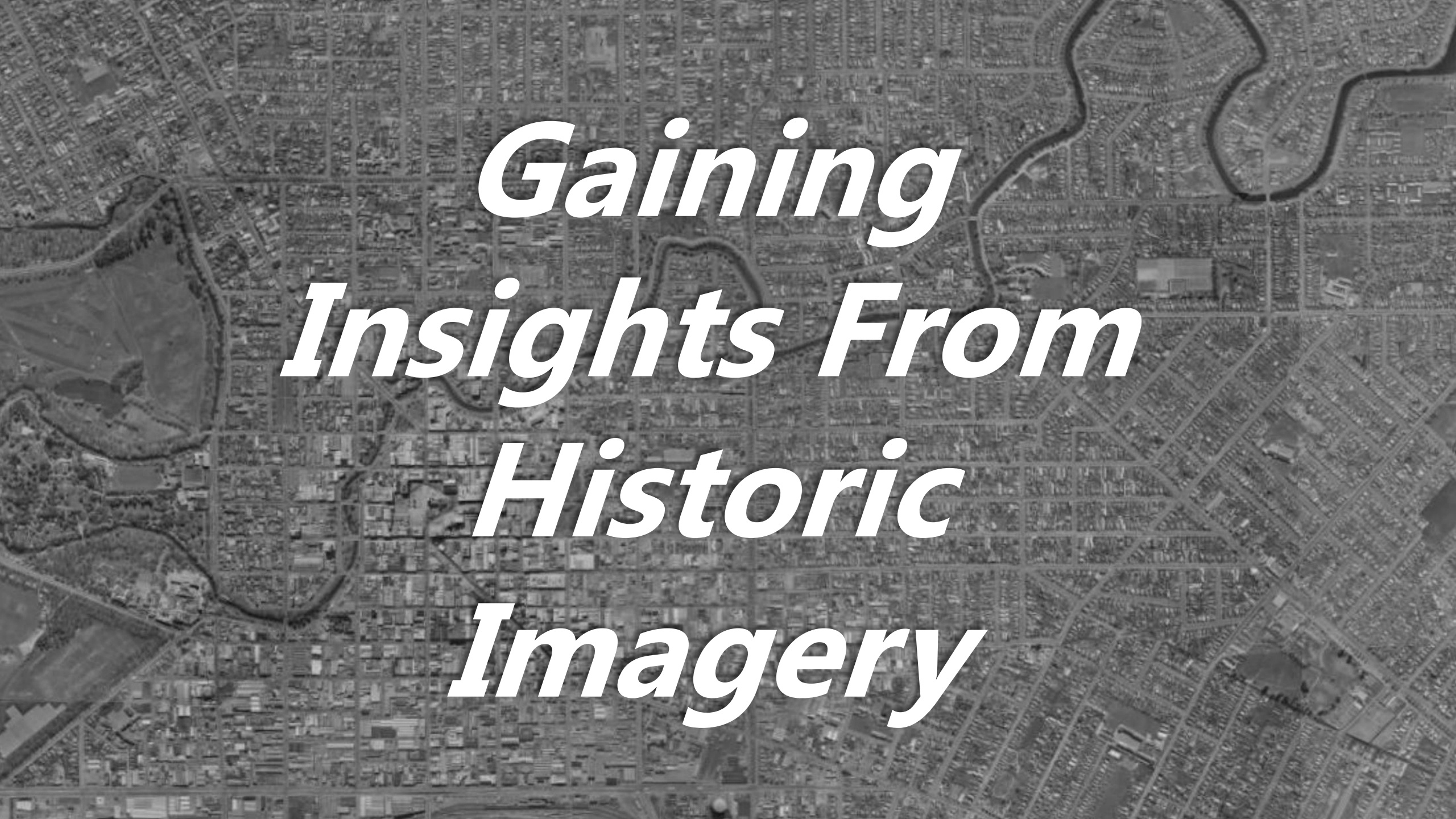
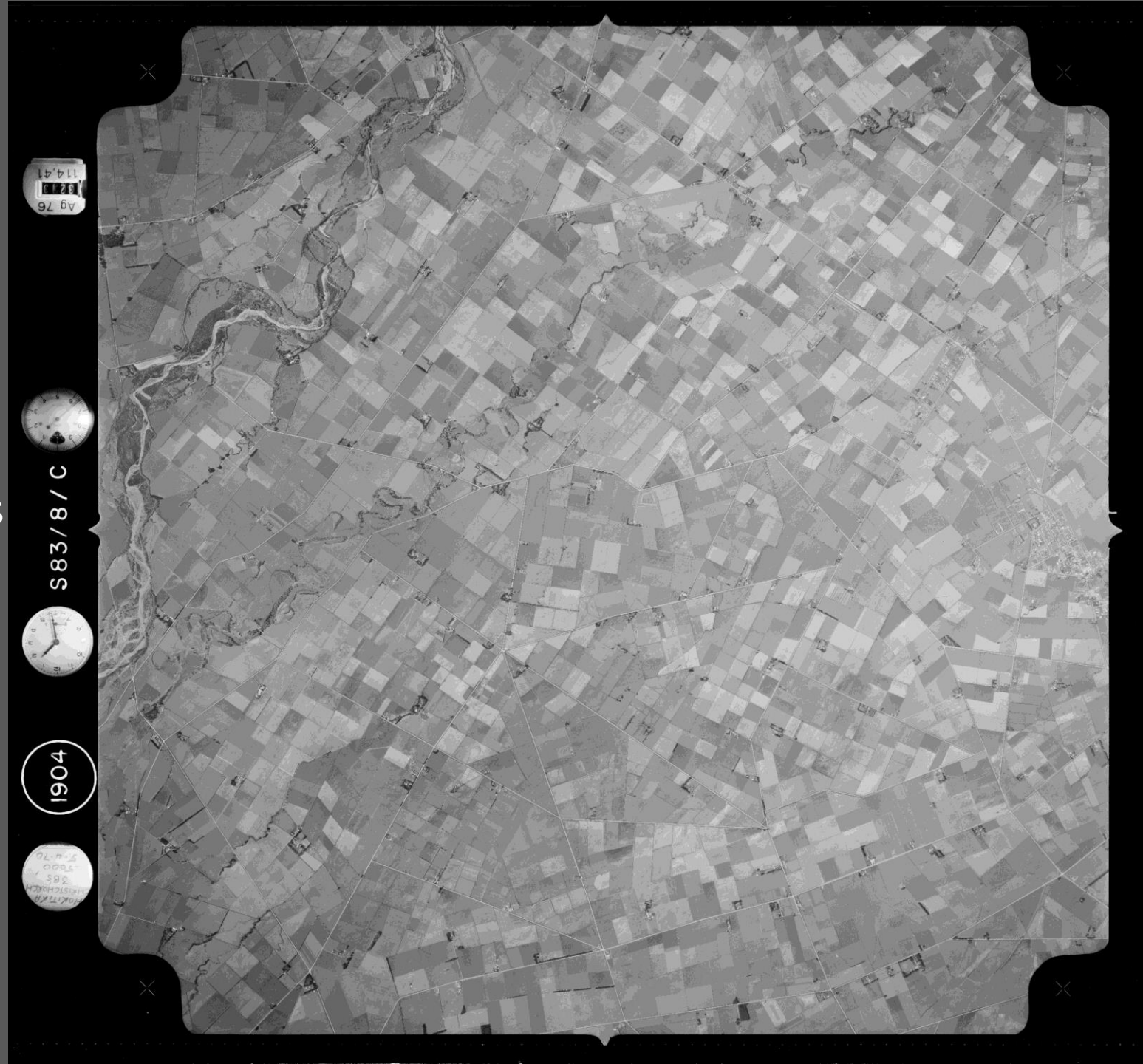

Gaining
Insights From
Historic
Imagery

Background

The Crown archive contains over 500,000 photos on film from nearly 7,000 aerial surveys captured from as early as the 1930's

But there's a problem:

