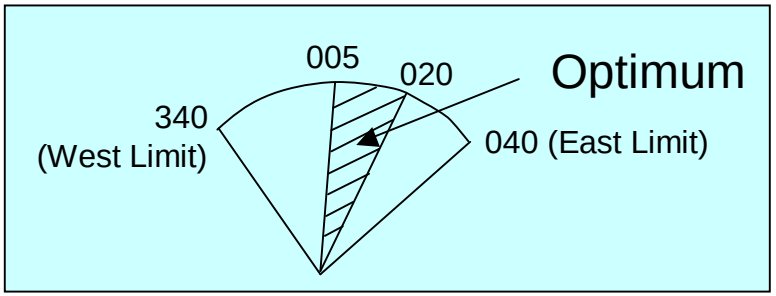
Introduction to the Southdown Ridge

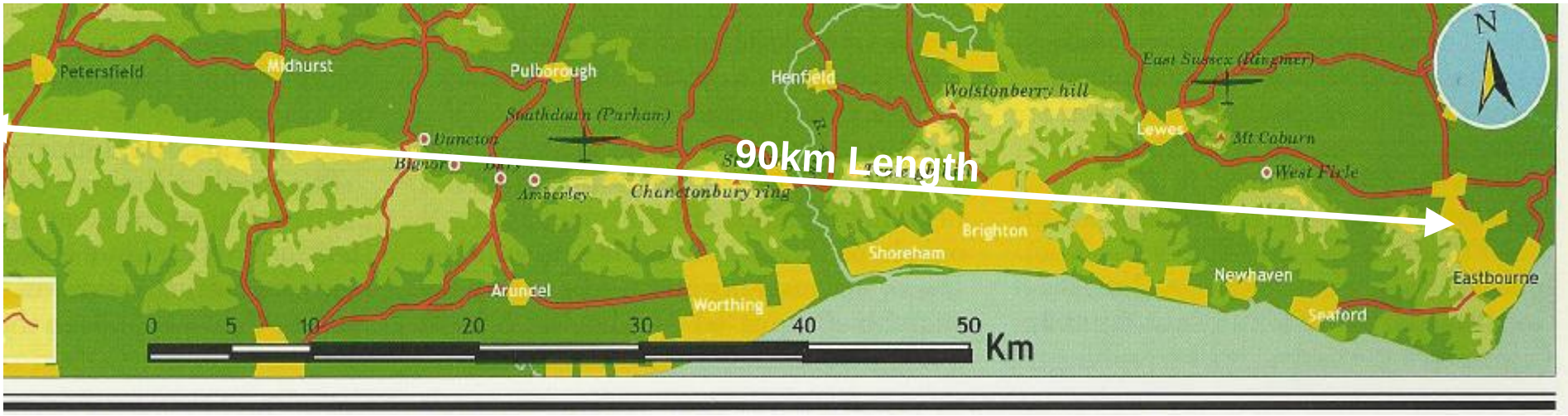




Southdown Gliding Club

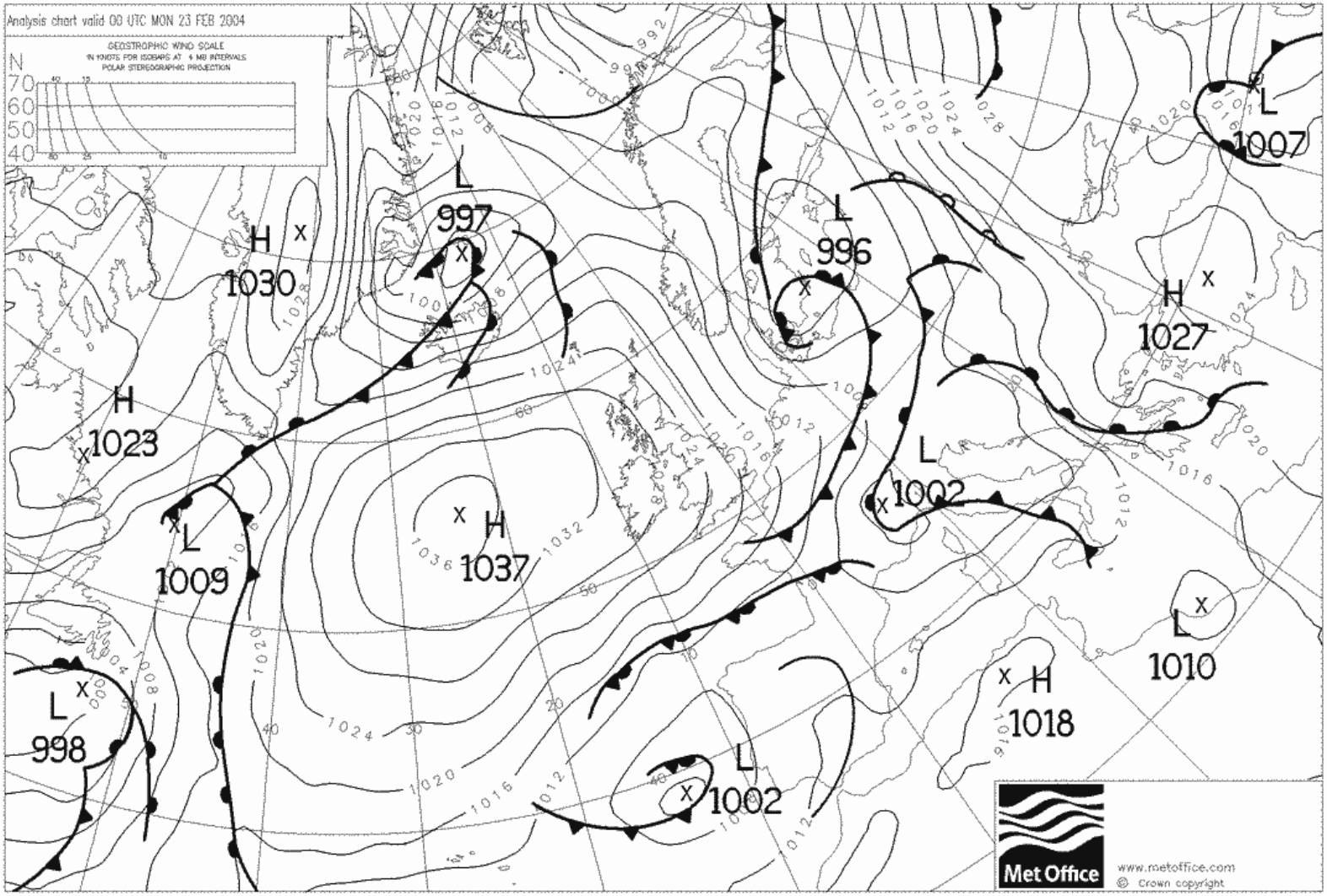
Southdown Ridge



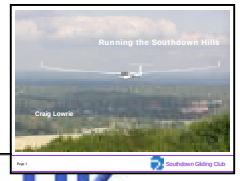


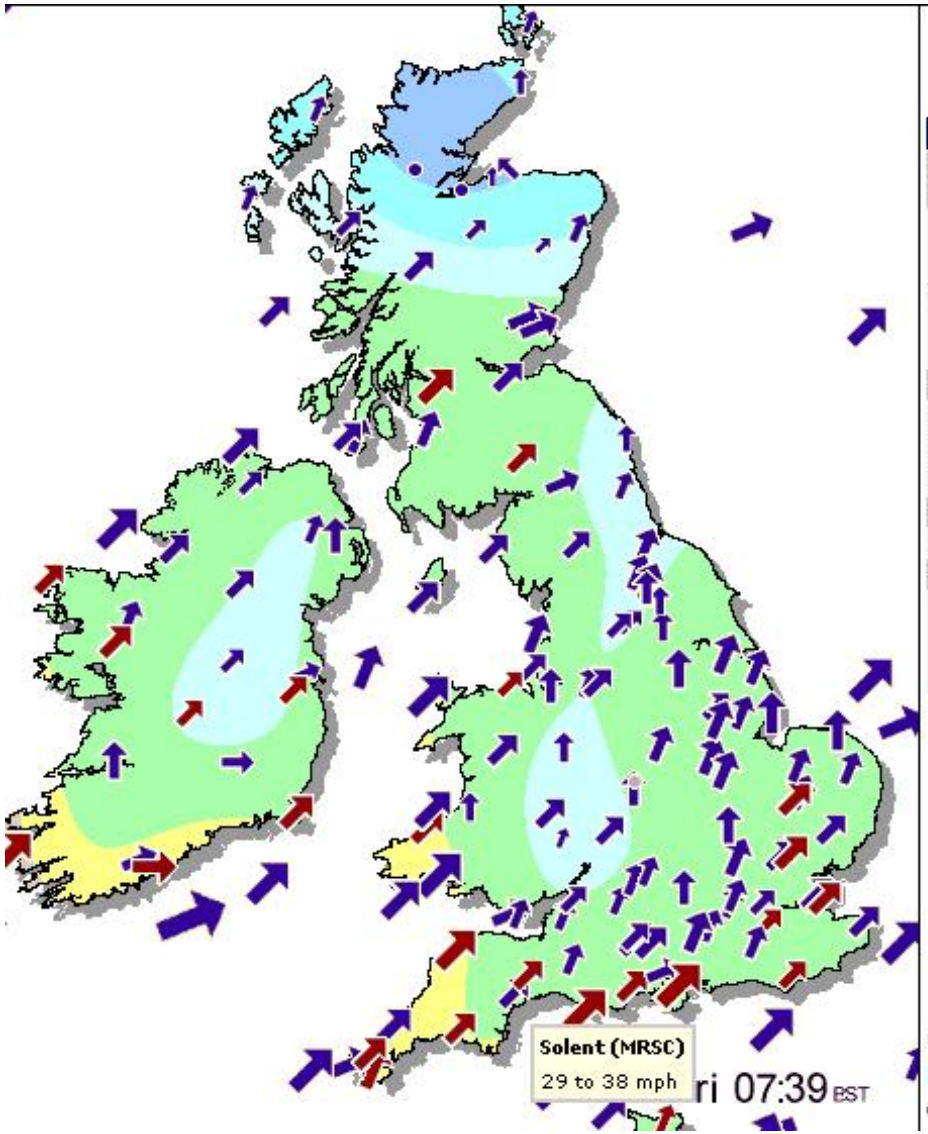
Thanks to Steve Longland for the map

Typical Ridge Chart – Feb 2004



Forecast Wind Direction and Strength





XCWEATHER.CO.UK
SPONSORED BY DIGIFLY FLIGHT INSTRUMENTS

LIVE WEATHER DATA	
Solent (MRSC) Fri 07:00 BST	
Speed	29 to 38 mph
Direction	SW
Temp/Dew	17 C
Altimeter	1007 mb
Visibility	8000 m

WIND HISTORY

05:00	30 mph
06:00	29 mph
07:00	29 mph

WEATHER

rain

CLOUD

DONATE
PayPal

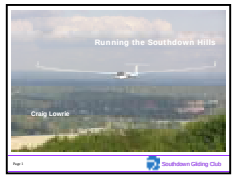
FORECAST DATA		FORECAST DATA	
FRI 6		**MON 9**	
07:00	20 mph	01:00	17 mph
10:00	26 mph	04:00	15 mph
13:00	23 mph	07:00	14 mph
16:00	21 mph	10:00	13 mph
19:00	22 mph	13:00	9 mph
22:00	21 mph	16:00	6 mph
SAT 7		19:00	3 mph
01:00	18 mph	22:00	2 mph
04:00	18 mph	**TUE 10**	
07:00	15 mph	01:00	1 mph
10:00	15 mph	04:00	1 mph
13:00	13 mph	07:00	3 mph
16:00	13 mph	10:00	6 mph
19:00	8 mph	13:00	8 mph
22:00	7 mph	16:00	8 mph
SUN 8		19:00	10 mph
01:00	8 mph	22:00	13 mph
04:00	10 mph	**WED 11**	
07:00	9 mph	01:00	14 mph
10:00	13 mph	04:00	14 mph
13:00	16 mph	07:00	13 mph
16:00	15 mph	10:00	10 mph
19:00	15 mph	13:00	14 mph
22:00	17 mph	16:00	14 mph

