

SURVINZ

Surveillance Infrastructure New Zealand

Specialist Science Solutions

Manaaki Tangata Taiao Hoki
protecting people and their environment through science

ESR

- **Supply range of scientific services to government organisations and commercial companies in New Zealand and the Asia-Pacific region**
- **Carry out research into**
 - _ **envirogenomics/proteomics/chemical genetics**
 - _ **microbial and chemical forensics**
 - _ **risk and risk management**

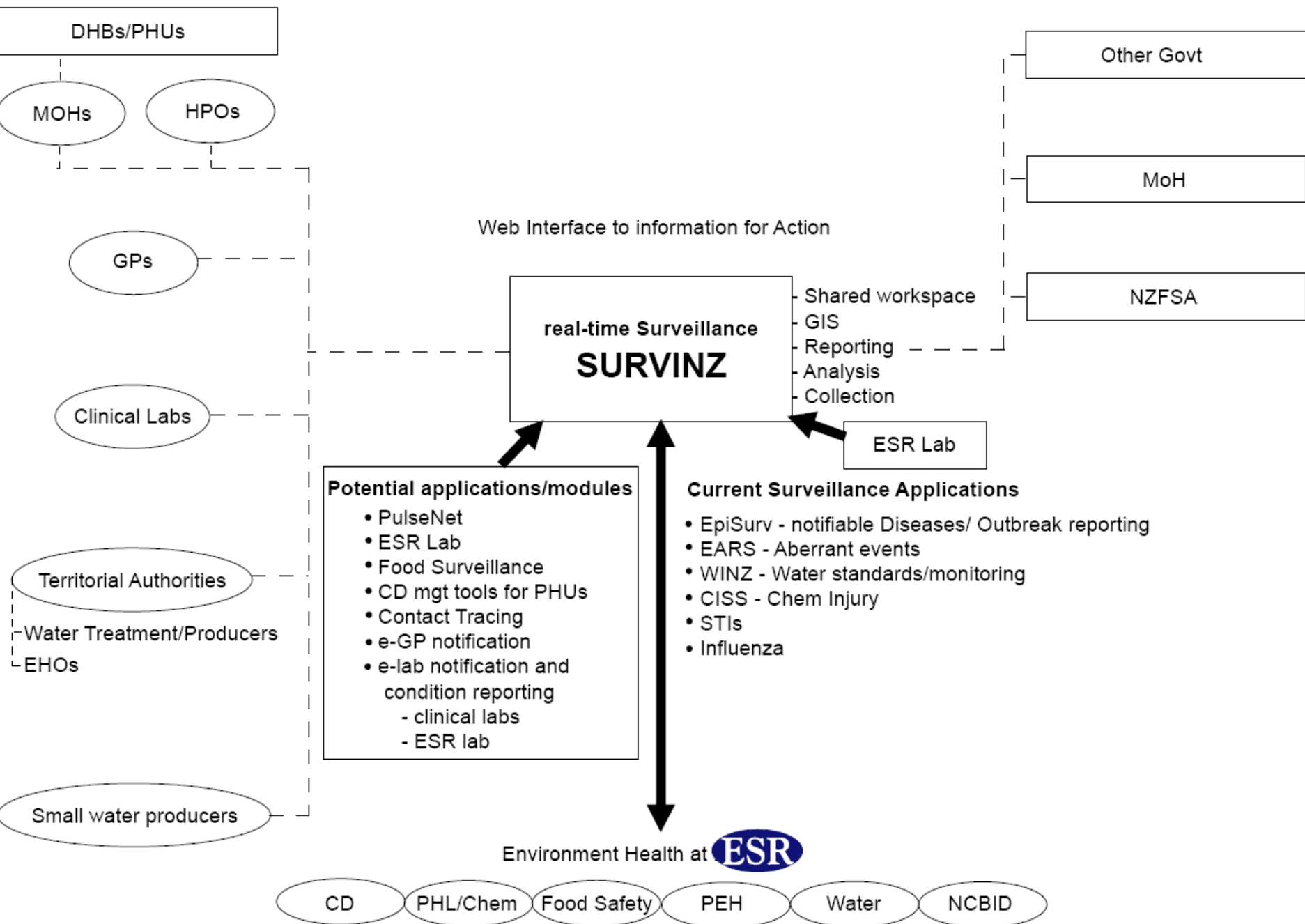
Programmes within ESR

- **Environmental Health**
 - communicable disease
 - food safety
 - population and environmental health
 - systems thinking, action research and social science
 - water management