- Paper & film copies
- Hard to access and share
- Film suffers from decay



Background

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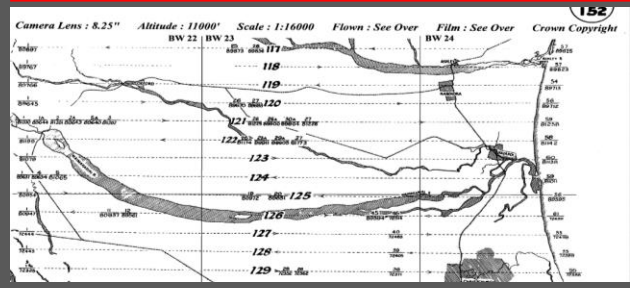
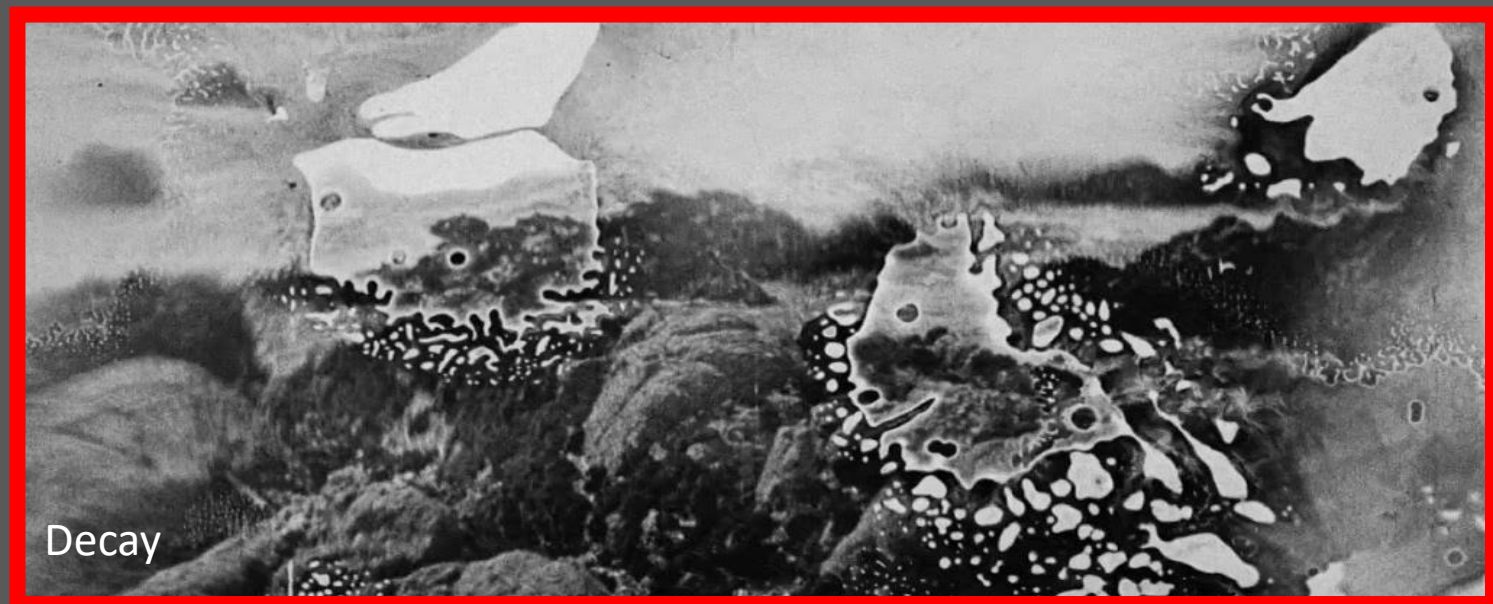
Film Copies



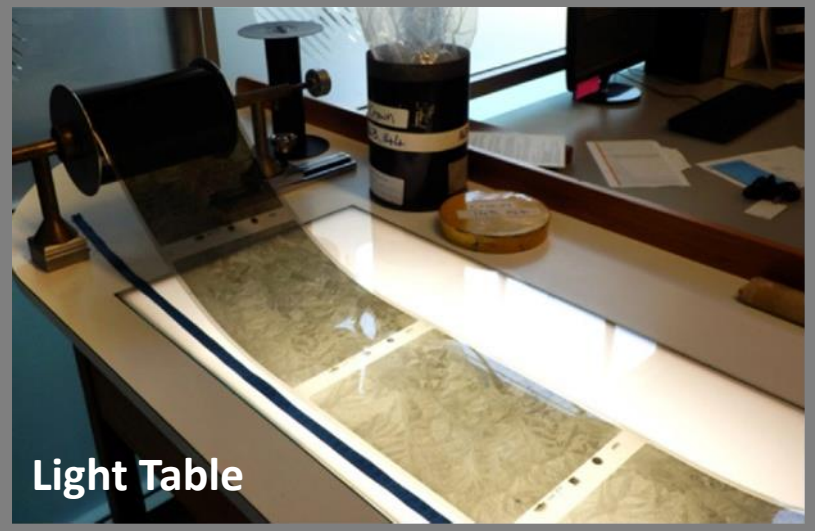

Decay

The Solution?

It was decided in 2014 to undertake a project to scan/digitise the archive.

The project began with three partner regions (Canterbury, Waikato and Bay of Plenty). Council partners continue to join the project progressively from across NZ as different areas became aware of the project and have funding to be able to join the initiative.

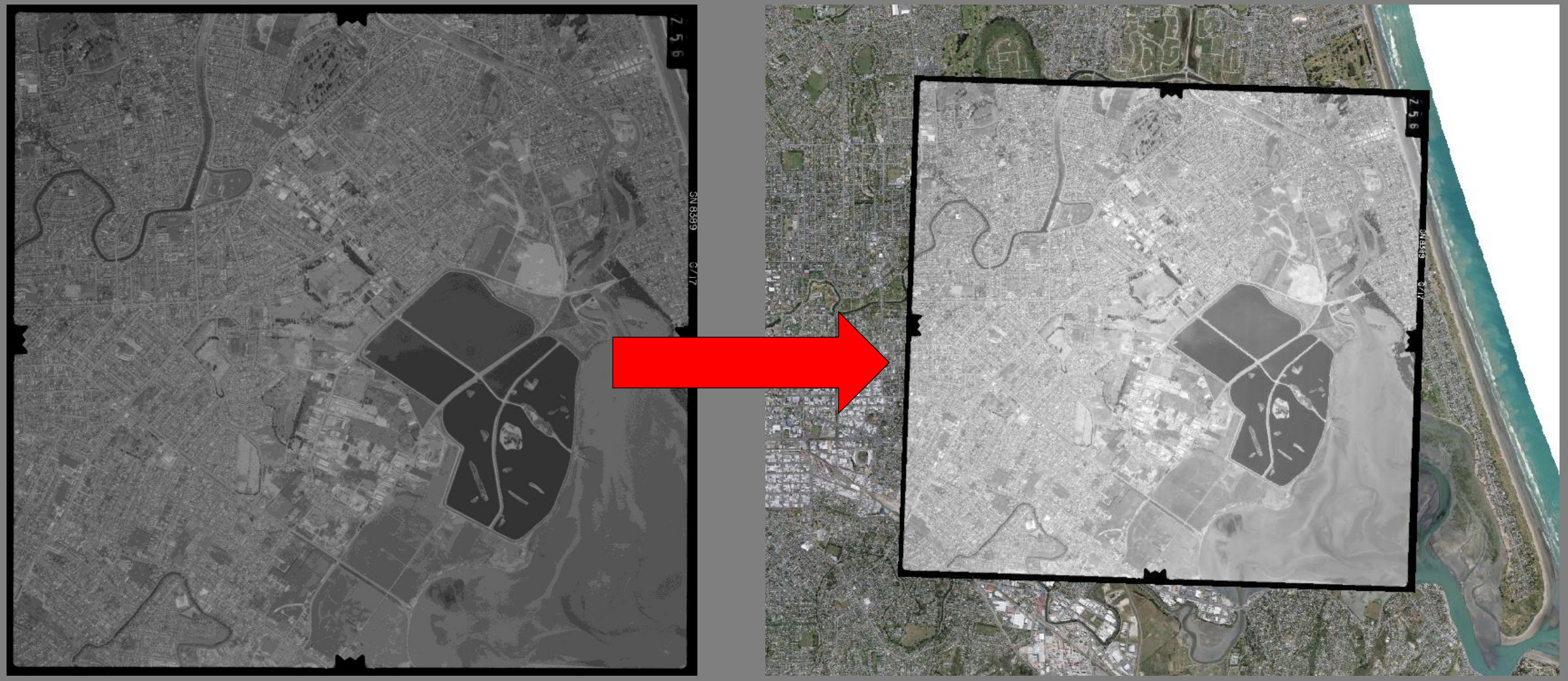
Scanners


Light Table

Retrolens.nz

RETROLENS
Historical Image Resource
Enter your location here
Not sure how to use Retrolens? | Explore Map
This site is made available through the work of the Local Government Geospatial Alliance (LGGA) and Abley. The images on the site have been scanned as a result of a joint project with Land Information New Zealand. Read more…