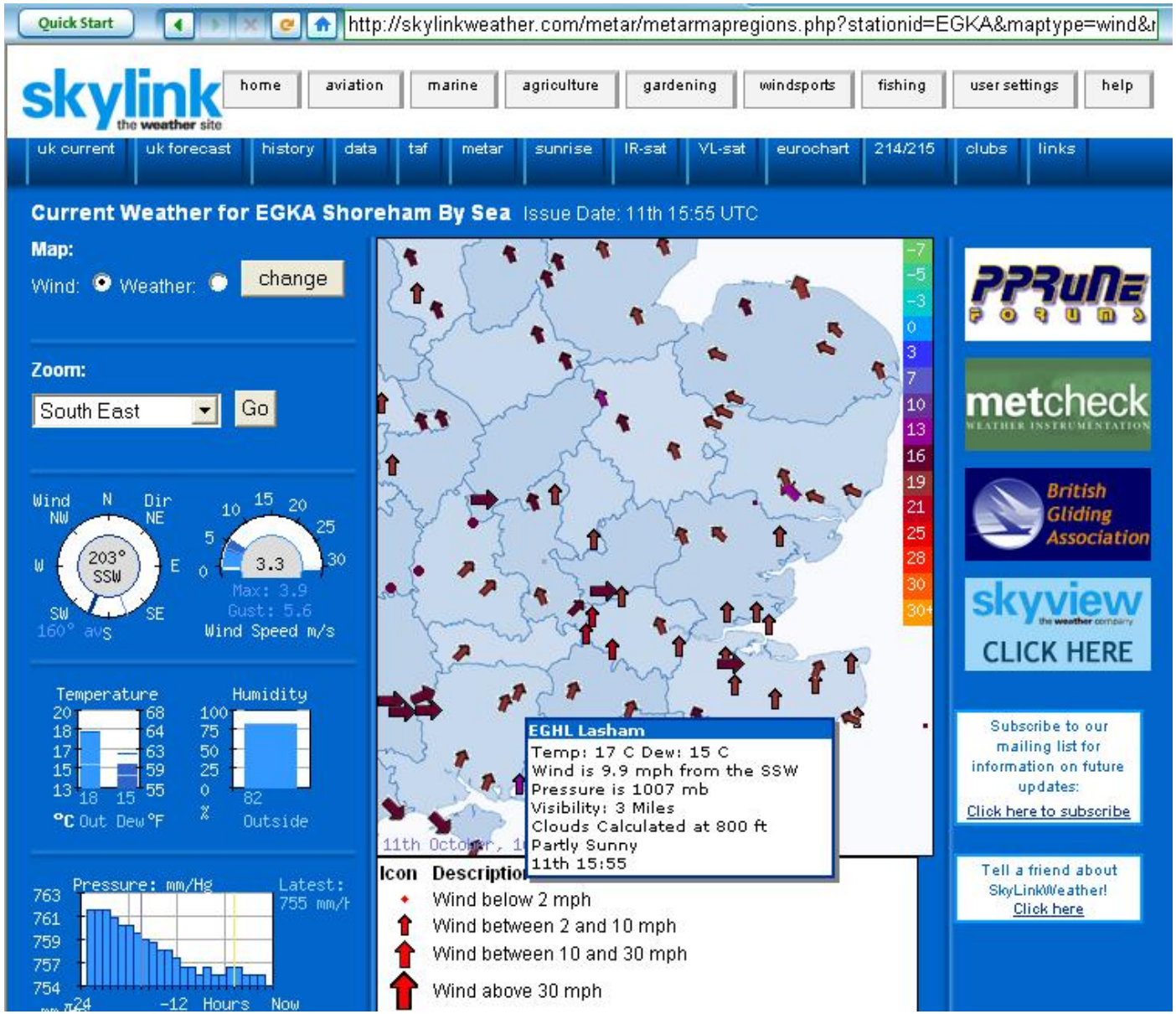
Time: GMT +1

Windspeed

0	1	2	3	4	5	6	7	8	9	10	11	Beaufort
0	1	5	8	13	20	25	32	39	47	55	64	MPH

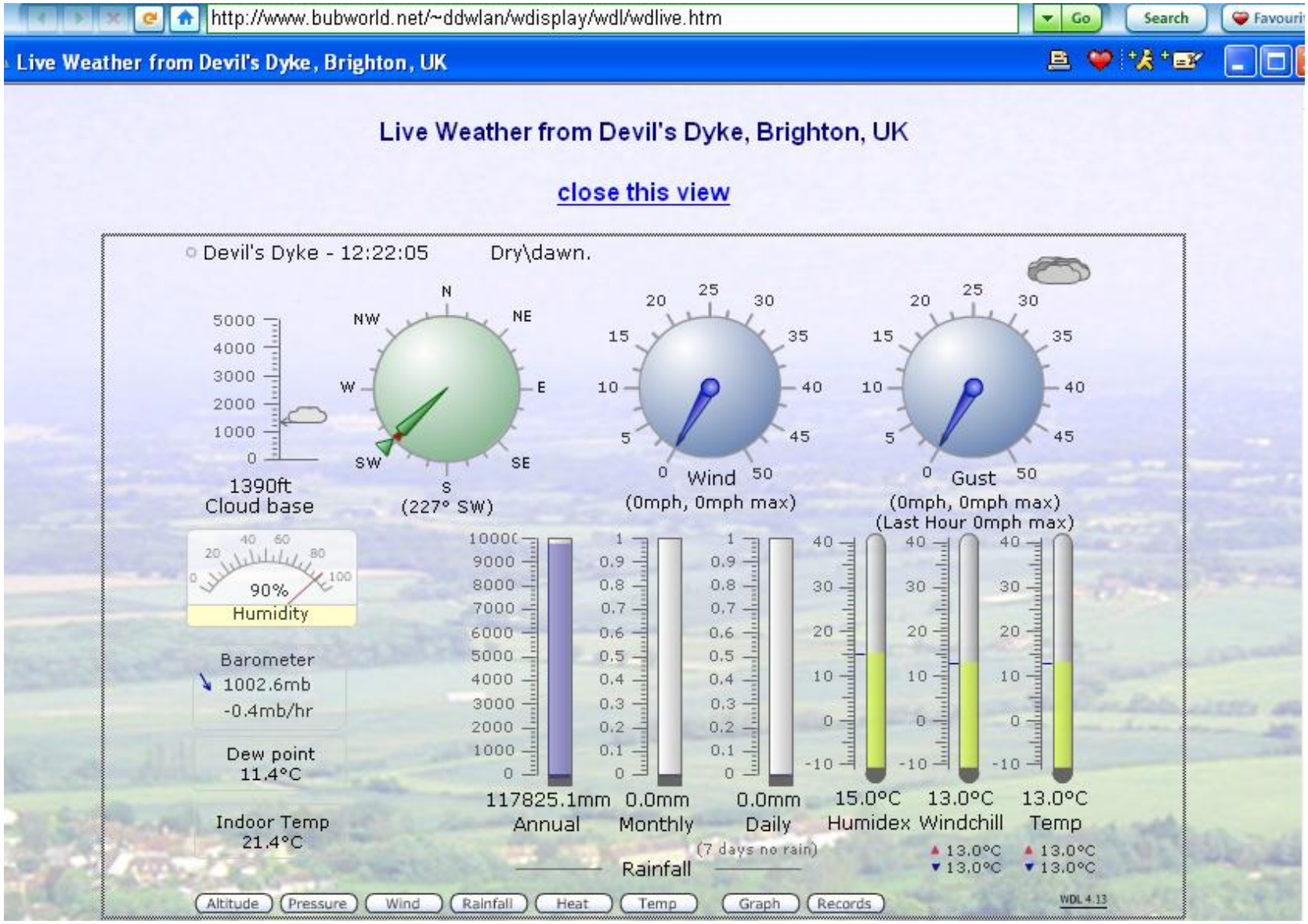
Local Conditions





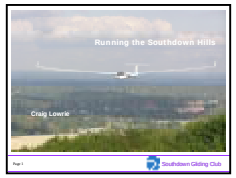
Southdown Gliding Club

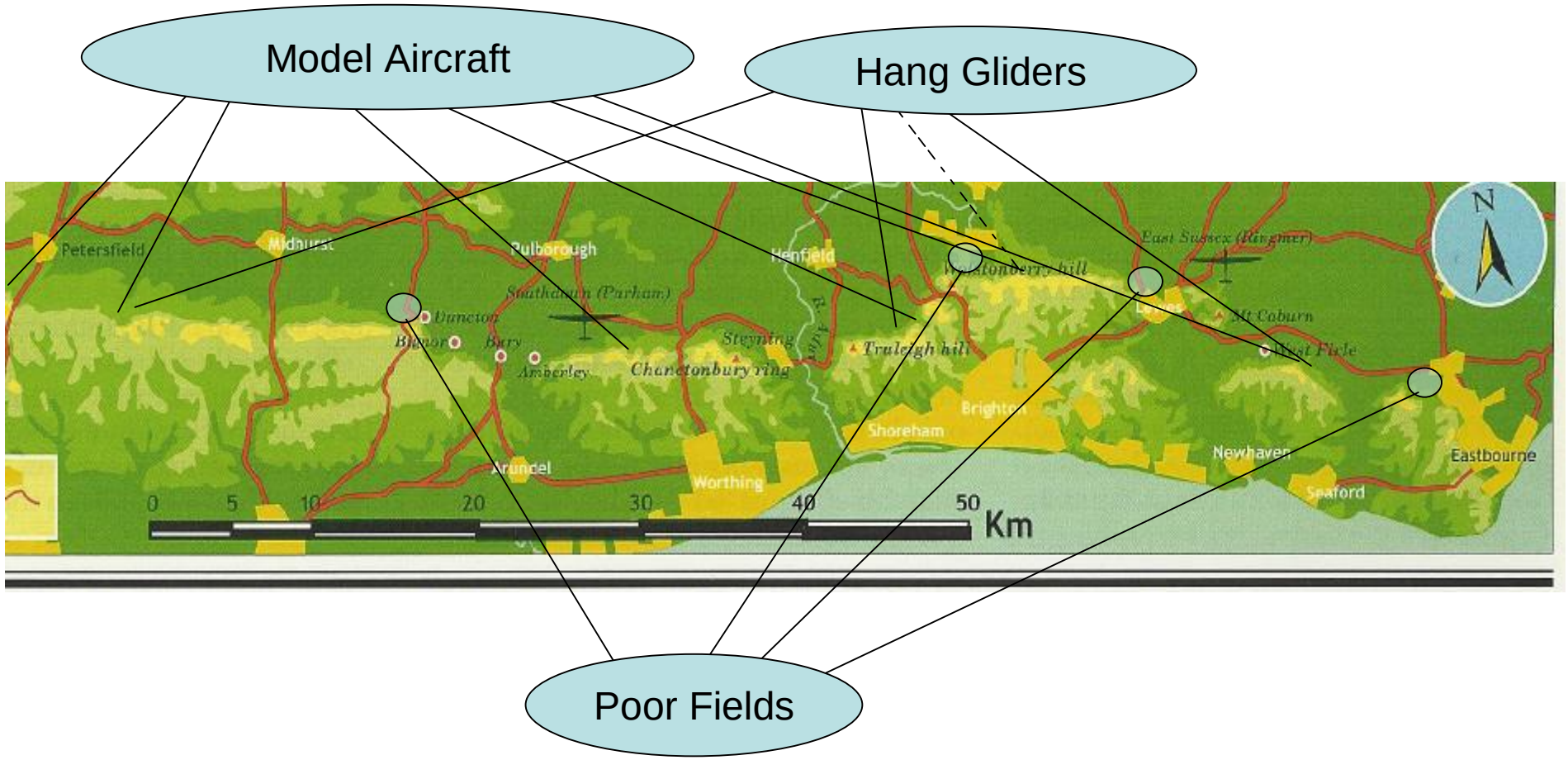
Devil's Dyke – Live Weather information



Southdown Gliding Club

Southdown Ridge - Hazards





Plus Walkers / Kites / Horses on “Southdowns Way”