- **Forensic Science**

New system requirements

- Real time surveillance
- Need to integrate notifiable disease records and laboratory records
- Need to integrate notifiable disease and environmental data



Scope of Project

- All ESR systems that generate data used in surveillance will ultimately reside on the SurvINZ platform
 - EpiSurv
 - ESR Lab
 - CISS
 - WINZ 6 system
 - STI surveillance
 - Influenza surveillance
 - MRSA
 - TB DNA

Scope

- **Implementation of the Surveillance Architecture Infrastructure to support**
 - Existing Surveillance applications (ESRLab and others)
 - Ad-hoc and one-off data gathering and analysis projects that occur over time, within a common framework, utilising common tools and standards
 - Redeveloped WINZ application
 - Redeveloped EpiSurv application

Scope (continued)

- **Development of Common Surveillance standards and conventions for**
 - Data storage and management
 - Data Warehouses
 - Reporting
 - Project Collaboration Services
- **Integration Services for integration of externally provided and internally generated data across systems**
- **Redevelopment of EpiSurv**

EpiSurv 7

- A secure, web based application, for data entry and reporting based on the new Surveillance Application Architecture
- Increased validation, drop down lists etc to improve the quality of data at the point of entry
- Enhanced Geographical Information System (GIS) capability
- Enhanced reporting capability, both at a National and local level
- Ability to combine data across a Public Health Service
- Flexibility to include new diseases without application development change
- Improved integration and capability for Outbreak reporting
- Real time or near real time reporting at a National level
- Improved Security capability, audit trails, user identification
- Ease of deployment and management in the external user environment

SURVINZ EpiSurv7 v0.6.55

User

Office

PHS

WorkSpace Case Outbreak Reports Maps

Case List New Case Lab Results List Transferred Case List

100 found (max results)

Search Criteria

Surname

Given Name(s)

PHI Number

Disease

Date Reported

Onset Date

Office Cases Only

All Cases for PHS

Max Results:

Case Open

EpiSurv No.

Epi No.	Name	NHI	Disease	Date Rep.	Status	Inv. Status	Create Date
07-100038-PN	****, ****		Legionellosis	22/03/2007	Not a case	Processing notification	22/03/2007
07-100037-PN	****, ****		Legionellosis	22/03/2007	Under investigation	Processing notification	22/03/2007
07-100036-PN	****, ****		Meningococcal disease	22/03/2007	Not a case	Processing notification	22/03/2007
07-100035-PN	****, ****		Meningococcal disease	22/03/2007	Under investigation	Processing notification	22/03/2007
07-100034-WN	****, ****		Anthrax	22/03/2007	Under investigation	Processing notification	22/03/2007
07-100033-PN	****, ****		Meningococcal disease	22/03/2007	Under investigation	Processing notification	22/03/2007
07-100032-DN	****, ****	EAT2225	Dengue fever	22/03/2007	Under investigation	Processing notification	22/03/2007
07-100030-PN	****, ****		Rheumatic fever - recurrent attack	22/03/2007	Probable	Processing notification	22/03/2007
07-100029-PN	****, ****	TTT1234	Tuberculosis - treatment of latent infection	22/03/2007	Confirmed	Processing notification	22/03/2007
07-100028-WN	****, ****	Tyu6789	Meningococcal disease	22/03/2007	Under investigation	Processing notification	22/03/2007
07-100025-AK	****, ****	Sfr1548	Cryptosporidiosis	21/03/2007	Under investigation	Processing notification	21/03/2007
07-100024-AK	****, ****		Brucellosis	21/03/2007	Under investigation	Processing notification	21/03/2007
			Haemophilus			Processing	