Taking it Further



Roadmap

2014 – Christchurch
2015 – Selwyn
2016 – Kaikoura and Waimakariri
2017 – Timaru
2018 – Hurunui and Kaikoura
2019 – Ashburton
2020 – Waimate, Mackenzie and Waitaki
2021 – 2025 In fill missed areas

Raw Imagery

Batch cropping and rotating

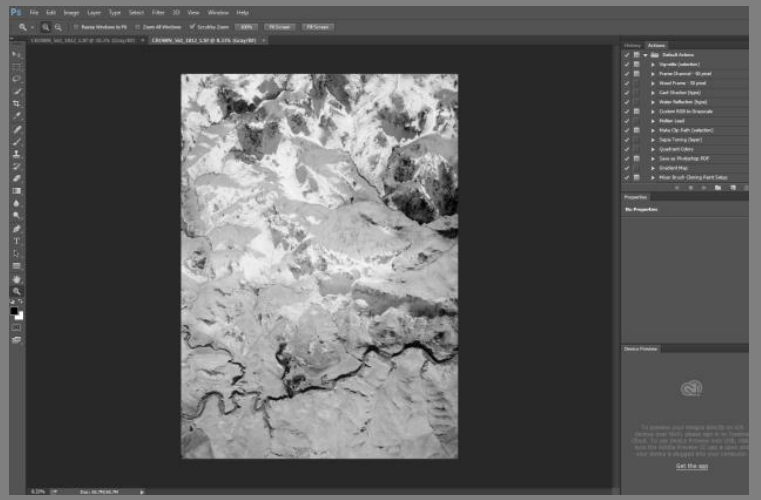
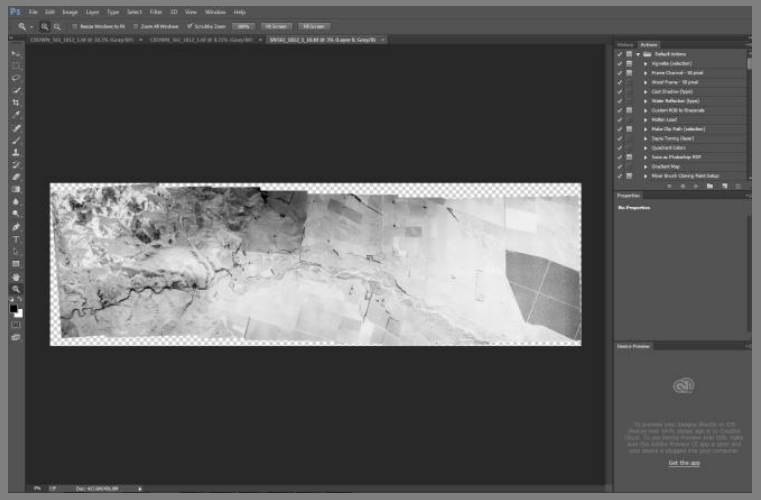
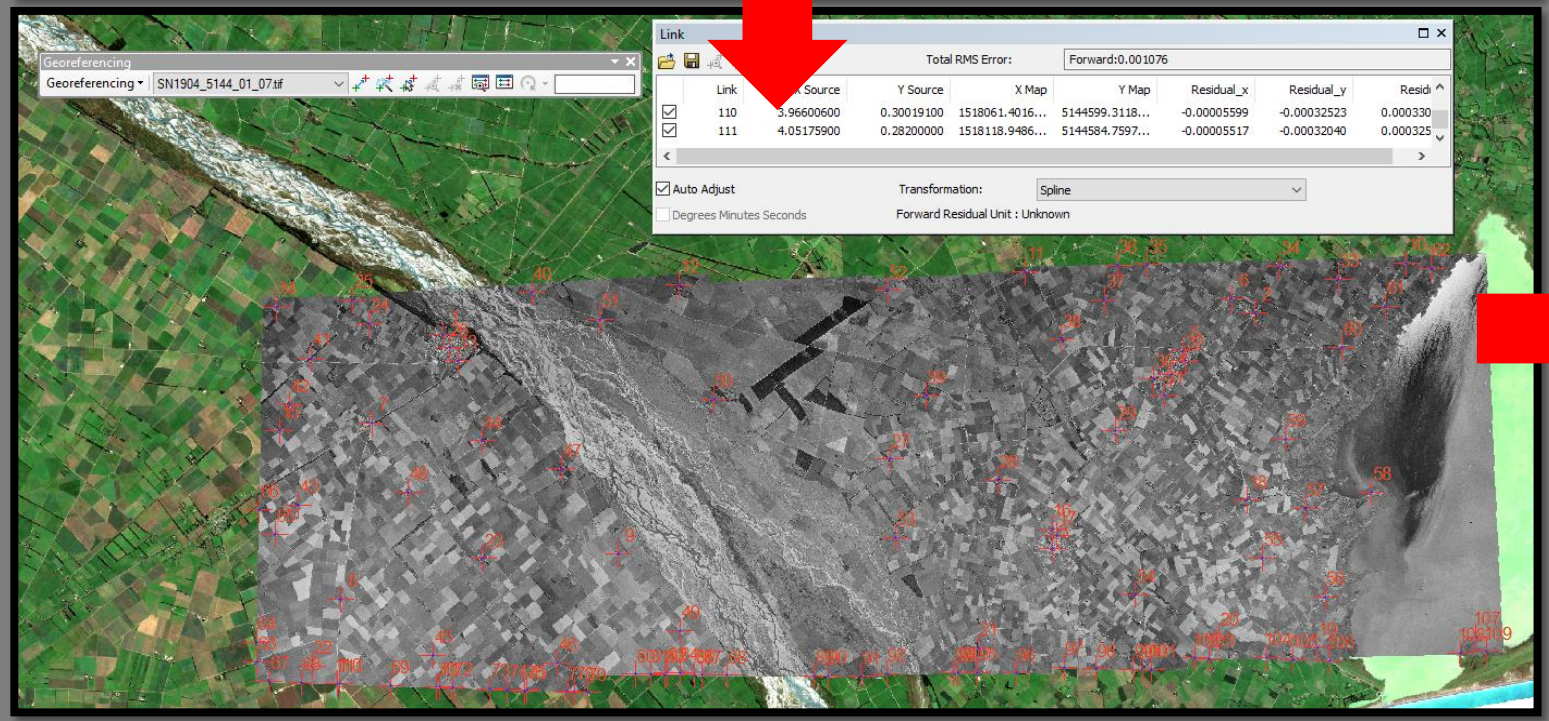