Thanks to Steve Longland for the map

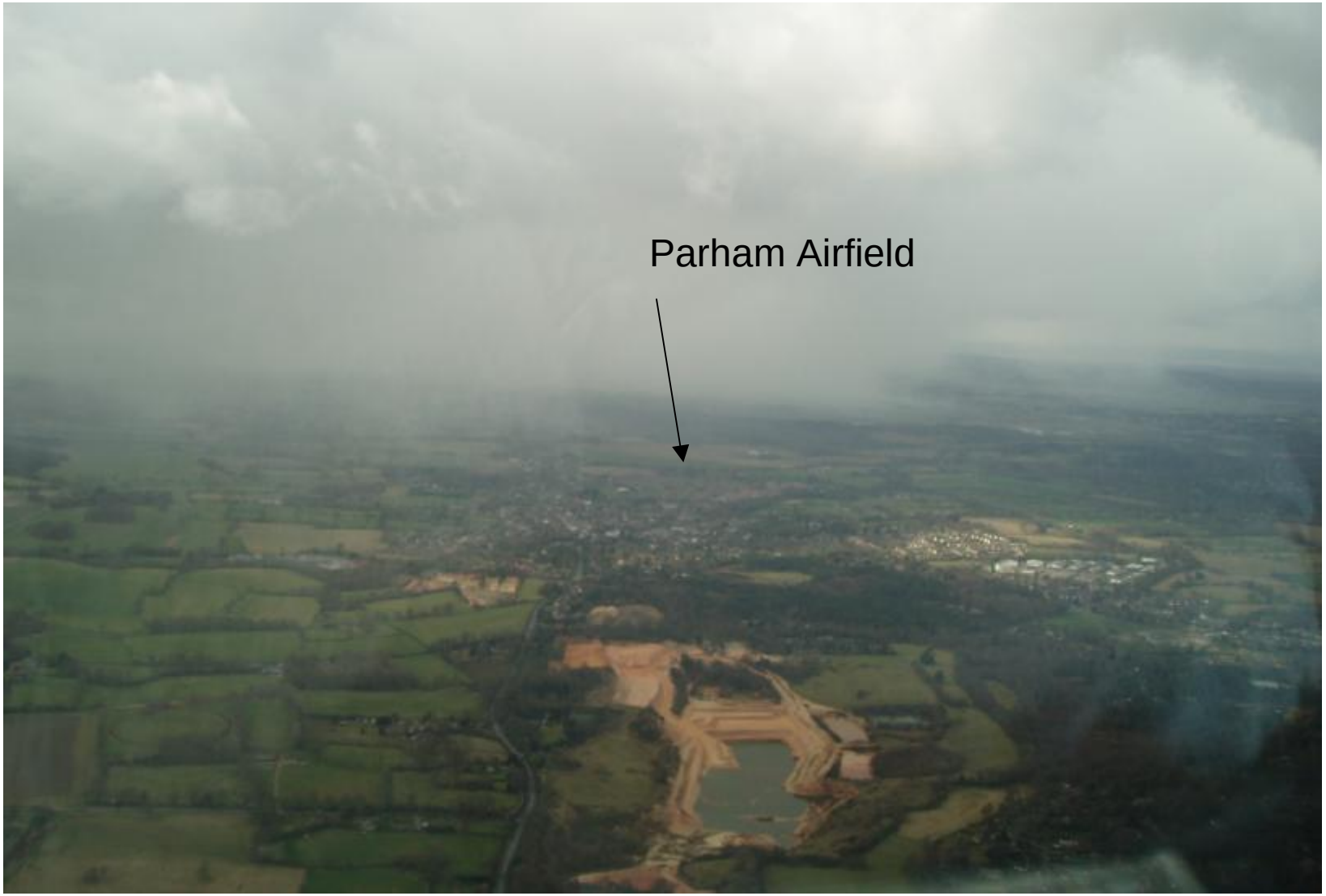
Southdown Gliding Club

Stud Farm
West of Duncton / Seaford College

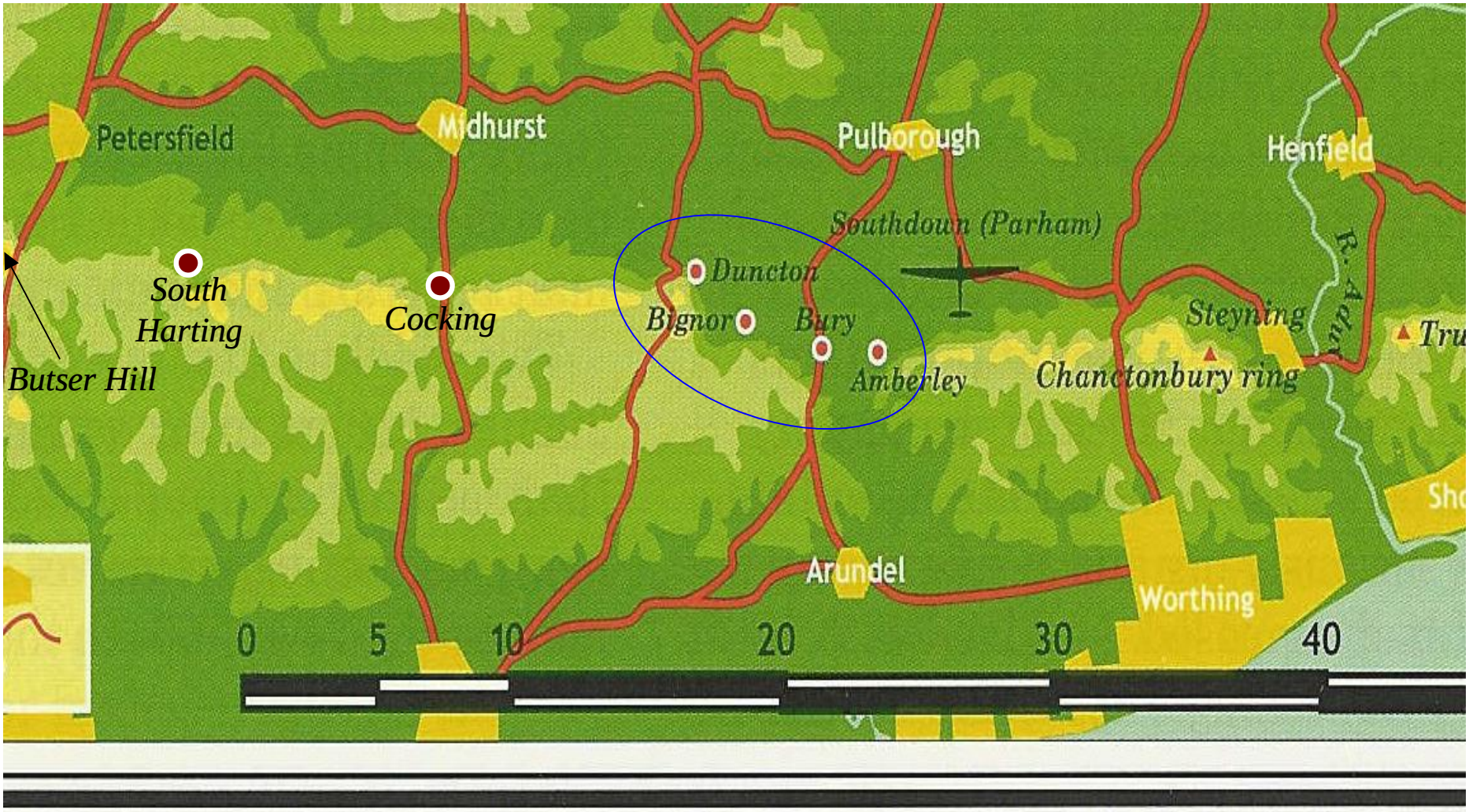
These fields contain precious cargo – Consider Them Unlandable