WorkSpace Case Outbreak Reports Maps

Case List New Case Lab Results List Transferred Case List

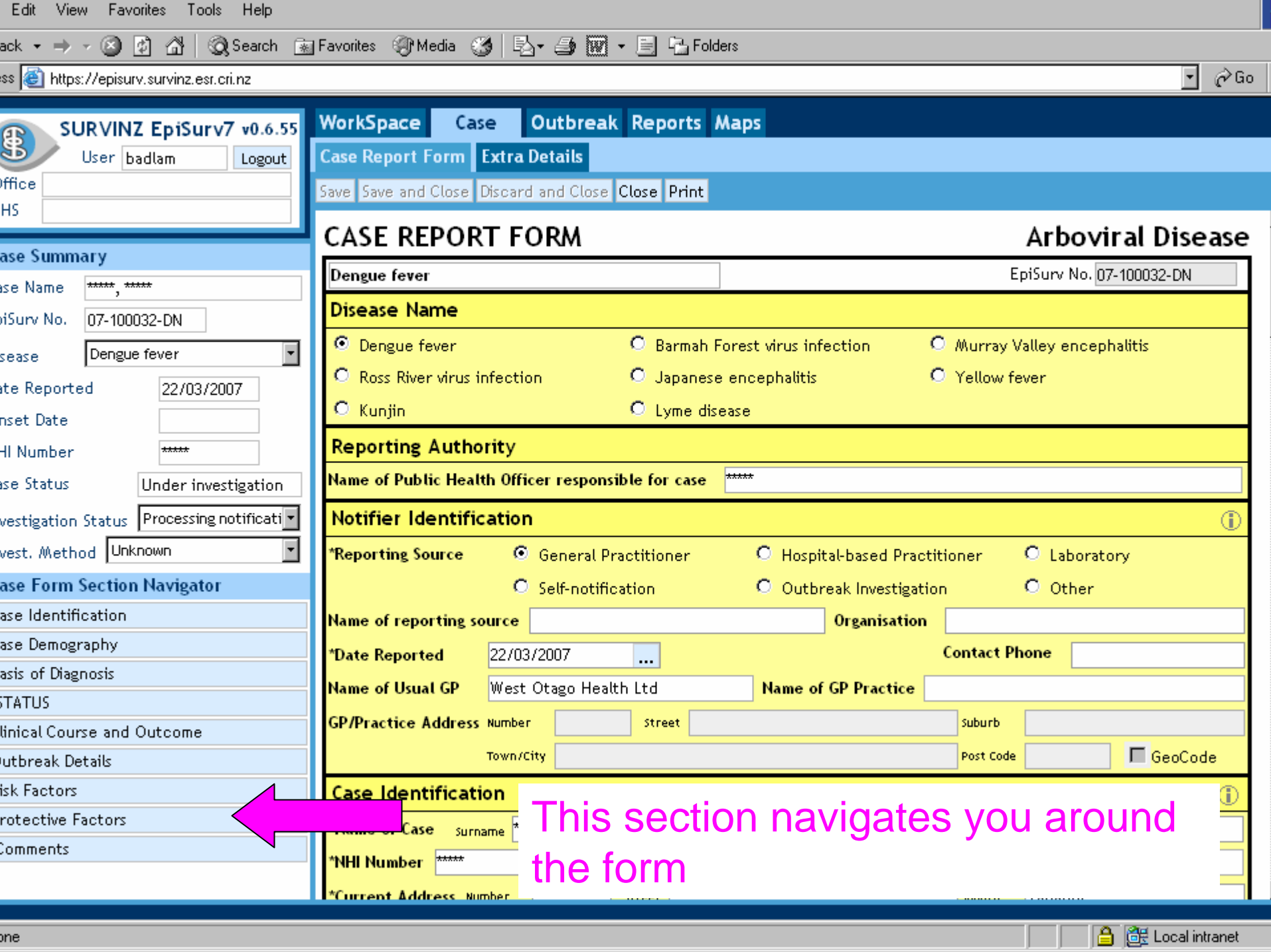
Open Selected Case Delete Selected Case 17 found