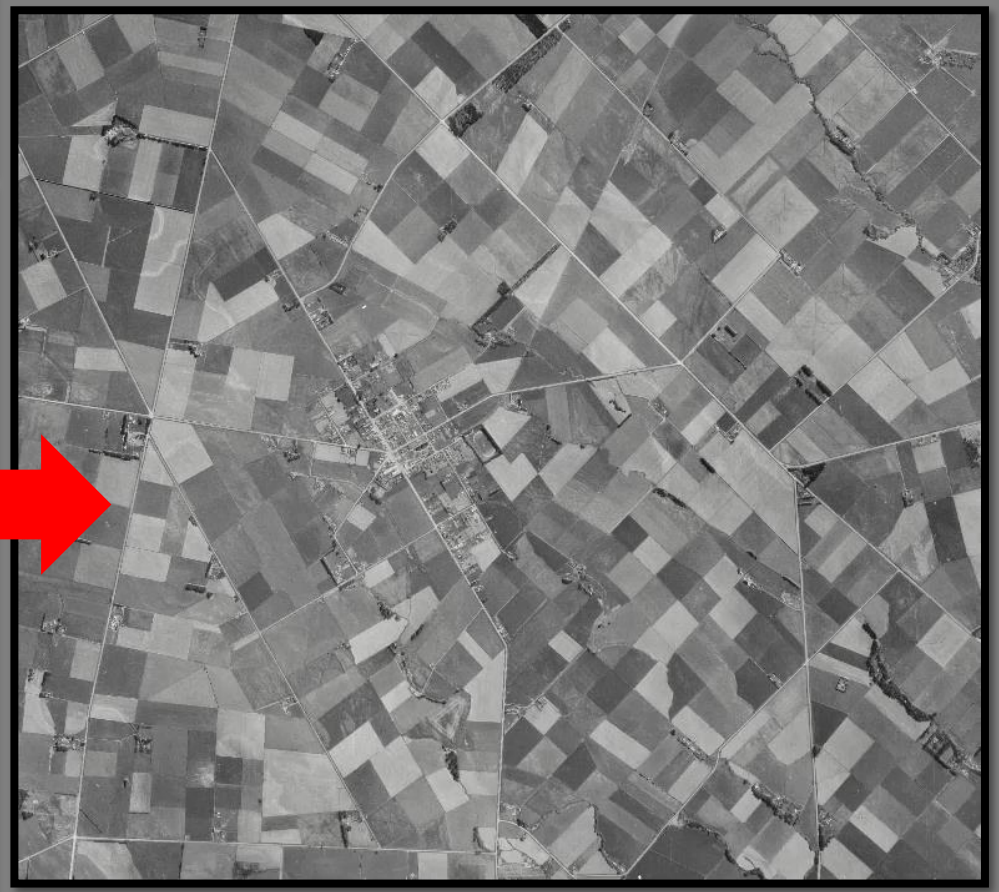
Photo merging



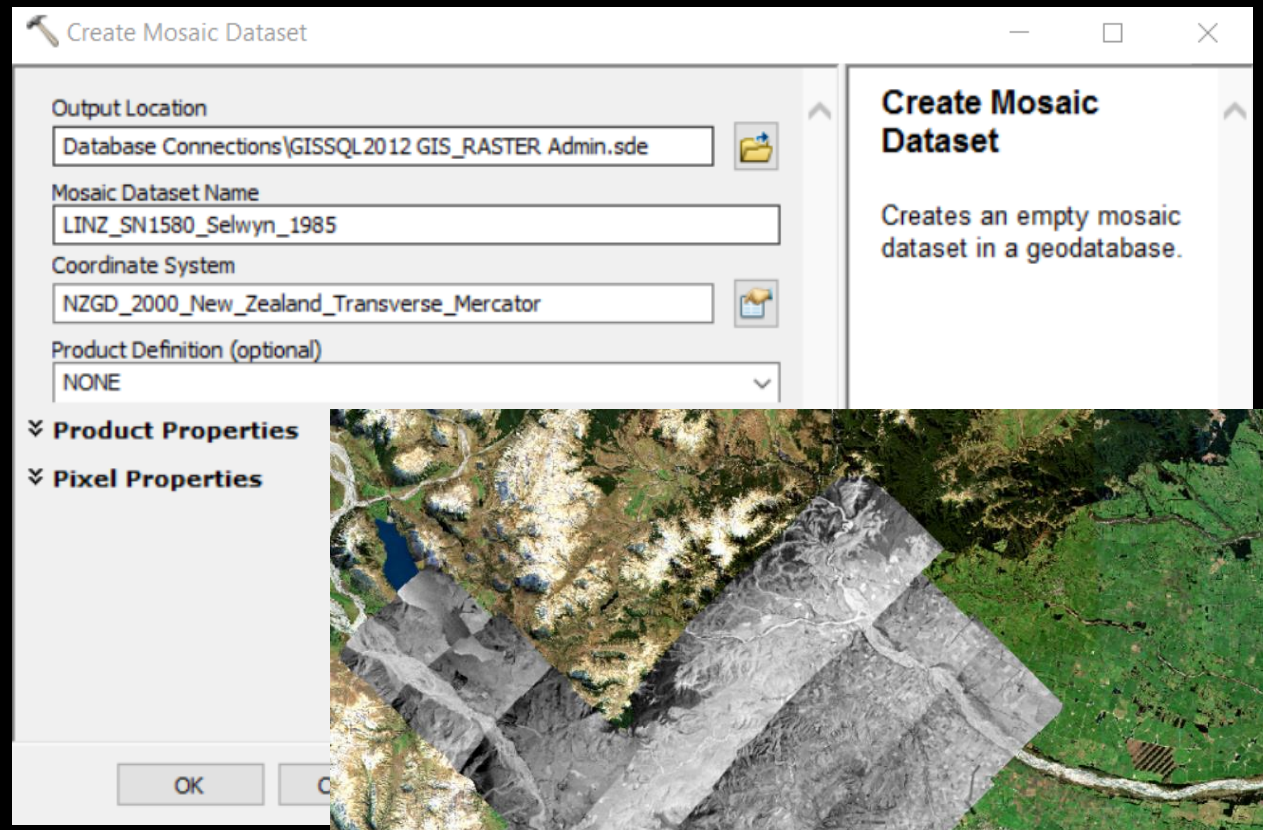
Photoshop

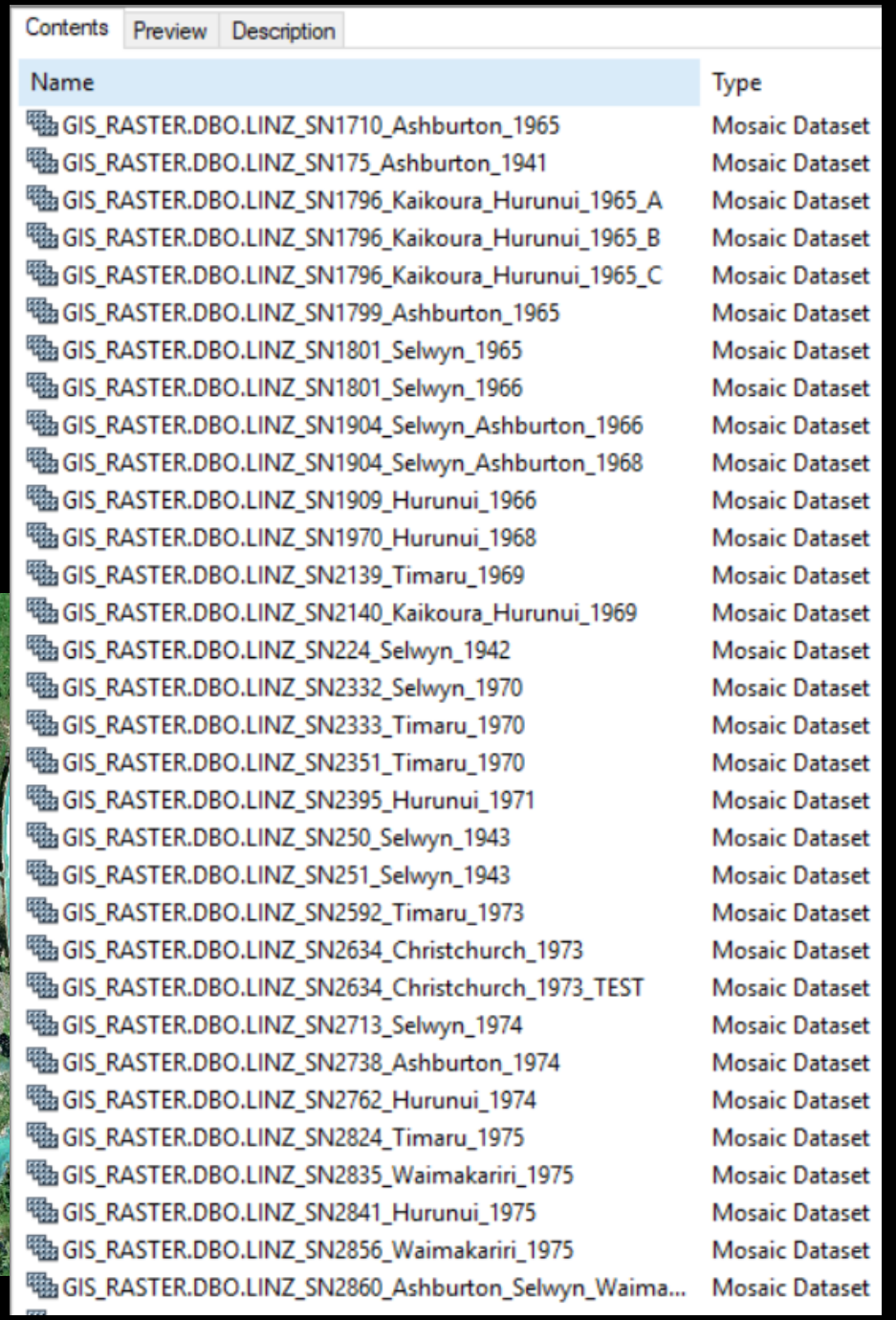
Georeferencing





Mosaicking


Create Mosaic Dataset
Output Location
Database Connections\GISSQL2012 GIS_RASTER Admin.sde
Mosaic Dataset Name
LINZ_SN1580_Selwyn_1985
Coordinate System
NZGD_2000_New_Zealand_Transverse_Mercator
Product Definition (optional)
NONE
Product Properties
Pixel Properties
OK
Create Mosaic Dataset
Creates an empty mosaic dataset in a geodatabase.