Met Hazards – Shower Activity

Met Hazards – Shower Activity



Going West

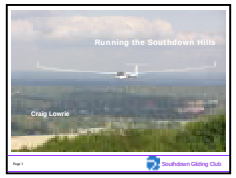


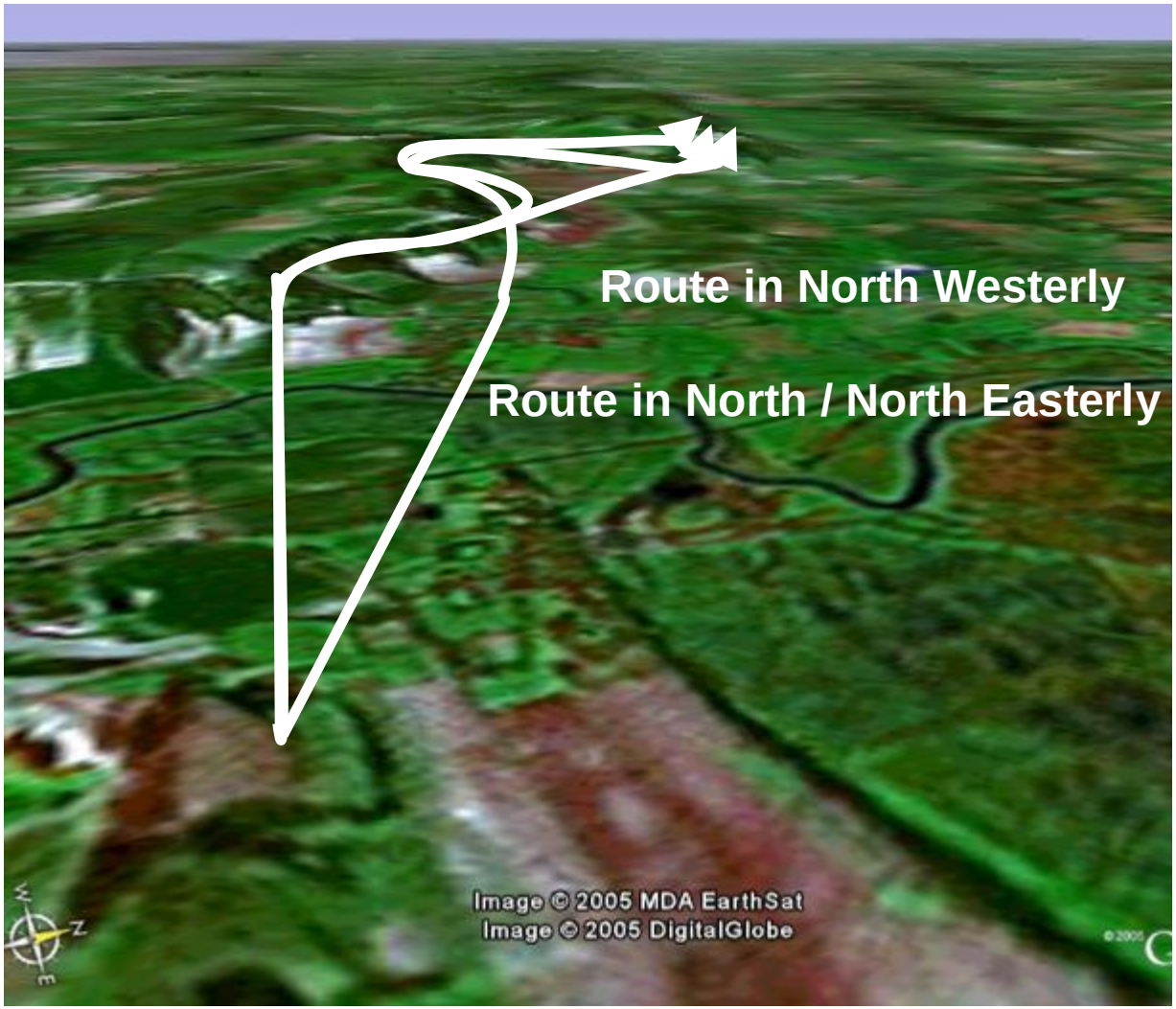
Thanks to Steve Longland for the map

Southdown Gliding Club

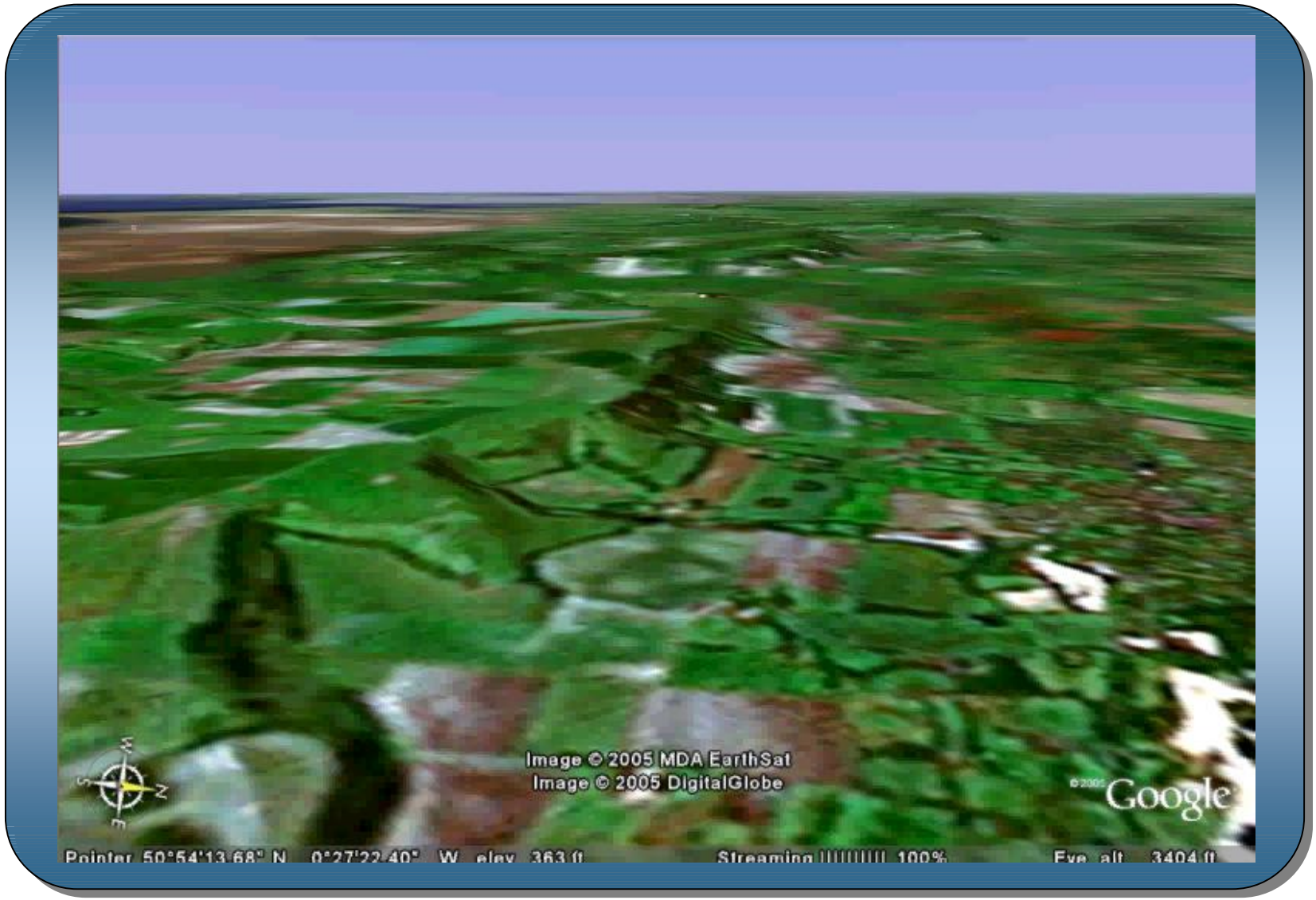
Going West From Parham

Crossing to Duncton

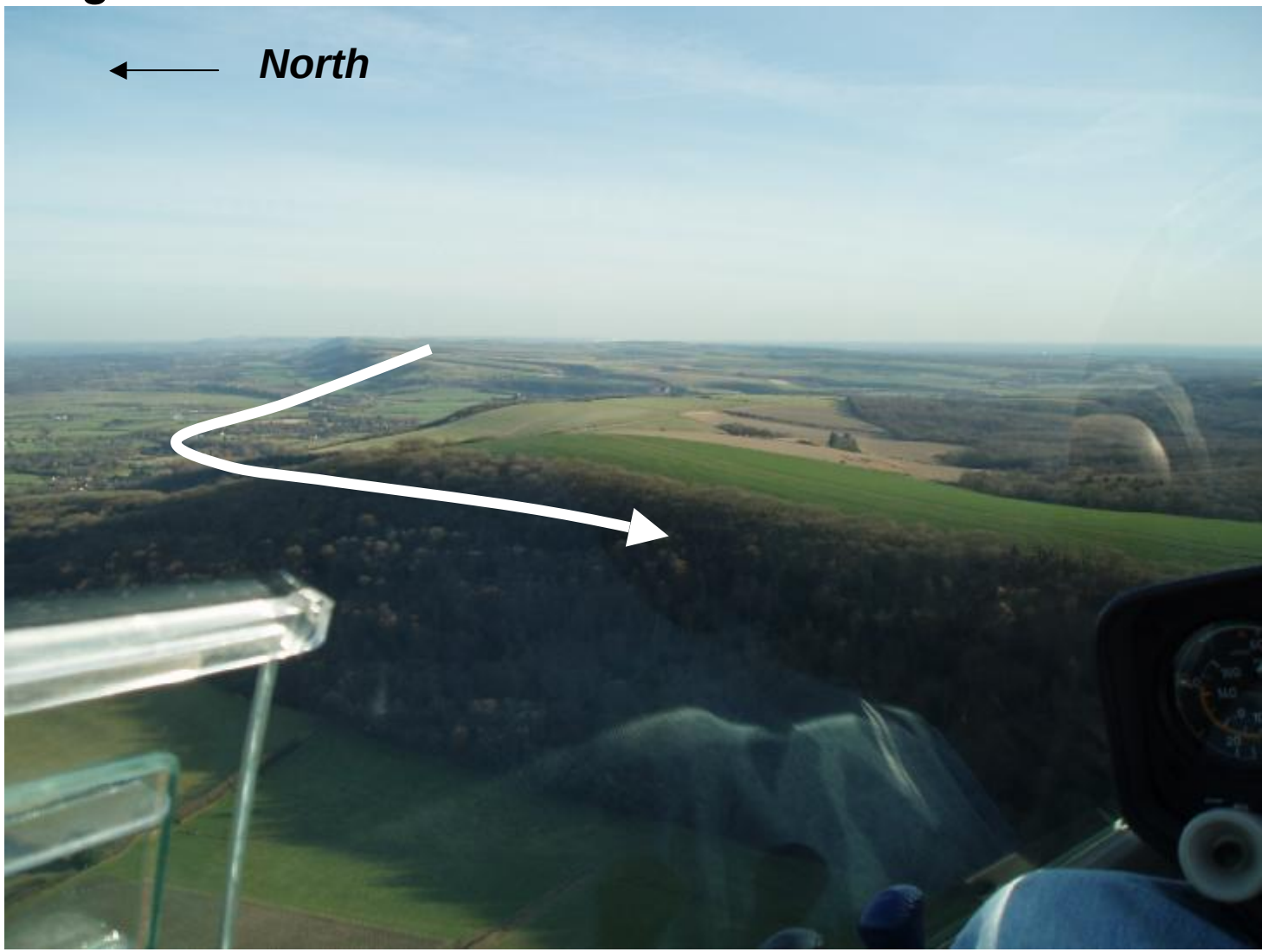




Video : Parham to Butser Hill



Bignor Bowl – The NW facing bowl
Looking SE



Pushing around Duncton (NW Wind)

N

Pushing around Duncton (NW Wind)

N

Southdown Gliding Club

Pushing around Duncton (NW Wind)

N

Pushing around Duncton (NW Wind)

N

Pushing around Duncton (NW Wind)