EpiSurv No.	Name	NHI	Disease	Date Rep.	Status	Inv. Status	Create Date
07-100032-DN	****, ****	EAT2225	Dengue fever	22/03/2007	Under investigation	Processing notification	22/03/2007
2007WK00379	****, ****	FGA6300	Dengue fever	26/02/2007	Confirmed	Case closed	18/03/2007
2007AK01625	****, ****	QPB5070	Dengue fever	12/03/2007	Confirmed	Case closed	18/03/2007
2007AK01620	****, ****	FRUB330	Dengue fever	12/03/2007	Confirmed	Case closed	18/03/2007
2007AK01616	****, ****	MZU8261	Dengue fever	12/03/2007	Confirmed	Case closed	18/03/2007
2007AK01479	****, ****	NBC5838	Dengue fever	05/03/2007	Confirmed	Case closed	18/03/2007
2007AK01477	****, ****	HKF5042	Dengue fever	05/03/2007	Unknown	Under investigation	18/03/2007
2007AK01475	****, ****	HLY9517	Dengue fever	05/03/2007	Confirmed	Case closed	18/03/2007
2007AK01474	****, ****						2007
2007AK01406	****, ****						2007
2007AK01405	****, ****	MXE3817	Dengue fever	28/02/2007	Confirmed	Case closed	18/03/2007
2007AK01396	****, ****	BHV1433	Dengue fever	28/02/2007	Confirmed	Under investigation	18/03/2007
2007AK01397	****, ****	EQW4520	Dengue fever	28/02/2007	Confirmed	Case closed	18/03/2007
2007AK01393	****, ****	HHF5167	Dengue fever	28/02/2007	Confirmed	Case closed	18/03/2007
2007AK01323	****, ****		Dengue fever	23/02/2007	Confirmed	Case closed	18/03/2007
2007AK01302	****, ****	SGA1588	Dengue fever	23/02/2007	Confirmed	Under investigation	18/03/2007

Choose specific diseases

Clicking here brings up case report

found Local intranet



SURVINZ EpiSurv7 v0.6.55

User

Office

MHS

Case Summary

Case Name

EpiSurv No.

Disease

Date Reported

Onset Date

MHI Number

Case Status

Investigation Status

Invest. Method

Case Form Section Navigator

- Case Identification
- Case Demography
- Basis of Diagnosis
- STATUS
- Clinical Course and Outcome
- Outbreak Details
- Risk Factors
- Protective Factors
- Comments

Workspace Case Outbreak Reports Maps

Case Report Form Extra Details

CASE REPORT FORM Arboviral Disease

Disease Name EpiSurv No.

Dengue fever
 Barmah Forest virus infection
 Murray Valley encephalitis
 Ross River virus infection
 Japanese encephalitis
 Yellow fever
 Kunjin
 Lyme disease

Reporting Authority

Name of Public Health Officer responsible for case

Notifier Identification ?

*Reporting Source
 General Practitioner
 Hospital-based Practitioner
 Laboratory
 Self-notification
 Outbreak Investigation
 Other

Name of reporting source Organisation

*Date Reported Contact Phone

Name of Usual GP Name of GP Practice

GP/Practice Address

Number Street Suburb

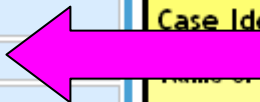
Town/City Post Code GeoCode

Case Identification ?

Name of Case

*NHI Number

*Current Address Number



This section navigates you around the form

Windows browser interface for SURVINZ EpiSurv7 v0.6.55. The browser address bar shows <https://episurv.survinz.esr.cri.nz>. The application header includes navigation tabs: Workspace, Case, Outbreak, Reports, Maps. Below this are sub-tabs: Case List, New Case, Lab Results List, Transferred Case List. A secondary menu contains: Open Existing Case, Create New Case, Print Empty Form.