Contents
Preview
Description
Name
Type
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GIS_RASTER.DBO.LINZ_SN175_Ashburton_1941 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1796_Kaikoura_Hurunui_1965_A Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1796_Kaikoura_Hurunui_1965_B Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1796_Kaikoura_Hurunui_1965_C Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1799_Ashburton_1965 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1801_Selwyn_1965 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1801_Selwyn_1966 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1904_Selwyn_Ashburton_1966 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1904_Selwyn_Ashburton_1968 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN1909_Hurunui_1966 Mosaic Dataset
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GIS_RASTER.DBO.LINZ_SN2333_Timaru_1970 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN2351_Timaru_1970 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN2395_Hurunui_1971 Mosaic Dataset
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GIS_RASTER.DBO.LINZ_SN2592_Timaru_1973 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN2634_Christchurch_1973 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN2634_Christchurch_1973_TEST Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN2713_Selwyn_1974 Mosaic Dataset
GIS_RASTER.DBO.LINZ_SN2738_Ashburton_1974 Mosaic Dataset
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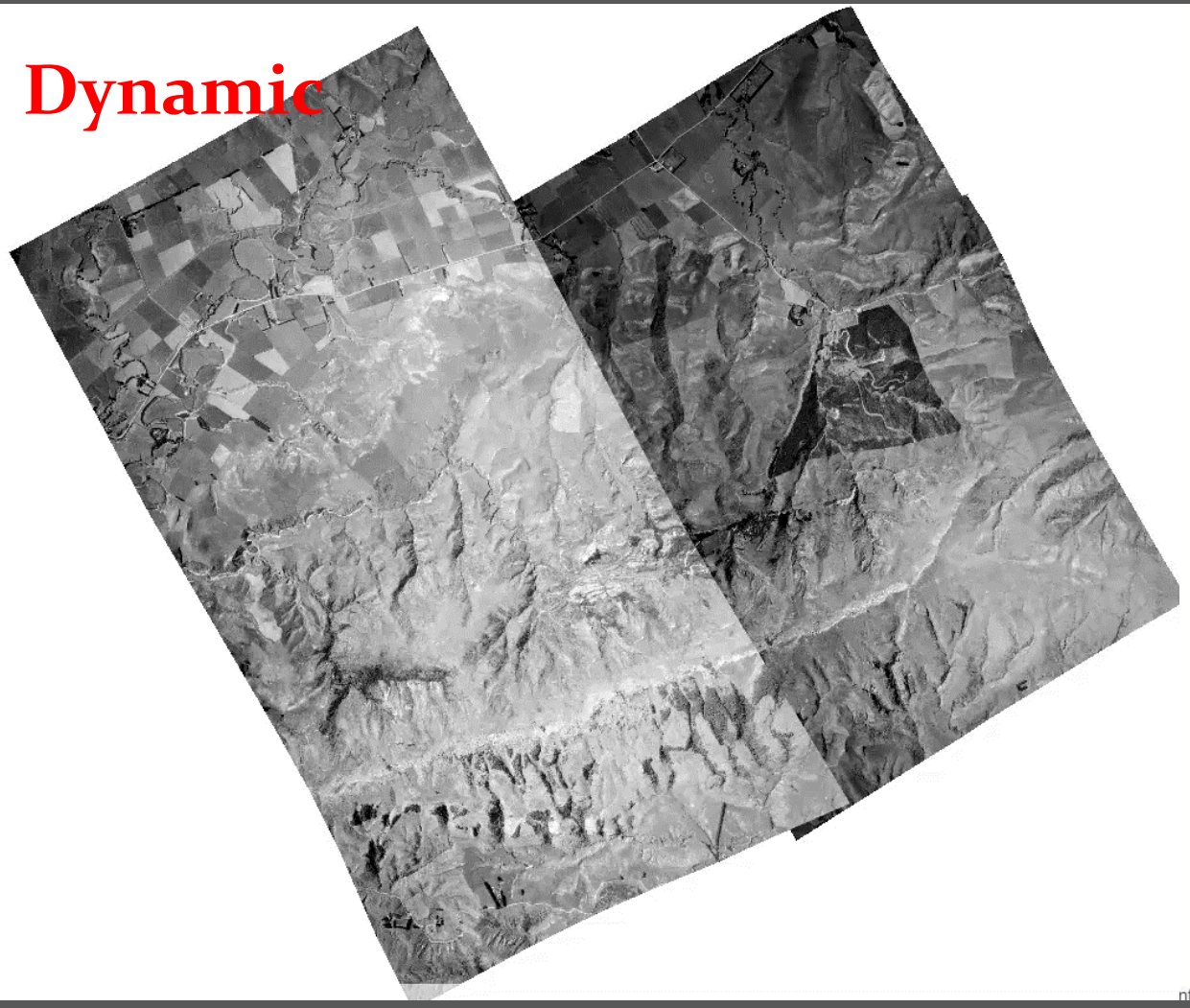
Caching

Dynamic



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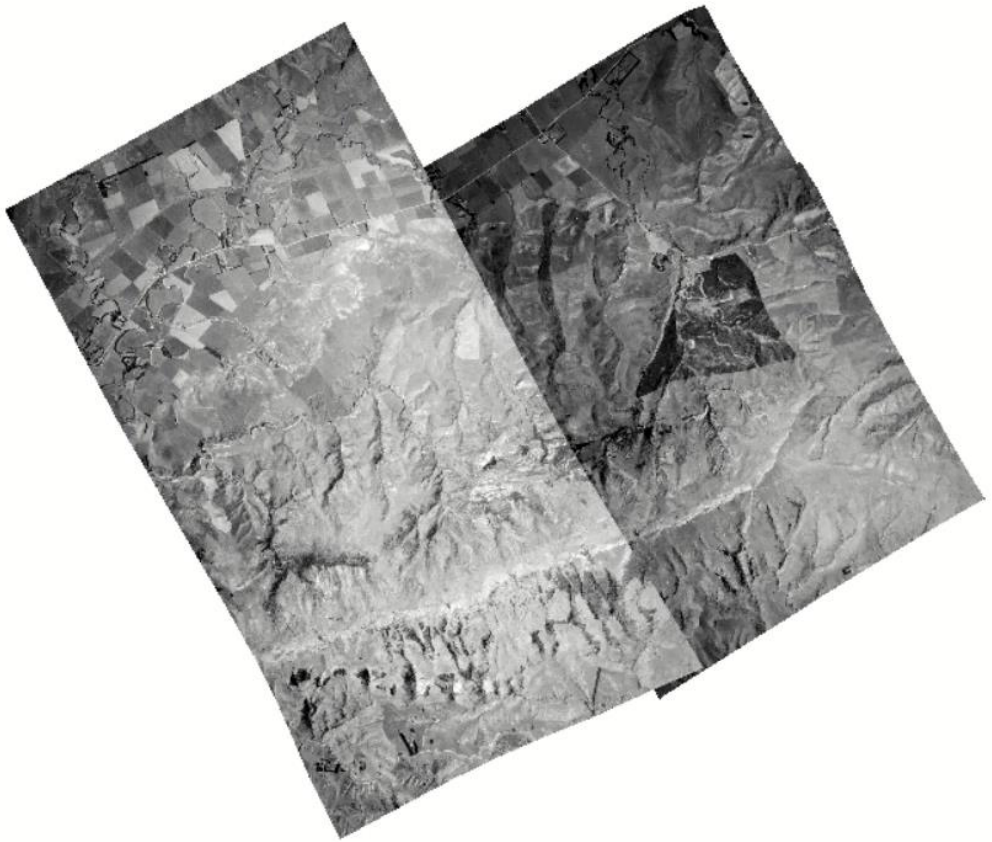
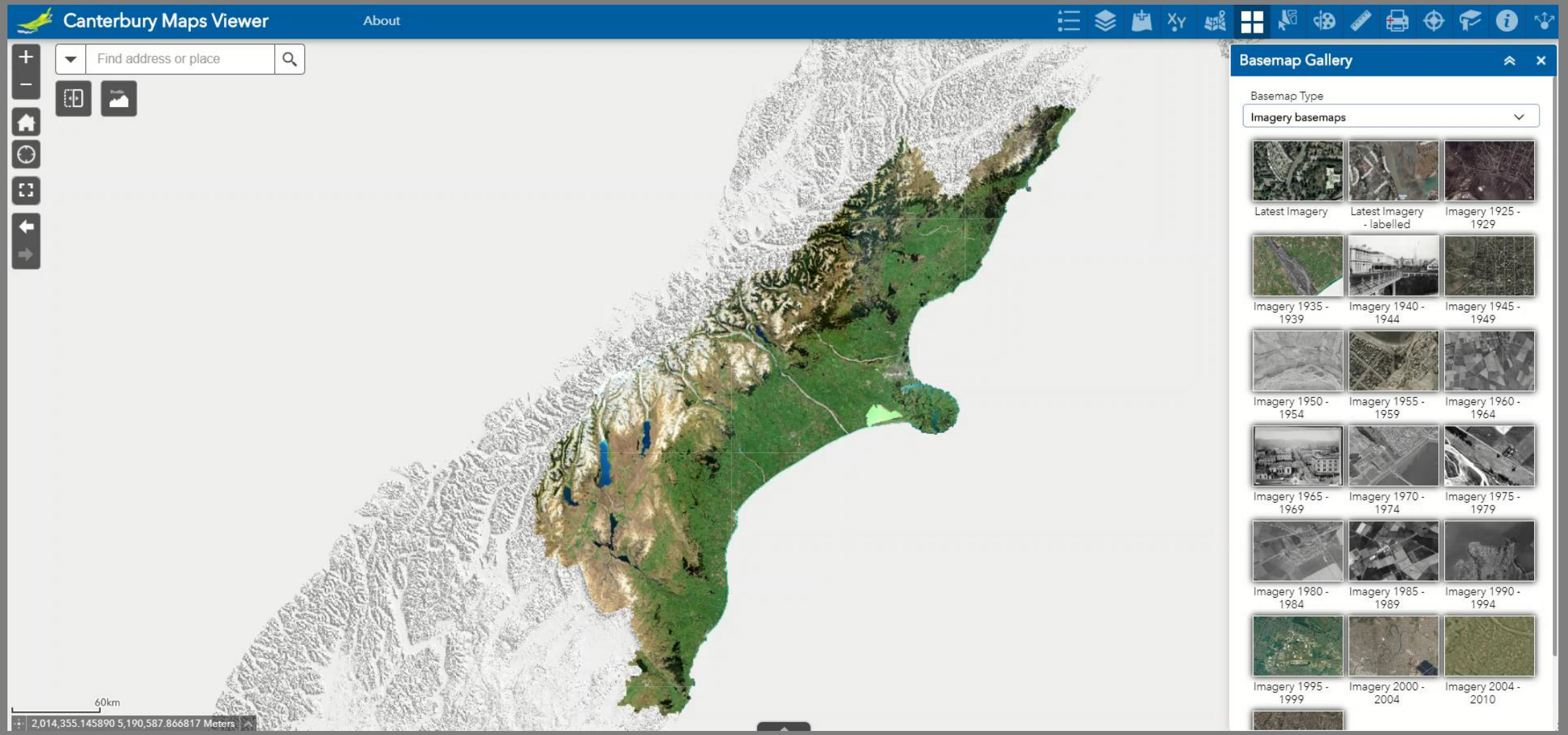