N

Approaching Cocking Gap

N

Approaching South Harting

Approaching Butser Hill

N

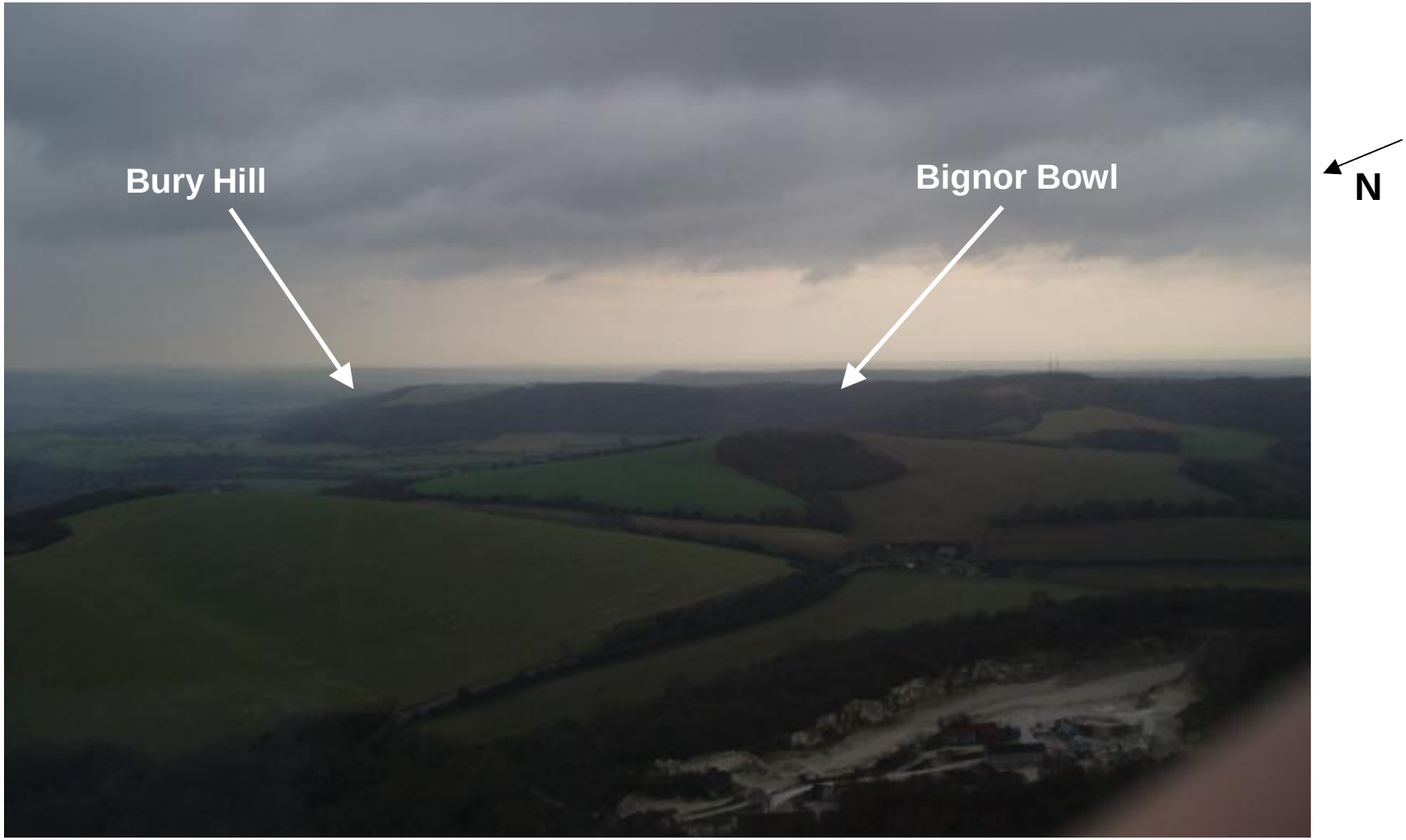
Approaching Cocking Gap from West

N

Crossing Cocking Gap, Heading East

N

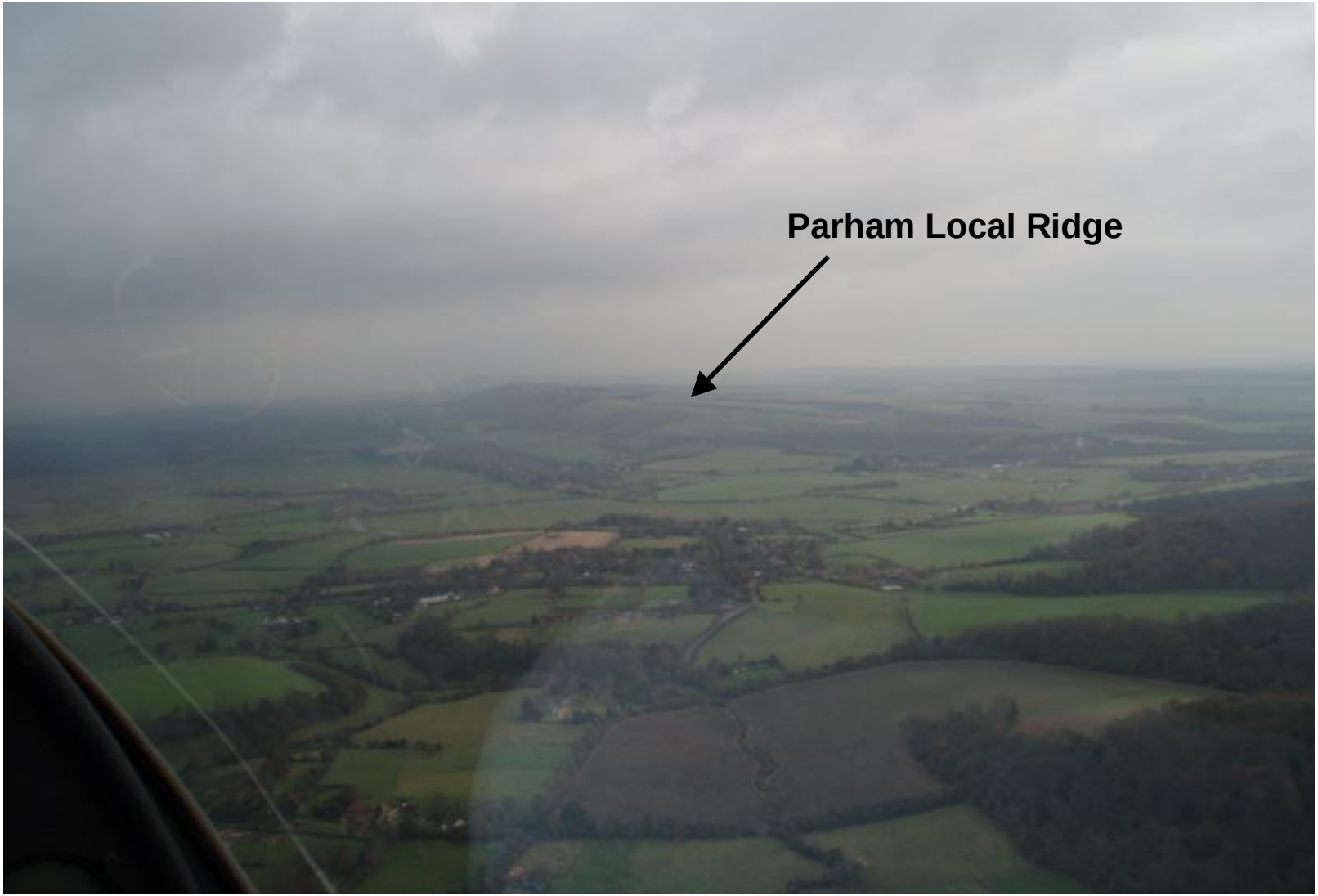
Over Seaford College, Looking South East