The left sidebar contains a user profile for 'badlam' and a 'New Case Details' form with the following fields:

- Surname: Bush
- Given Name(s): George
- HLI Number: XYZ567
- Disease: Anthrax
- Date Reported: 23/03/07
- New Case button

The main content area displays a table with the following columns: EpiSurv No., Name, NHI, Disease, Date Rep., Status, Inv. Status, Create Date. A pink arrow points to the 'NHI' column header with the text 'Prints off case report form'. Another pink arrow points to the 'New Case' button with the text 'Bring up case report form'.

EpiSurv No.	Name	NHI	Disease	Date Rep.	Status	Inv. Status	Create Date
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Outbreak screen

WorkSpace Case **Outbreak** Reports Maps

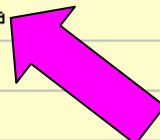
Outbreak List 100 found (max results)

Open Selected Outbreak New Outbreak

Outbreak No.	Pathogen	Subtype	Create Date	Reported
OB-07-100016-WN			23/03/2007	23/03/2007
OB-07-100015-DN	Campylobacter		23/03/2007	23/03/2007
OB-07-100014-AK			23/03/2007	23/03/2007
OB-07-100013-DN	Campylobacter		22/03/2007	22/03/2007
OB-07-100012-HN	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100011-HN	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100008-AK	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100009-WH	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100010-TI	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100006-RO	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100007-AK	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100005-WN	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100004-AK	Bordetella	pertussis	22/03/2007	22/03/2007
OB-07-100003-PN			20/03/2007	20/03/2007
OB-07-100002-AK				2007
OB-07-100001-NP				2007
WR2001001	Campylobacter			2001
WR2002001	Giardia			2002
WR1999001			18/03/2007	06/01/1999
WR2000001	Salmonellosis 150		18/03/2007	11/02/2000

0 found (max results)

Local intranet



Click here to bring up the outbreak form

Browser address bar: https://episurv.survinz.esr.cri.nz

Navigation tabs: Workspace, Case, **Outbreak**, Reports, Maps

Sub-navigation tabs: **Outbreak List**, Outbreak Form, Attachment, Case List, Add Existing Case, Add New Case

Buttons: Save, Save and Close, Discard and Close, Close, Print

Outbreak Report Form

Outbreak Summary Outbreak No. OB-07-100012-HN

Reporting Authority

Name of public health officer responsible for case: _____

Date outbreak reported: 22/03/2007 Interim report Final report - date finalised _____

Disease and Implicated Pathogen, Toxin or Chemical

Name of implicated pathogen, toxin or chemical (if known): Bordetella

Subtype: pertussis

Other known pathogen: _____

Unknown pathogen: Gastroenteritis Other illness (specify) _____

CASE DEFINITION(S)

Laboratory-confirmed case: _____

Other confirmed case: _____

Outbreak Form Section Navigator

- Reporting Authority
- Disease and Implicated Pathogen, Toxin or Chemical
- Outbreak Demographics
- Circumstances of Exposure/Transmission
- Circumstances of Exposure/Transmission
- Circumstances of Exposure/Transmission
- Factors Contributing to Outbreak
- Management of the Outbreak
- Other comments on outbreak

↑ This section takes you to various parts of the form

Creating reports

 SURVINZ EpiSurv7 v0.6.55

User

Office

PHS

WorkSpace Case Outbreak **Reports** Maps

Standard Custom

Report Types

All New Zealand Data

My PHS Data

Reports

All NZ Case Detail

All NZ Case Summary

* N002 - Cases By Age Group	<input type="button" value="Display"/>
Summary of notified case numbers by age groups for specified disease and time period.	
* N003 - Cases By Disease and Status	<input type="button" value="Display"/>
Summary of notified case numbers by disease, status and time period.	
* N004 - Cases By Week by Health District	<input type="button" value="Display"/>
Summary of the number of notified cases by disease and Health District by selected week.	
* N005 - Monthly Totals for the Last 12 Months	<input type="button" value="Display"/>
Summary of the number of notified cases by disease and month for the last 12 months.	

