



Imagery Intelligence –IMINT RAF Aerial Imagery of the Atlantic Wall Imagery Analysis seen from a Current Perspective

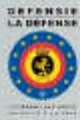


RAVERSIJDE, 23/05/14



Comandant d'Aviation Alain Vecchiato,
Intelligence & Security General Service
Imagery Section SGRS-I/G OPS

.be



Briefing Points



- IMINT: foreword...
- Data made available
- Area treated: Atlantic Wall Raversijde / Oostende airfield
- Photo Interpretation
- Image Displays & Comparisons
- Use of Collateral Information
- Conclusions

.be



Foreword



IMINT is a Collection Asset which constitutes INTELLIGENCE.
Other assets are SIGINT, OSINT, HUMINT

The advantages of a military IMINT capability today as during WW II remain:

- Reliability of the information (Photographic Interpretation - PI)
- Respect of the confidentiality
- Programming / tasking capabilities
- Independence

IMINT requires today as during WW II:

- A platform (air /space)
- A collection technique (wet films, digital sensors)
- An imagery analysis capability

IMINT requires collateral information resulting from other assets
→ Important role of HUMINT

.be



Data Available



- Royal Air Force Aerial Imagery from the RCAHMS in Edinburgh (Royal Commission on the Ancient & Historical Monuments of Scotland)
- Resistance Sketches from the CEGESOMA (Centre for Historical & Documentation on WW2) and from the SHD Vincennes (Service Historique de la Défense)
- PLEIADES Satellite Imagery from the AIRBUS Consortium (ASTRIUM)

.be



Area of Interest



Satellite PLEIADES Imagery 50cm Spatial Resolution .be

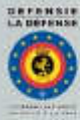


Photo Interpretation (PI)






PI in the 1940s or today consists of the same requirements

- To know the platform type (aircraft, UAV, Satellite)
- To know the image parameters
 - Titling
 - Camera /sensors type
- To know the weather parameters
 - Image Quality
 - Weather conditions (Cloud coverage)
- Pilot's navigation /Satellite track
- Confirmation of the localization

.be

DEFENSE
LA DEFENSE

29 APR 1944

TITLING ...

- Day / Time Group
- Focal of the camera
- Recce Unit

- Used until 2000's with Wet Films
- Called nowadays "Metadata"

.be

DEFENSE
LA DEFENSE







IMAGE QUALITY



23 Jun 1941

WEATHER CONDITIONS

- Very sunny weather increases the contrast of the image
- Impact of the quality Processing Unit
- Still applicable today with Digital Sensor/Data

.be



IMAGE QUALITY



29 APR 1944

WEATHER CONDITIONS

Very Hazy weather causes a blurred image
→ Impact of the quality Processing Unit

→ Still applicable today with Digital Sensor/Data

.be



11 SEP 1944



Note:

- the Airfield Perimeter
- the Atlantic Wall area
- the Beach at low tide

• Taken by a SPITFIRE of the 4SQN.


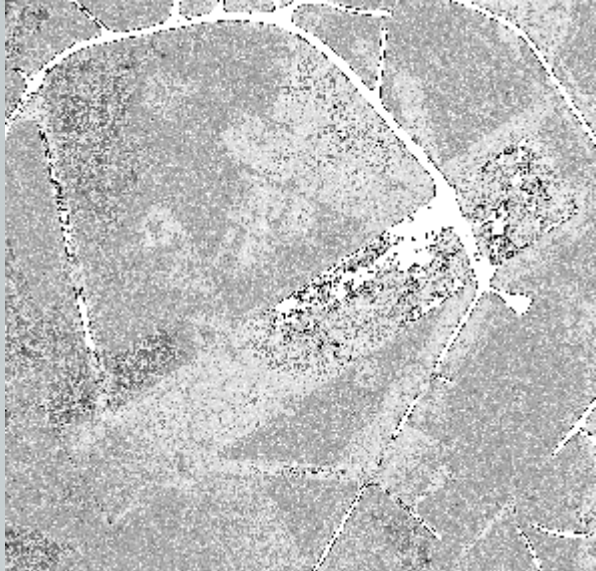

.be





01 APR 1942 Extracts of 1942 & 1944 imagery 20 APR 1944
 Focus on the Airfield → Bomb craters
 Importance of humidity
 "Cleaner" than in 1942

.be

20 APR 1944

Extract of 1944 imagery
 Dimensions: 610m X 100m
 Confirmation of the Resistance Info
 Bomb craters

.be



01 APR 1942

Extracts of 1942 & 1944 imagery
Probably works in progress in 1942.
Airfield looks "Cleaner" than in 1942

20 APR 1944

.be



11 SEP 1944



- General view of the Western area of The Atlantic Wall Domain
- Prince Charles memorial
- Bunker Area

.be



11 SEP 1944

- Reveted Pads for Arty
- Bunkers

.be



11 SEP 1944

Note obstacles on the beach

.be

Collateral information: sketch made by the Resistance

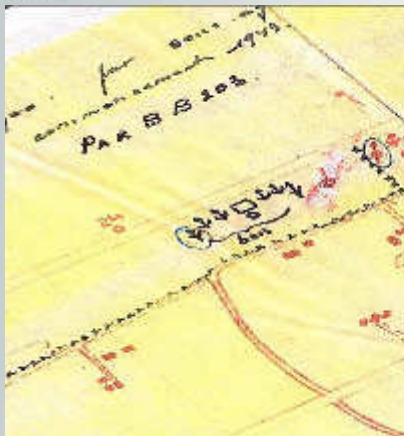


21 MAY 1944

[Comparison with SEP 1944 imagery](#)

Principal characteristic: tremendous respect of the proportions

.be



21 MAY 1944

11 SEP 1944

Note the high graphical coherence & the continuity of the information issued by the Resistance

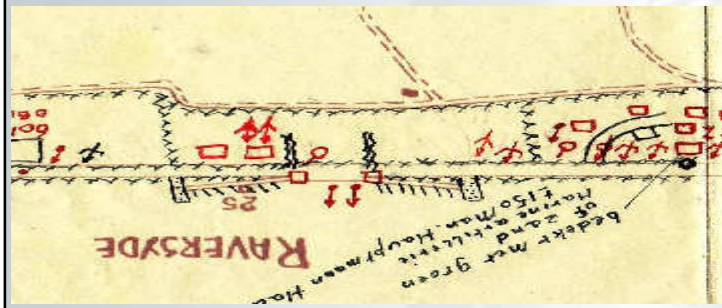
.be



11 SEP 1944

Comparison: SEP 1944 imagery
With Sketch issued by the Resistance

- Note the accuracy of the sketch:
- Ramps to the beach
 - Respect of the proportions
 - Curve of the road
 - Distance with the Ramp



21 May 1944

be



21 MAY 1944

Note the high level of detail expressed by the Resistance



11 SEP 1944





Conclusions



- Photographic Interpretation during WW II and today follows the same basic rules
- Weather circumstances remain of a paramount importance
- Useful & accurate collateral information is indispensable
- Excellent information produced by the Resistance
- The human Photographic Interpretation cannot be replaced by the most sophisticated computer