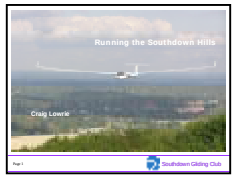


Over Seaford College, Looking South East

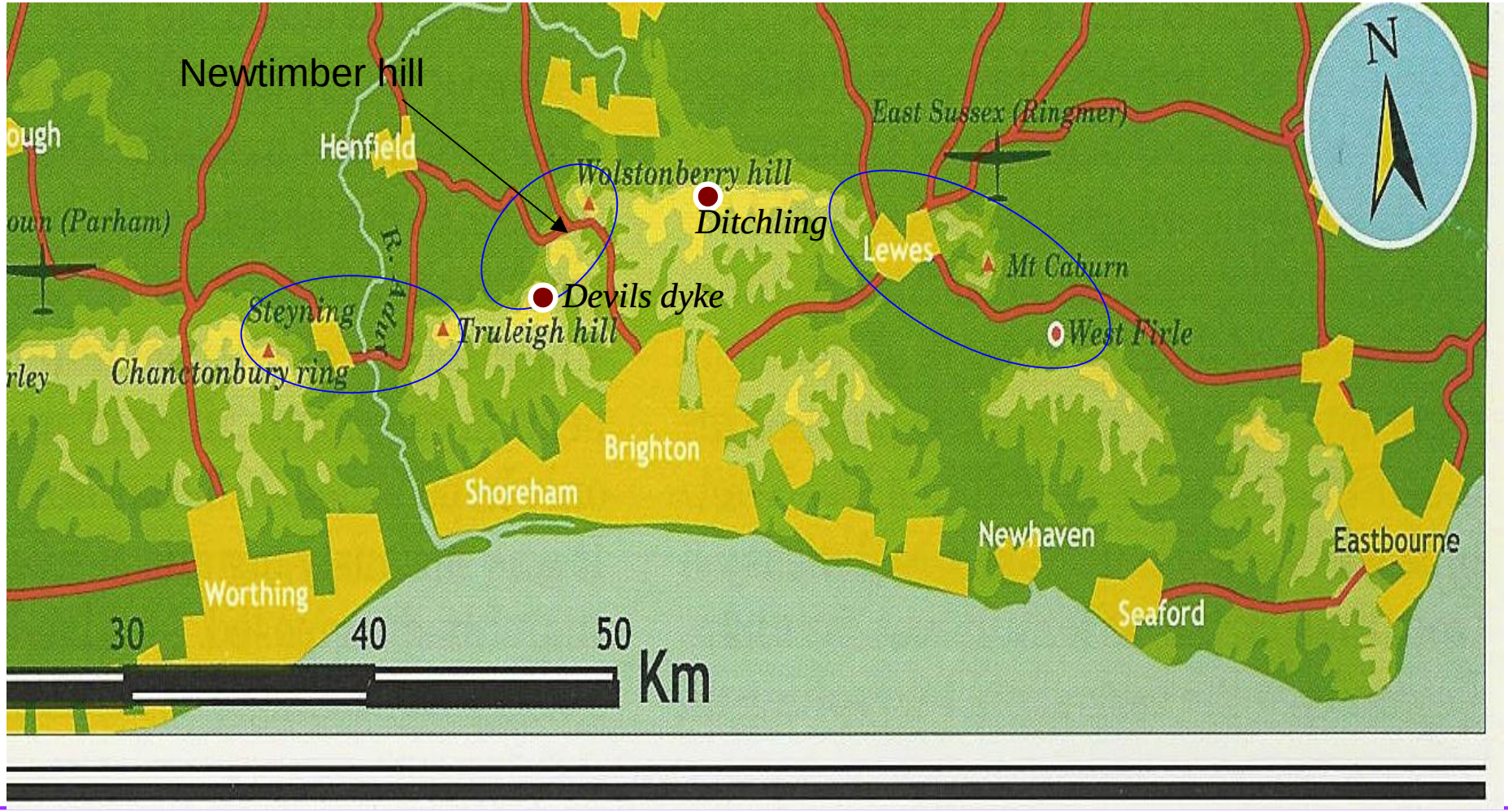
N

Leaving Bignor, Heading to Local Ridge





Going East From Parham



Thanks to Steve Longland for the map

Southdown Gliding Club

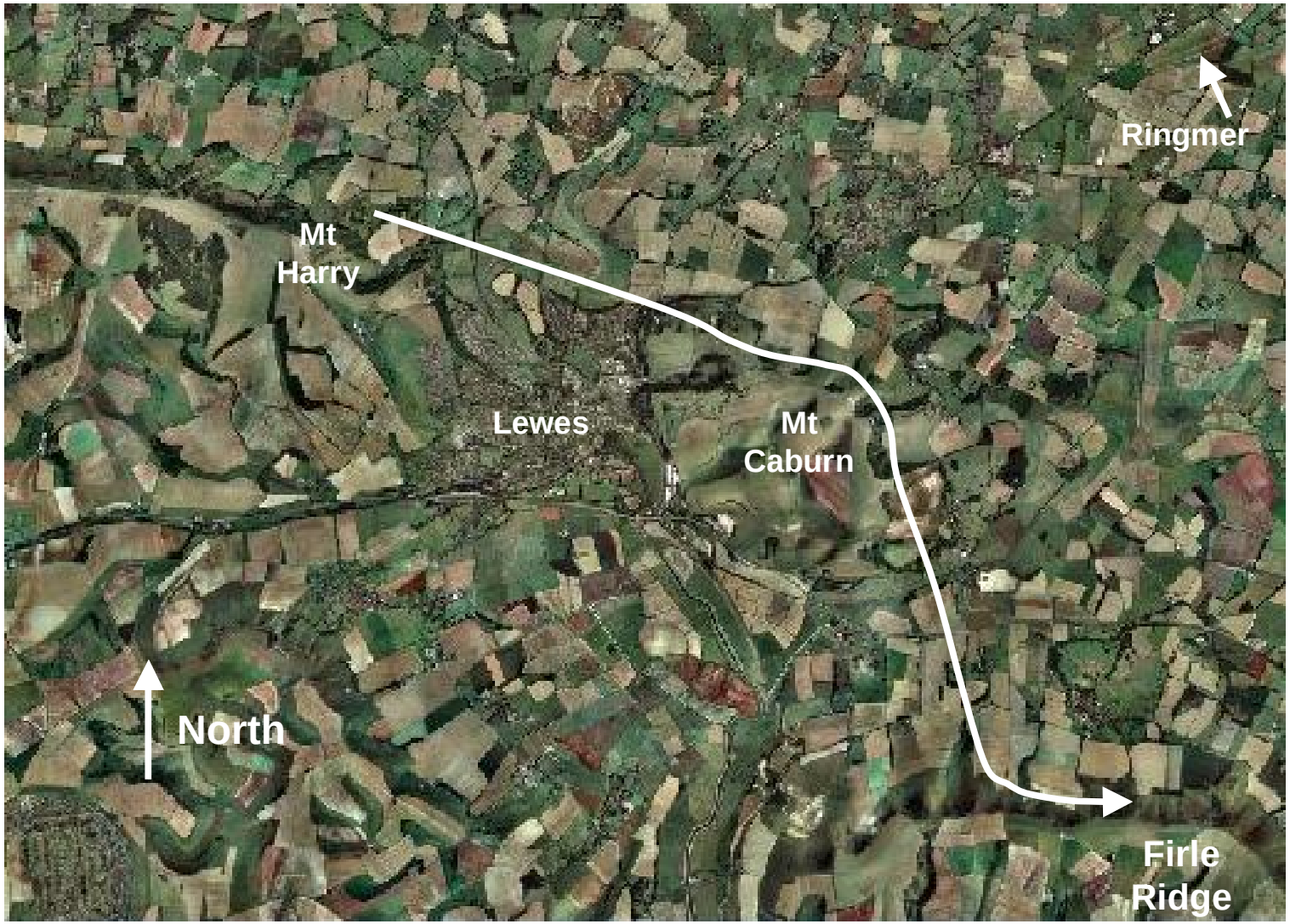
Chanctonbury to Truleigh

Southdown Gliding Club

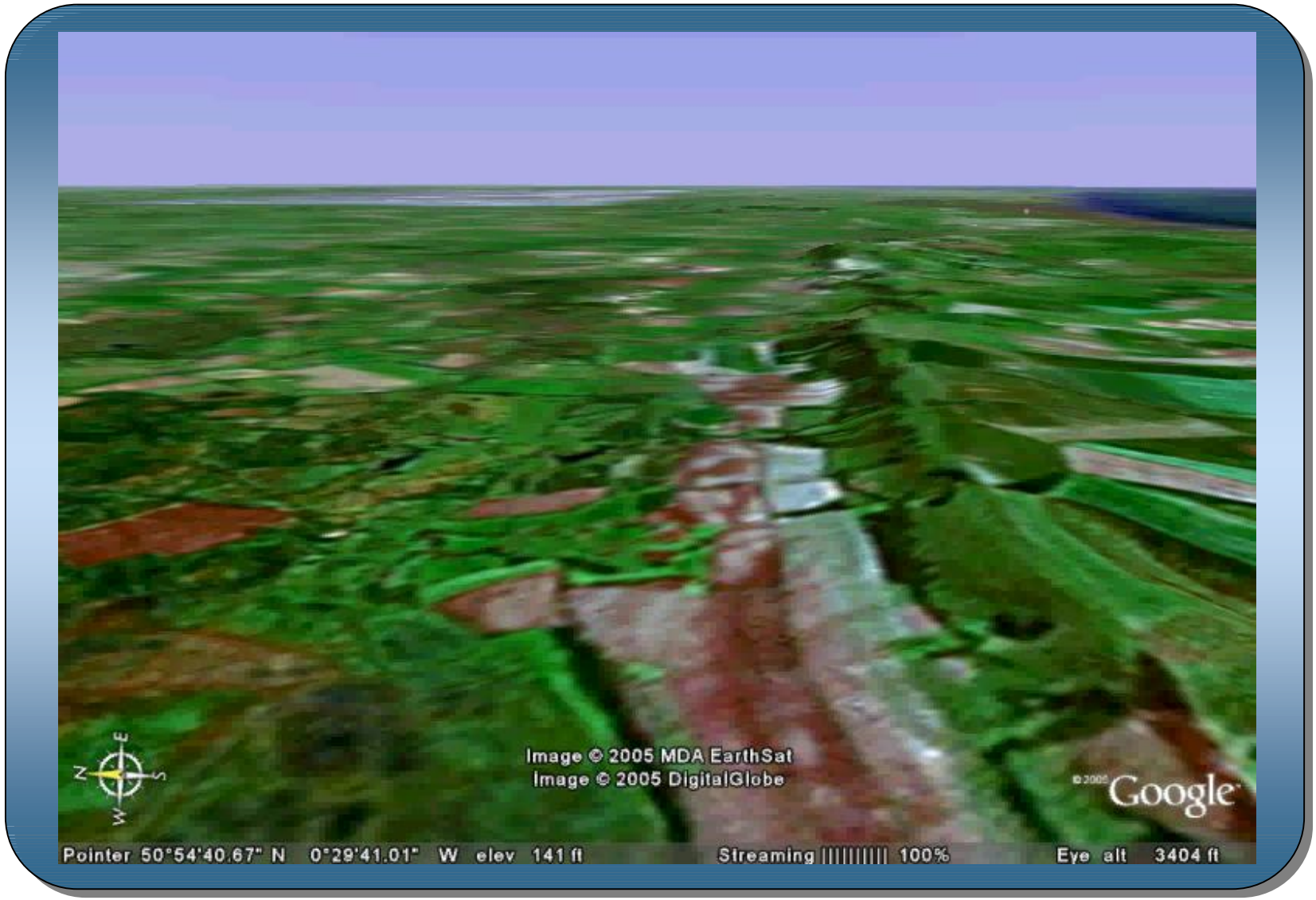
Devils Dyke Jump to Windmills

Southdown Gliding Club

Lewes to Firle



Video : Parham to Eastbourne



Southdown Gliding Club

Heading East Past Jack & Jill

N

Approaching Ditchling Beacon

N

Ditchling Beacon

N

Approaching Lewes

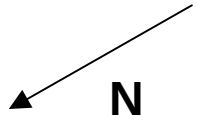
N

Over Mt Caburn – Heading for Firle

Approaching Firle Beacon

N

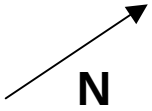
Approaching Eastbourne



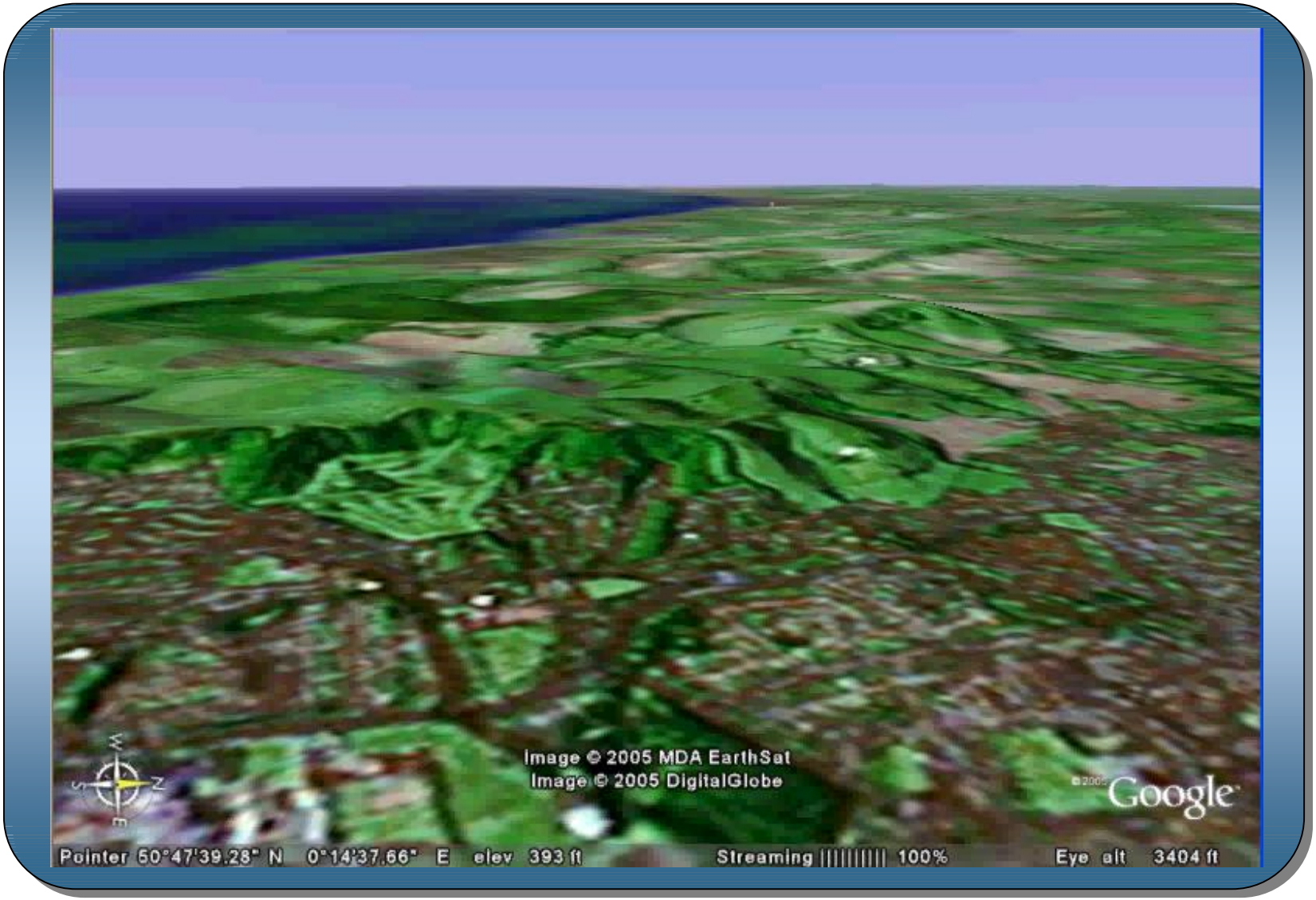
Eastbourne showing ENE facing Ridge

N

Eastbourne Looking West



Video : Eastbourne to Parham



Southdown Gliding Club

Heading WNW towards Mt Caburn

N

Mt Caburn toward Mt Harry

N

Ditching Beacon, Heading West

Approaching Wolstonberry / Newtimber hill

N

Crossing the Saddle towards Newtimber

N

Behind Wolstonberry towards Newtimber

N

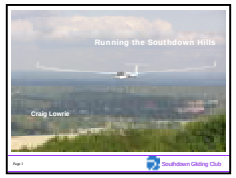
Approaching Newtimber hill

N

To Devils Dyke from Newtimber hill

N

Truleigh Hill to Chanctonbury