Sample report

Report Date From 23/02/2007

Report Date To 23/03/2007

View Report

1 of 1 100% Select a format Export

Cases by Status

N003

Reporting Period: 23/02/2007 - 23/03/2007

Disease	Under investigation	Confirmed	Probable	Unknown	Suspect	Total
Anthrax	2	0	0	0	0	2
Brucellosis	1	0	0	0	0	1
Campylobacteriosis	4	1985	4	49	0	2042
Cryptosporidiosis	1	104	0	5	0	110
Dengue fever	3	42	2	1	0	48
Gastroenteritis - unknown cause	10	10	15	18	0	53
Gastroenteritis / foodborne intoxication	0	2	9	3	0	14
Giardiasis	0	209	0	7	0	216
Haemophilus influenzae type b	0	6	0	0	0	6
Hepatitis A	0	11	0	0	0	11
Hepatitis B	1	5	0	2	0	8
Hepatitis C	2	3	0	0	0	5
Hepatitis NOS	0	1	1	0	0	2
Lead absorption	0	7	0	3	0	10
Leishmaniasis	5	3	0	0	0	8

The screenshot shows the EpiExplorer web application. The interface is divided into several sections:

- Search Filters:** Located on the left, it includes a dropdown for 'Disease' (Dengue fever), radio buttons for 'In the last' (Month), 'Between' (23/12/2006 & 23/03/2007), and 'is' (All years), and a 'Search' button.
- Overview Map:** A small map of New Zealand with a red box highlighting the North Island region.
- Main Map:** A larger map of New Zealand with yellow star markers indicating case locations in Auckland, Manukau, Tauranga, and Hamilton.
- Results Table:** A table at the bottom left showing search results for 'Dengue fever reported between 23/02/2007 & 23/03/2007'.