nformation New Zealand

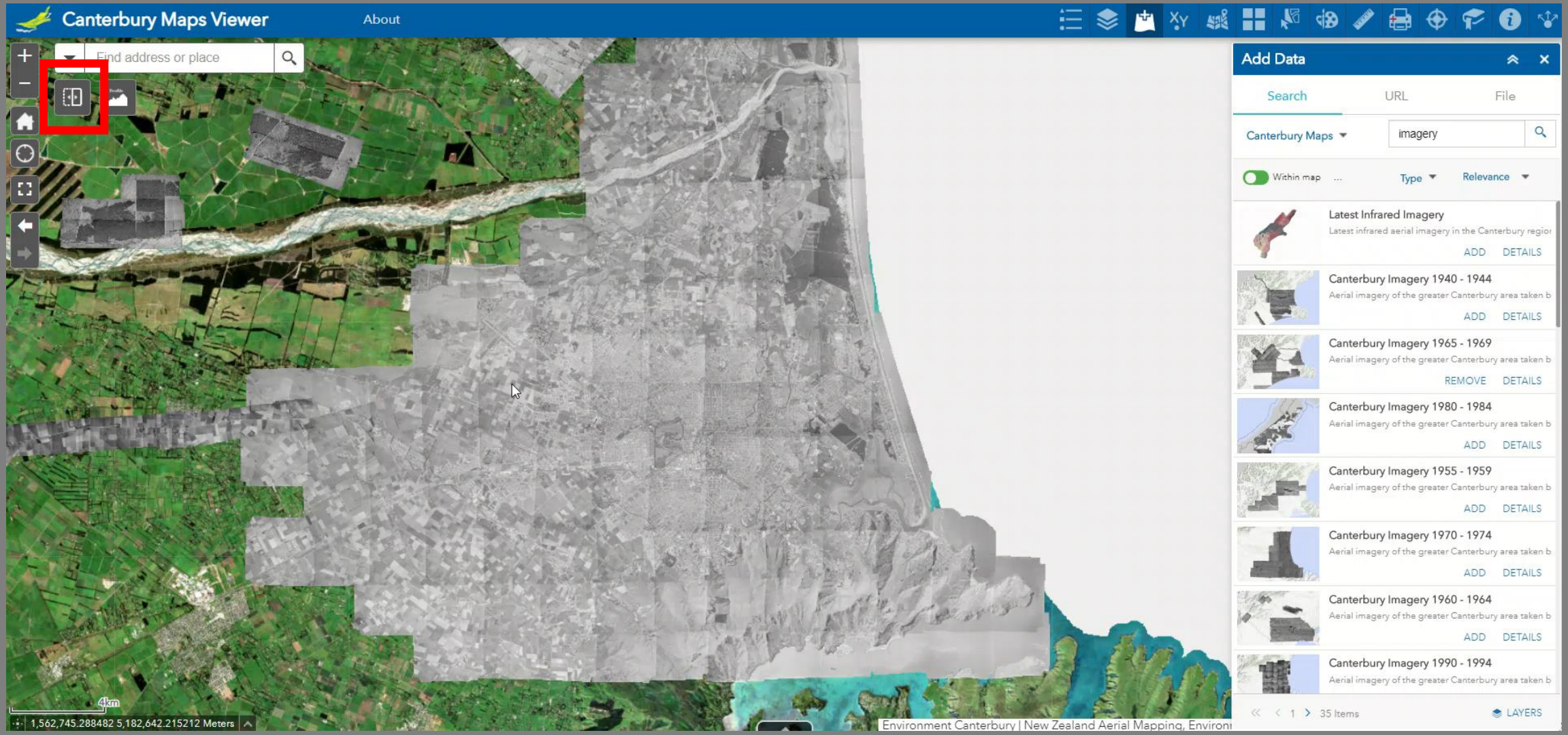
Web Applications

Basemap Gallery



Web Applications

Swipe Tool



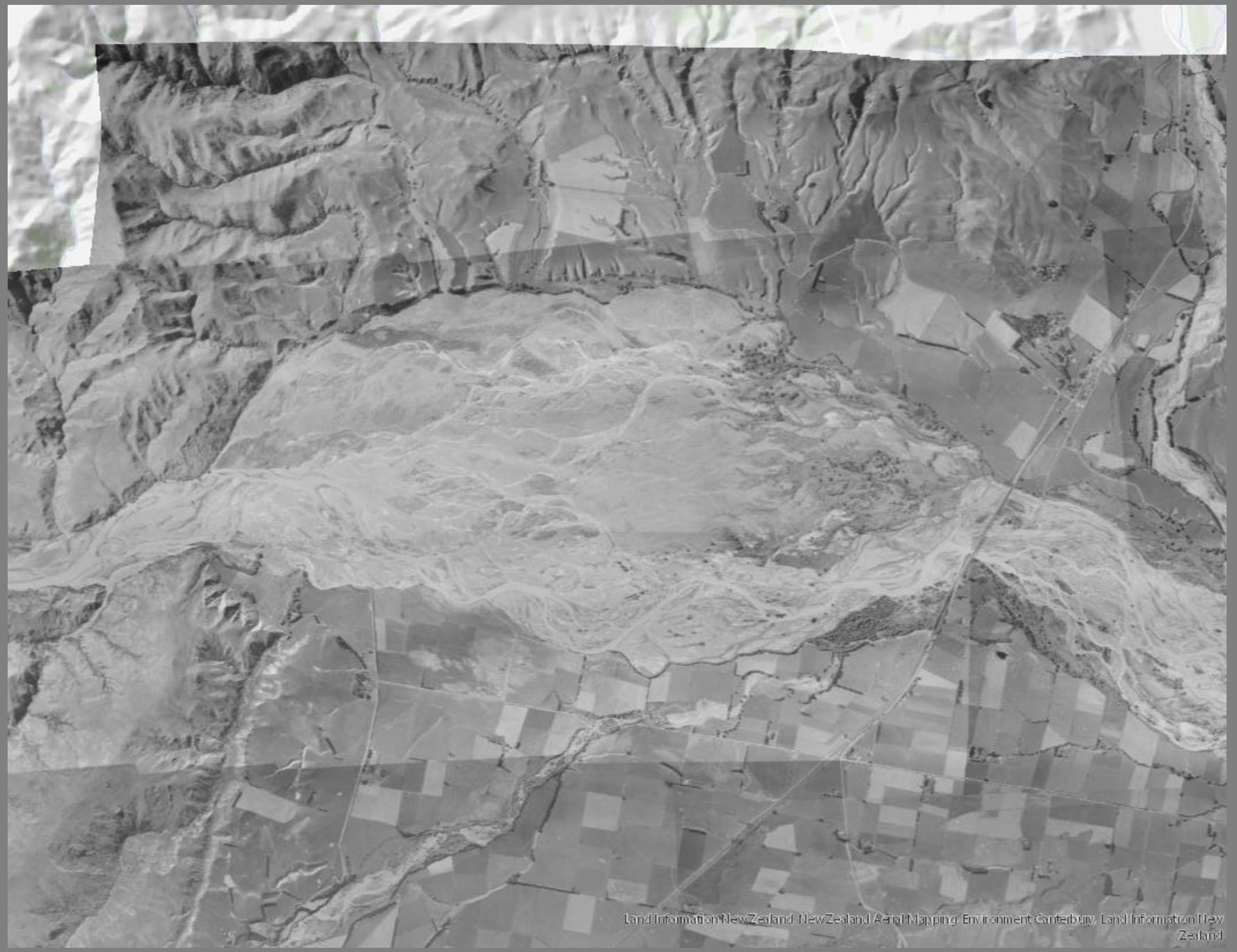
How Environment Canterbury Uses it

Environment Canterbury
Regional Council
Kaunihera Taiao ki Waitaha

Hazardous Activities and Industries List (HAIL)

River Delineation

1959



River Delineation

1983

River Delineation

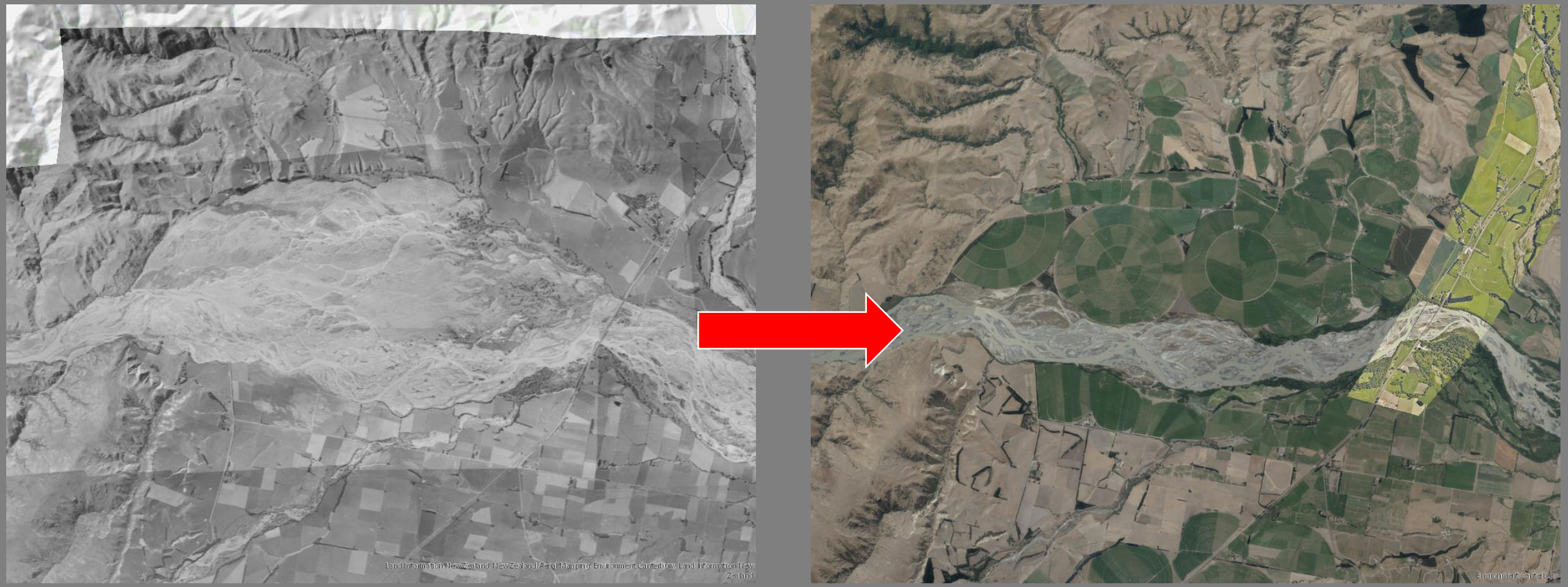