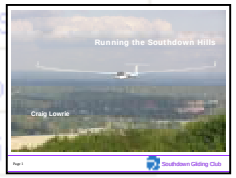


Over Steyning Bypass heading to Chanconbury

N

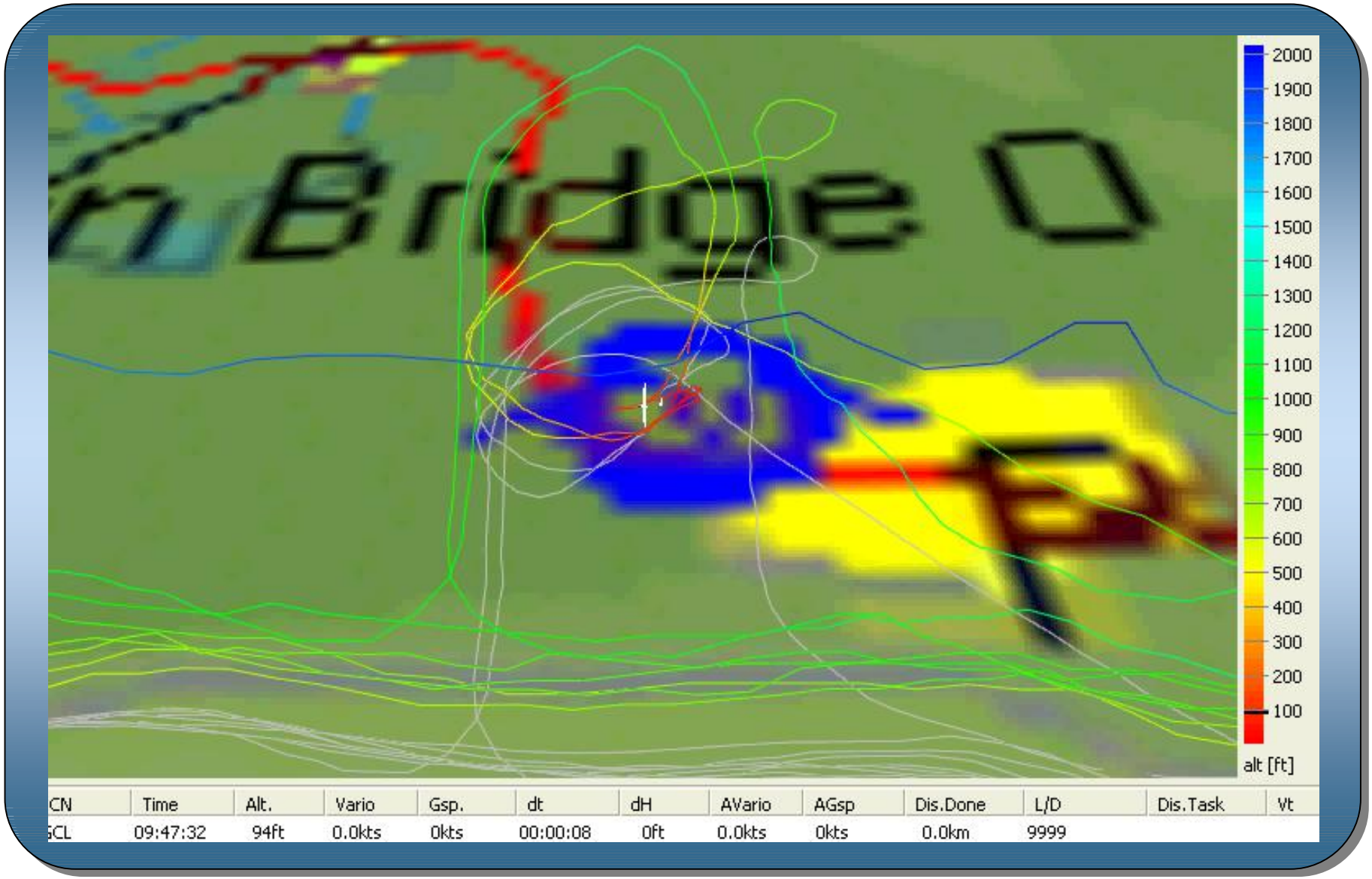
Approaching Chanctonbury hill

Maximising Ridge Running Speed

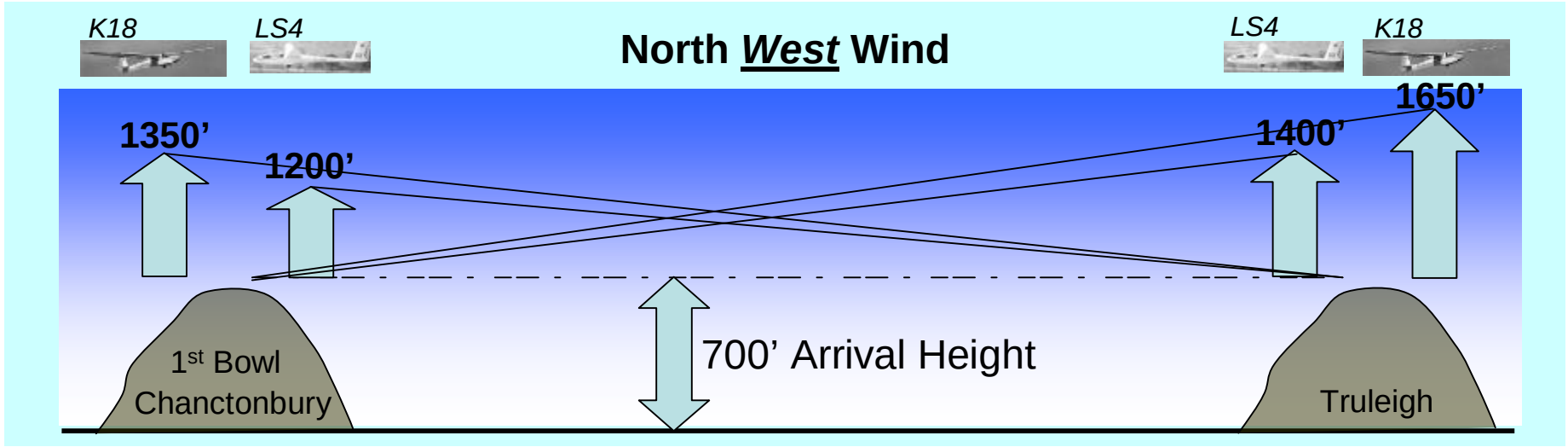


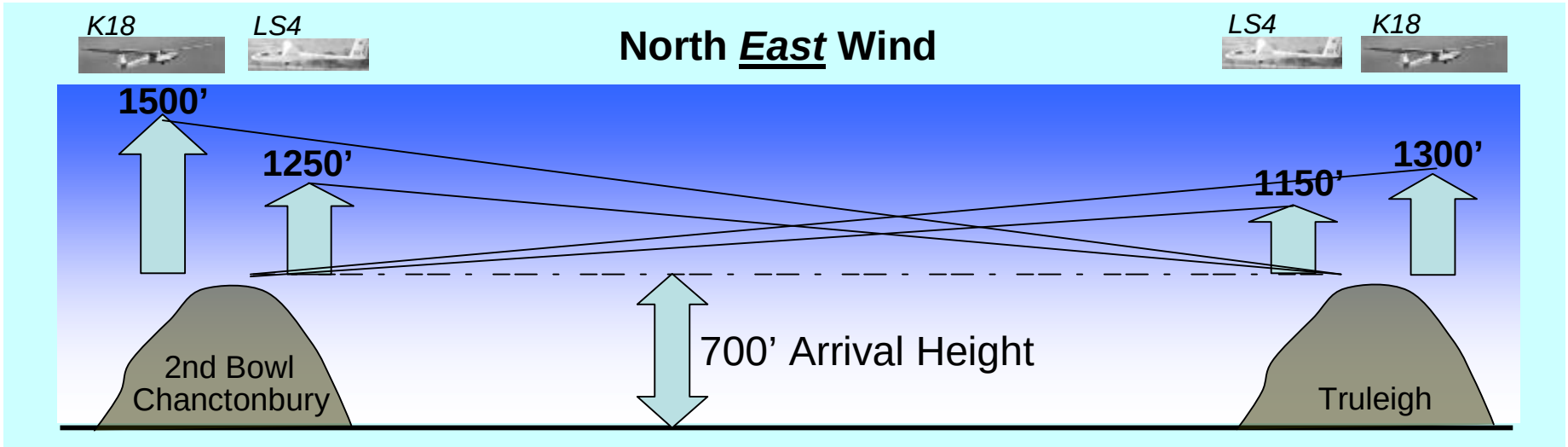
- With care, practice and experience, speeds of 135-145 kph can be achieved using the Southdown ridge over 100-300km tasks
- Maximum speeds can be achived by;
  - Utilising *optimium conditions* (000-020 at 15-20 kts)
  - Running the ridge crest at *maximum* possible speed
  - Managing energy and altitude to *avoid the need to turn*
  - *Crossing gaps at maximum speed* consistent with acceptable arrival height
  - Taking the most *direct route* possible especially around forward or backward jumps (ie Duncton / Dyke / Firle)
  - *Optimising glider* for high speed (ie 15m + Water)
- Typical maximum Speeds;
  - PAR-HAR-LNW-PAR 123km 52mins 143 kph
  - PAR-BUT-POL-PAR 175km 78mins 134 kph

Butser – Eastbourne (180km at 130km/hr)



Chanctonbury <-> Truleigh Gap Crossing
Calculated height needed (Parham QFE)

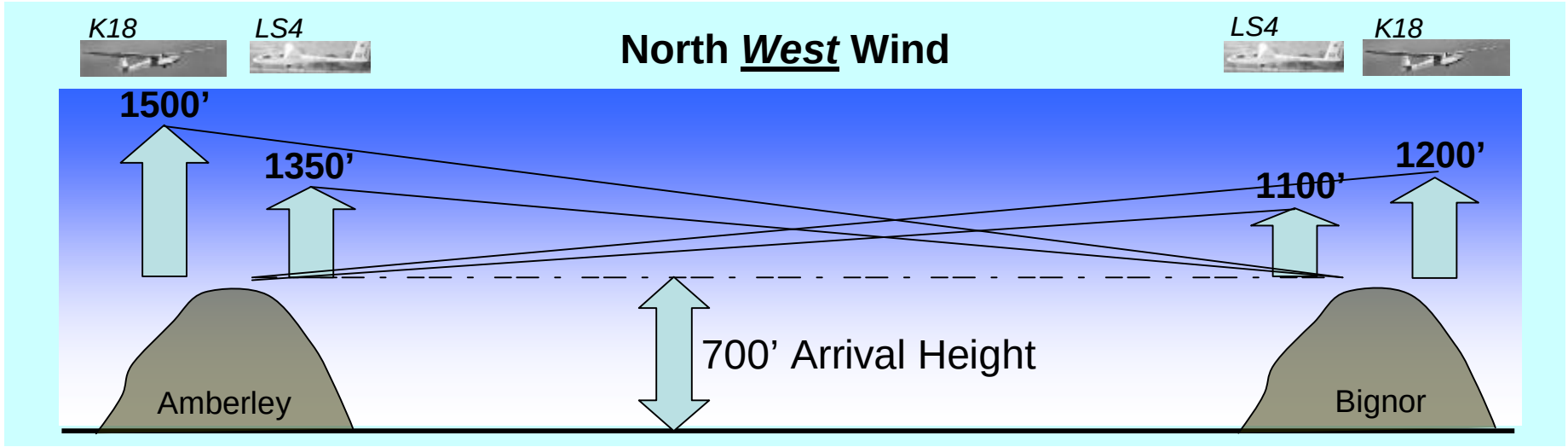


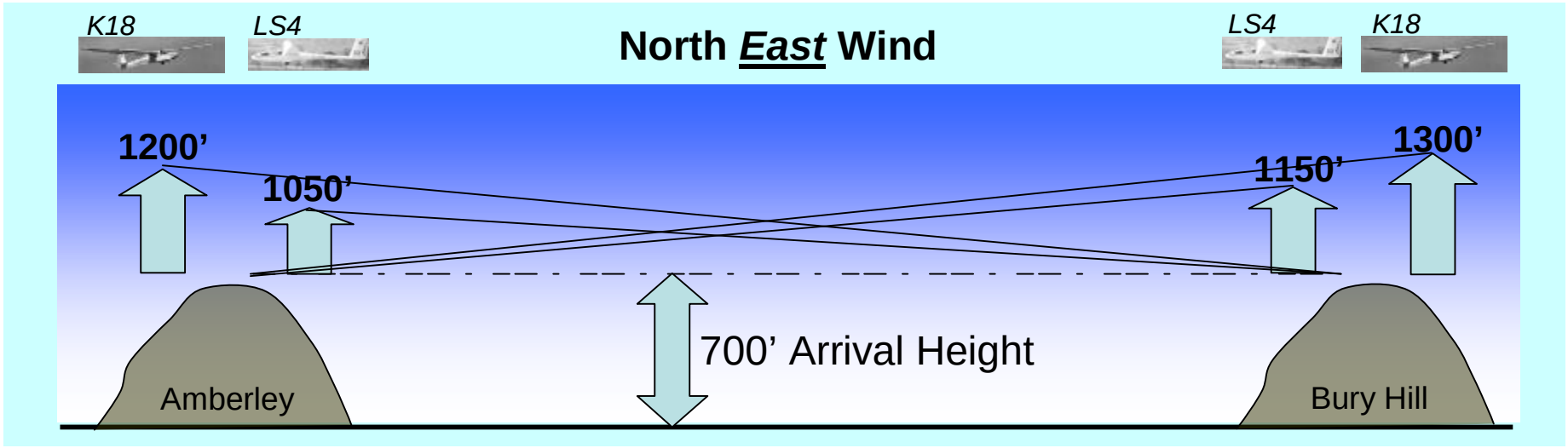


Guidance Only – Sink / Lift can effect this

Amberley <-> Bignor / Bury Gap Crossing

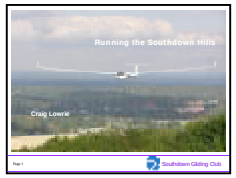
Calculated Height Needed (Parham QFE)