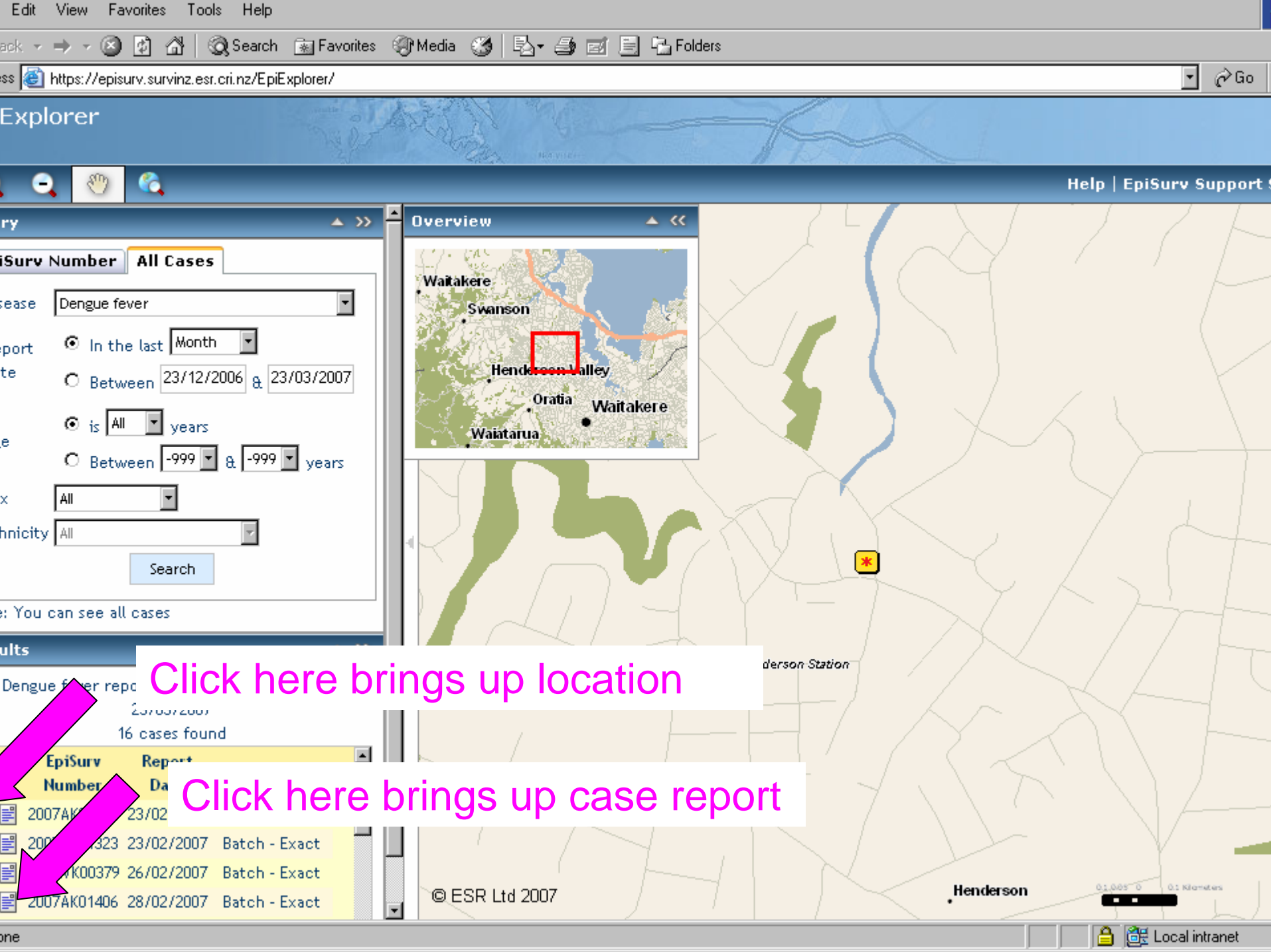
Two pink arrows point to the search filters and the results table, with text boxes indicating their functions.

Choose variables here

Cases come up here

Dengue fever reported between 23/02/2007 & 23/03/2007
16 cases found

EpiSurv Number	Report Date	Accuracy
2007AK01302	23/02/2007	Batch - Exact
2007AK01323	23/02/2007	Batch - Exact
2007WK00379	26/02/2007	Batch - Exact
2007AK01406	28/02/2007	Batch - Exact



EpiSurv Number All Cases

Disease:

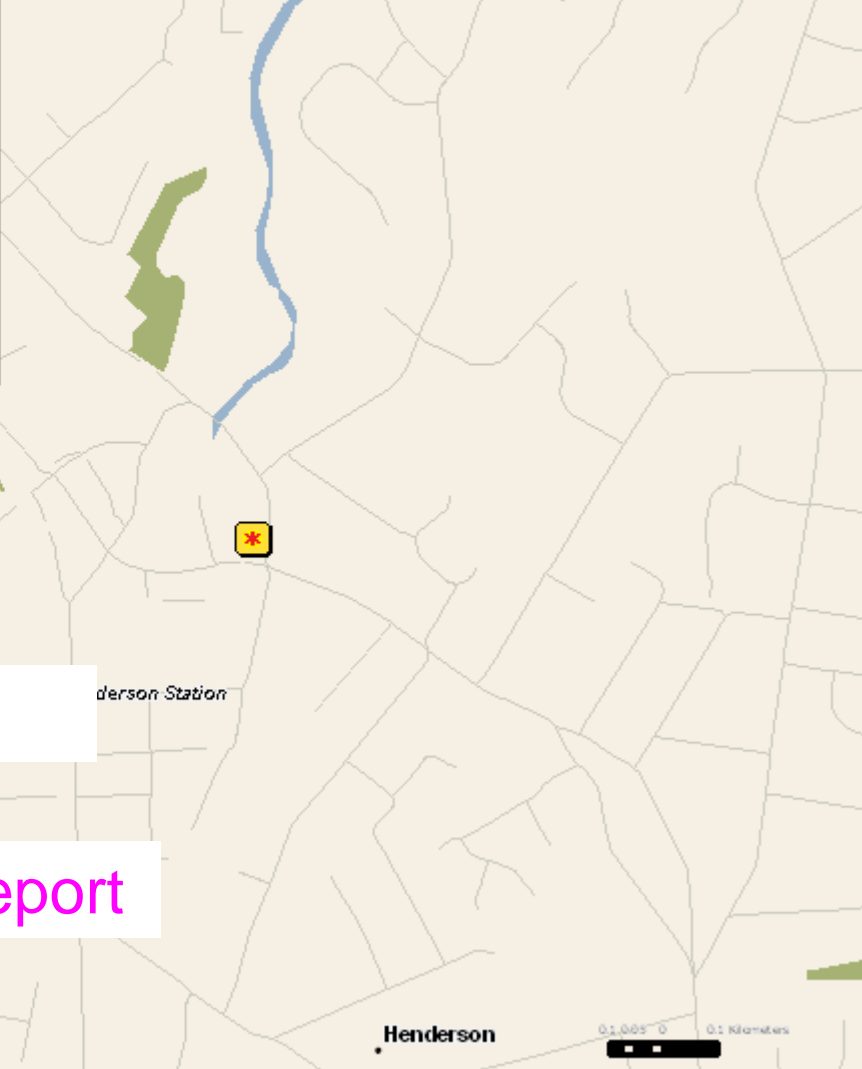
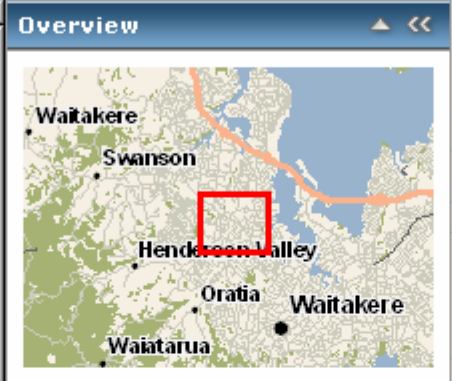
Report date: In the last Between &

Age: is years Between & years

Sex:

Ethnicity:

You can see all cases



Click here brings up location

Click here brings up case report

Results

Dengue fever reports 23/03/2007
16 cases found

EpiSurv Number	Report Date	Details
2007AK01406	23/02	
2007AK01406	23/02/2007	Batch - Exact
2007AK00379	26/02/2007	Batch - Exact
2007AK01406	28/02/2007	Batch - Exact

EpiSurv7 Data Extract Tool

This tool allows you to select a set of EpiSurv data to extract for further analysis. The extract details can be saved and rerun at a later time. Contact the EpiSurv Support Centre for help with complex queries. (Excludes the status: "Not a case")

Title:

Description:

Disease Type:

Disease:

Add to Query

DHB
 TA
 HD

Add to Query

Fields: Select fields to display on the report.

Query: Enter SQL syntax here.

Clear

Cancel

Run Report

Creating your own report

EpiSurv7 Data Extract Tool

This tool allows you to select a set of EpiSurv data to extract for further analysis. The extract details can be saved and rerun at a later time. Contact the EpiSurv Support Centre for help with complex queries. (Excludes the status: "Not a case")

Title:

Description:

Disease Type:

Disease:

DHB
 TA
 HD

Fields: Select fields to display on the report.

- Common Case Fields**
 - Disease - Disease name
 - EpiSurvNumber - The EpiSurv case identifier
 - Status - Case status: {Under investigation/suspect/probable/}
- 01 - Notification Details**
- 02 - Case Identification**
- 03 - Case Demography**
- 04 - Clinical Course and Outcome**
- 05 - Outbreak Details**
- 06 - Local Details**
- 07 - System**
- ARB Fields**

Query: Enter SQL syntax here.