1995

River Delineation

2004

River Delineation

2017


Land Information New Zealand NewZealand Aerial Mapping Environment Canterbury Land Information New Zealand

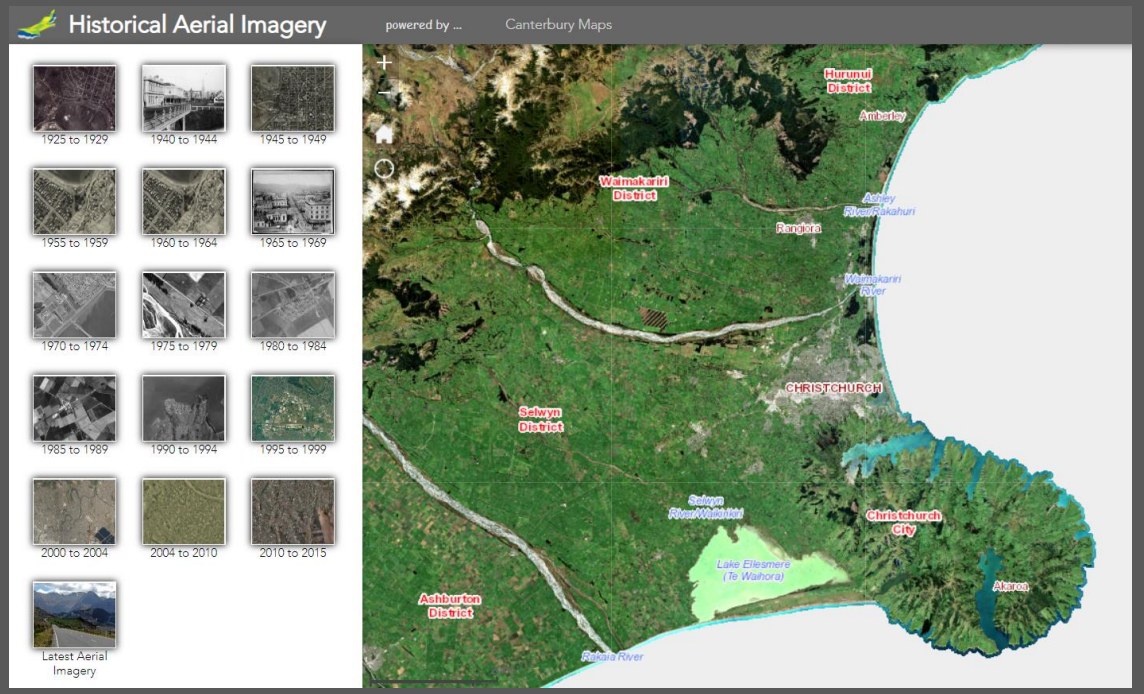
How the Public Uses it

canterbury maps

canterburymaps.govt.nz

Canterbury Maps

- Access to cached services via our public servers
- Map Viewer
- Customised maps specifically for historic imagery



Services:

- Imagery/Canterbury_Imagery_1925_1929 (MapServer)
- Imagery/Canterbury_Imagery_1935_1939 (MapServer)
- Imagery/Canterbury_Imagery_1940_1944 (MapServer)
- Imagery/Canterbury_Imagery_1945_1949 (MapServer)
- Imagery/Canterbury_Imagery_1950_1954 (MapServer)
- Imagery/Canterbury_Imagery_1955_1959 (MapServer)
- Imagery/Canterbury_Imagery_1960_1964 (MapServer)
- Imagery/Canterbury_Imagery_1965_1969 (MapServer)
- Imagery/Canterbury_Imagery_1970_1974 (MapServer)
- Imagery/Canterbury_Imagery_1975_1979 (MapServer)
- Imagery/Canterbury_Imagery_1980_1984 (MapServer)
- Imagery/Canterbury_Imagery_1985_1989 (MapServer)
- Imagery/Canterbury_Imagery_1990_1994 (MapServer)
- Imagery/Canterbury_Imagery_1995_1999 (MapServer)
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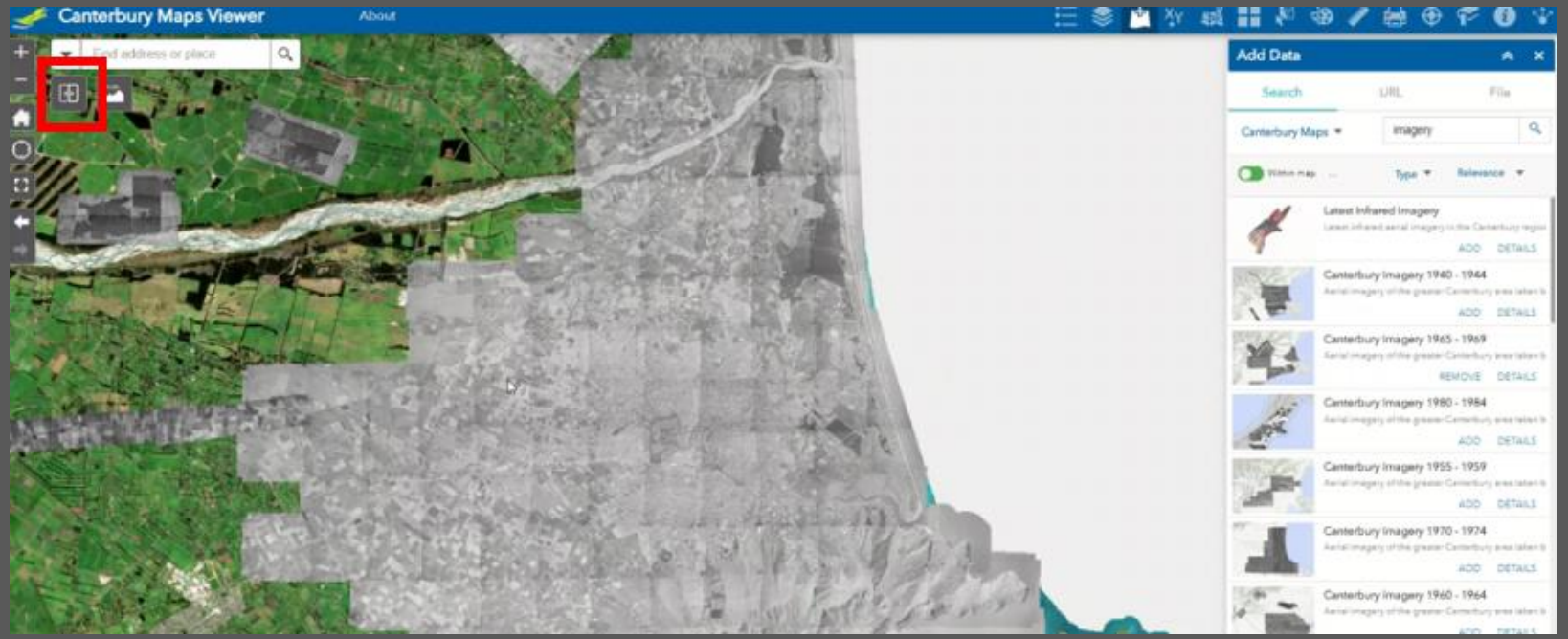
- Imagery/Canterbury_Imagery_2010_2015 (MapServer)

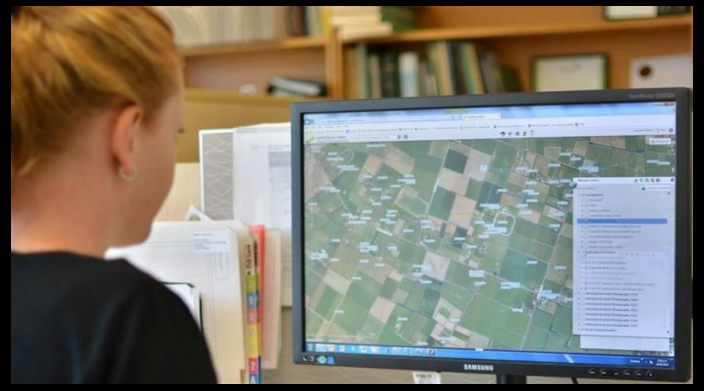


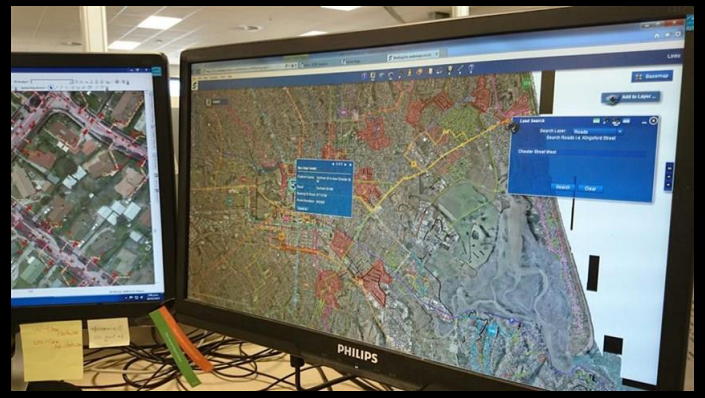
Canterbury Maps – User Stories

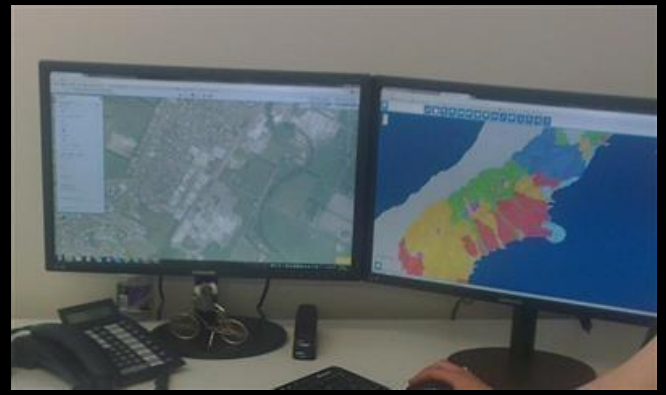
Aurecon – “We also make use of the **historical aerial photography** web service to show site usage through time, which is particularly useful for our land development team and geotechnical engineers, as well as our clients when assessing the suitability of a site for future development.”

Eliot Sinclair – “**Historical aerial photographs** shown on the GIS are also used to determine site history which is useful for our civil and geotechnical engineers, and for the environmental engineers when assessing any risk of contamination.”

Davis Ogilvie – “The Structural team uses the Canterbury Maps website to look at the historical use of a site, when it was it was first developed and when alterations were made to the property.”



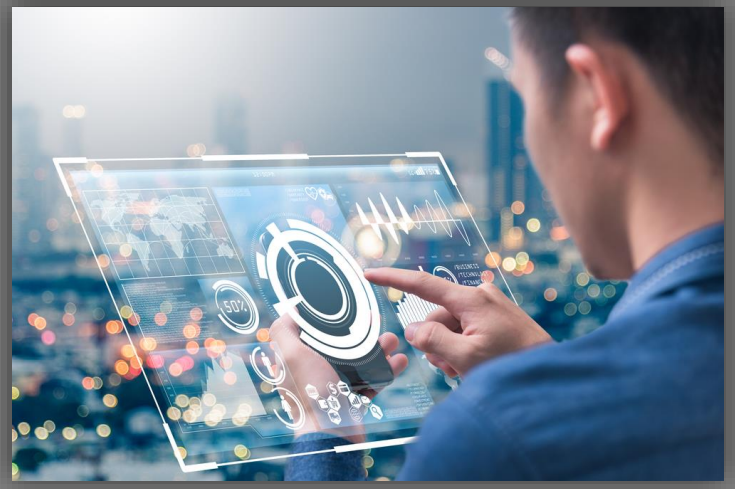




canterbury maps

The Future

- Full coverage of Canterbury
- Other regions build upon this so we can get national coverage
- 3D Imagery
- Historic building footprints?
- Machine learning?



Any Questions?