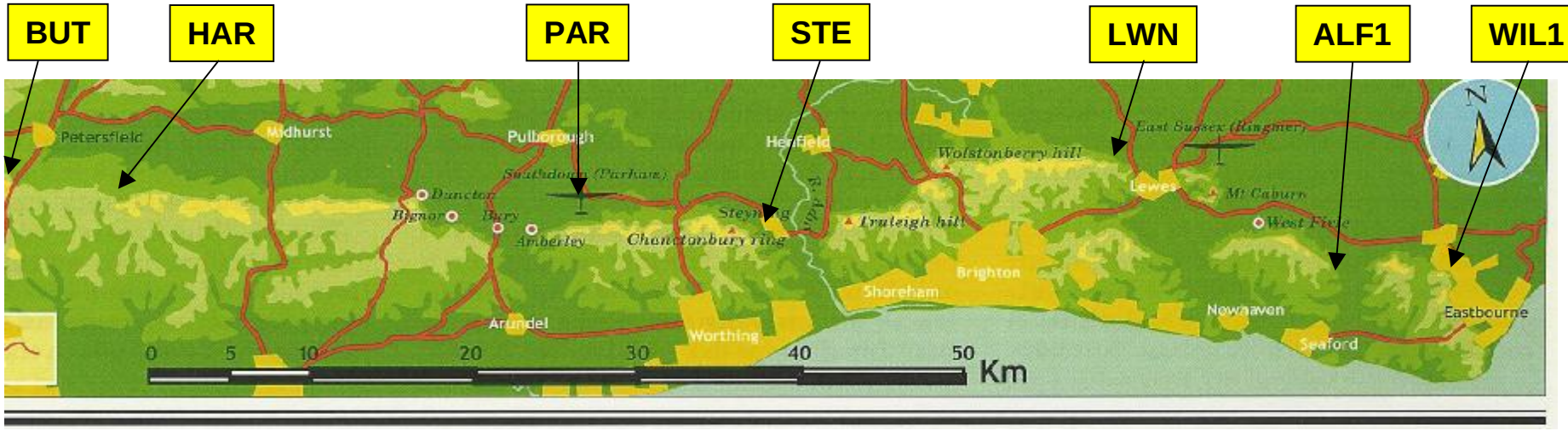




Guidance Only – Sink / Lift can effect this

Turning Points & Task Options



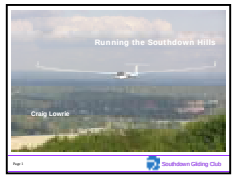


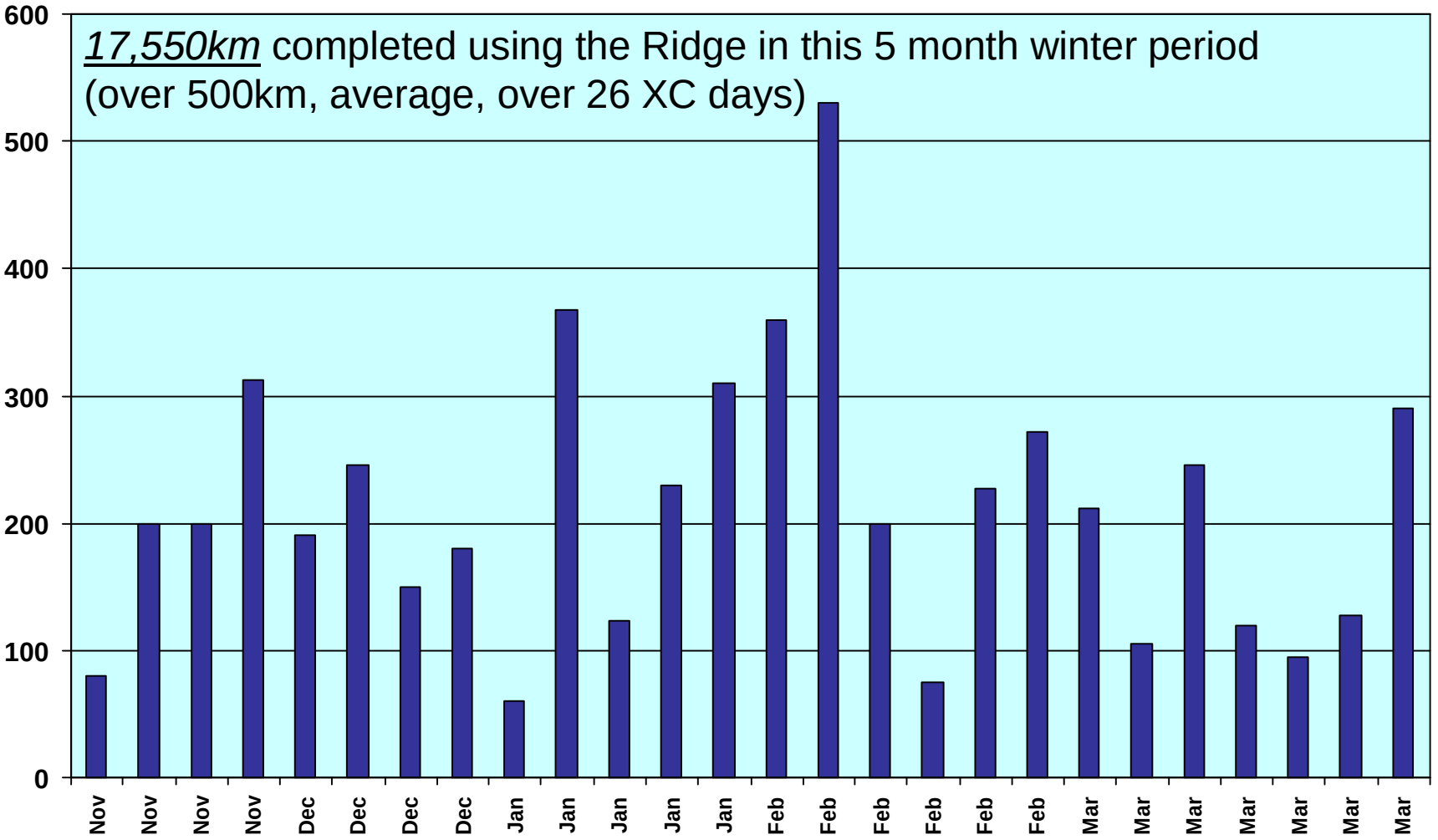
Task	Dist (KM)	NW	N	NE
PAR-HAR-PAR	59	Novice-5	Novice-2	Novice-0
PAR-HAR-STE-PAR	80	Novice-5	Novice-2	Novice-1
PAR-HAR-LWN-PAR	124	Inter-4	Inter-3	Inter-4
PAR-BUT-LWN-PAR	138	Inter-5	Inter-3	Inter-4
PAR-HAR-WIL1-PAR	164	Pundit-5	Pundit-4	Inter-5
PAR-BUT-WIL1-PAR	178	Pundit-5	Pundit-4	Inter-5
PAR-BUT-WIL1-BUT-PAR	250	Pundit-5	Pundit-4	Inter-5
BUT-WIL1-HAR-ALF1-BUT*	329	Pundit-5	Pundit-4	Inter-5

* BUTser remote Start/Finish 0=Straightforward 5 = very difficult

Nov 2005 – March 2006

Best Individual Ridge Distance on any day



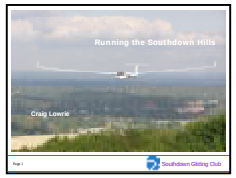


Typically 2-4 T.P's used on these flights
Only includes flights from Parham Airfield

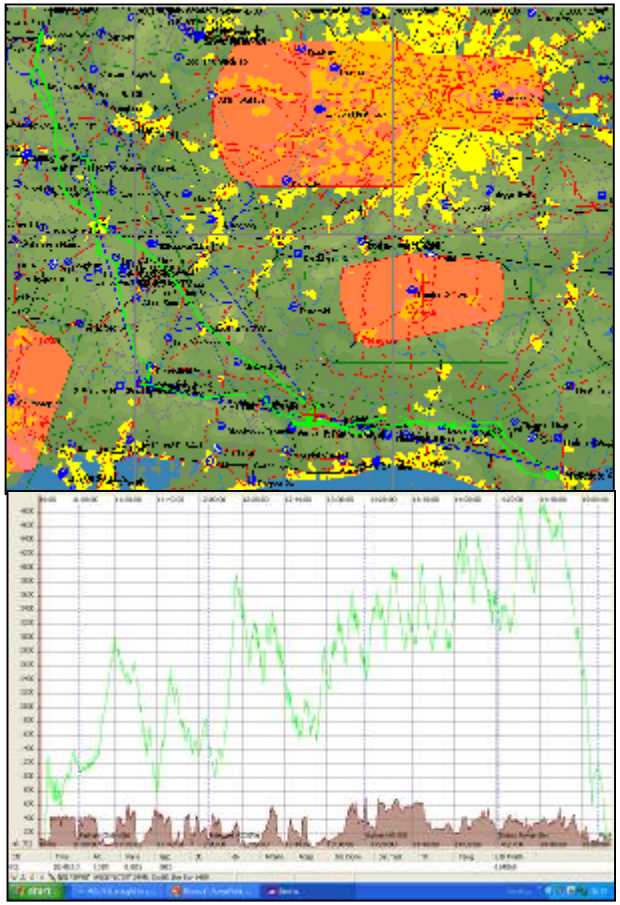
Southdown Gliding Club

Using The Ridge to Extend the day…

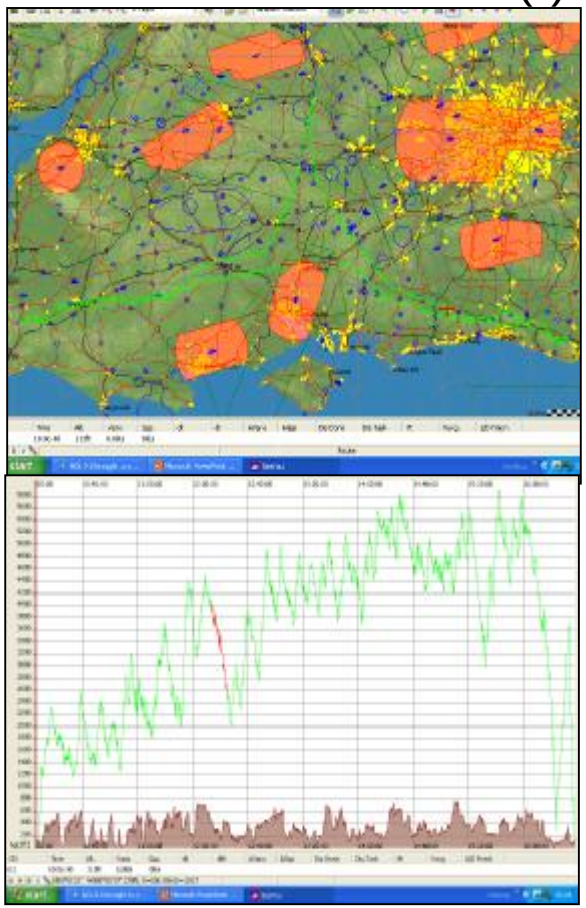
Three Predeclared Tasks from 2005/2006



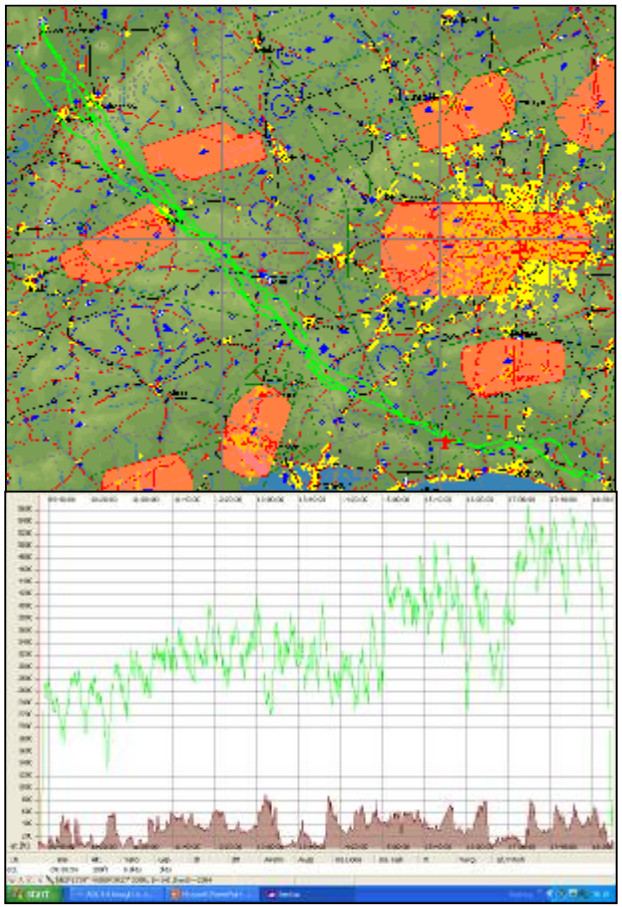
307km POL-BUT-DID



505km POL-CHA-DID (*)



765km POL-GRM-LSS-LED



Start Earlier / Minimise Early Landouts / Increase speed / Fly Further

* Clearance obtained for Southampton ZoneTransit !

Southdown Gliding Club

Southdown Ridge Running

- The Southdown hills offer access to a *unique* soaring capability which enables cross-country flying to extend all year-round
- With care, long flights can be achieved even in modest performance gliders
- Flying conditions, especially wind strength and direction can significantly effect task selection and must be considered before and during flights
- Significant knowledge and experience exists and is available to allow you ***all*** to enjoy this fascinating aspect of cross-country flight