

**REPORT FROM THE  
DIEBACK INTERPRETATION  
EFFICIENCY REVIEW GROUP  
(D.I.E.R.)**

**TO THE  
STEERING TEAM  
SECTION MANAGERS AND  
REGIONAL OPERATIONS OFFICERS**

**AUGUST 1992**

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## THE PROJECT TEAM

The D.I.E.R. quality improvement team comprised of:

Jeff Boulton - S.F.R. interpreter representative

Kevin Helyar - C.F.R. interpreter representative

Dave Meehan - Project Leader

Alex Moylett - E.P.B. representative

Matt Reynolds - Swan interpreter representative

Rob Towers - Facilitator

Glen Tuffnell - Contract interpreter representative

Frank Vince - Operations representative

Assistance was also received from R Armstrong, S O'Grady and W Kay.

## 1. INTRODUCTION

### 1.1 Problem

All regionally based interpreter teams have not been able to interpret sufficient area per annum to totally satisfy customer demand and certainly have not been able to meet the Director of Forests instruction that we have sufficient area interpreted to cover 2 years logging.

### 1.2 The Mission

To establish an efficient interpretation system which will meet customer's annual demand for hygiene information.

### 1.3 Discussion

Some of the recommendations have been acted on already while others are unique to a particular area, while others still await your endorsement.

The root causes from which the recommendations were derived, were identified by an exhaustive investigatory process involving interpreters, E.P.B. and operations staff and may hit raw nerves in one or two instances.

As Managers, it is up to each of us to have an honest look at each recommendation and accept them in the spirit they are given. You can be assured that each DIER group member is committed to ensuring the recommendations are implemented.

Thus your endorsement of each of the recommendations is eagerly sort.

## 2. METHODOLOGY

As some of the DIER group were not familiar with the quality improvement process, some time was spent explaining the process in detail.

### Step 1 - Mission Statement

The group discussed the relevance of the mission statement, checked the original problem, revisited the mission statement and presented a revised mission statement to the steering team who endorsed it.

### Step 2 - Product Survey (Appendices 2 & 3)

While carrying out step 3 - describing the current system, a customer product survey was carried out to determine the level of use current interpreter products. This identified which interpreter products were required.

### Step 3 - Defining the Process (Appendix 2)

The interpretation process was flowcharted and differences between regions were identified. Seven processes (a group of activities with a common purpose) were identified.

It was the closer examination of these processes and where interpreters spent their time (appendix 3) that revealed the root causes and led to the recommendations.

### Step 4 - Who does what (Appendix 4)

The development of deployment flowcharts indicated who was involved in each step in each process. The responsibilities were qualified as being:-

- primary responsibility for completing the task;
- advises on how the activity is done;
- assists in completing the activity;
- inspects during or at completion of task.

The deployment flowchart can be used to:-

- identify who is involved in a process;
- identify where each person is involved in a process;
- redefine reporting structures leading to a reallocation of personnel.

Step 5 - Issues Identified (Appendix 5)

During the process of describing the interpretation system and developing the deployment flowchart many issues arose. These were progressively added to an issues bin and considered when dealing with root causes and recommendations.

Step 6 - Root Causes (Appendix 6)

A large number of root causes (52) were identified from discussion of the interpreter process, the deployment flowcharts, cause effect diagrams and the issues bin. The root causes were categorised into:-

|                        |                  |
|------------------------|------------------|
| Planning               | People           |
| Management             | Equipment        |
| Current work practices | Environment      |
| Training               | Award and Policy |
| Service                | Product          |

It was the examination of the root causes that led to the formation of recommendations.

A summary of the root causes and the potential gains if they were resolved is given in Appendix 7.

Step 7 - Recommendations (Appendix 8)

As several of the root causes could be dealt with under common solutions the recommended actions were grouped into 29 recommendations. There were further divided into:-

1. Large impact - quick to implement (7)
2. Large impact - longer to implement (8)
3. Small impact - quick to implement (8)
4. Small impact - longer to implement (6)

The larger impact recommendations were described using the following headings;

- The problem
- Recommended action
- Likely impact
- Time before result achieved
- Who should initiate the process
- When to begin
- Resources required

### 3. SUMMARY OF RECOMMENDATIONS

All recommendations involve either varying modifications to management styles and methods, planning, award charges or improvements in equipment.

#### 3.1 Large Impact - Quick to Implement

The 7 recommendations in this group have either been resolved or are currently being addressed.

It is recommended that follow-up action of the 7 recommendations in this group be assigned to the I/L dieback.

The estimated gain should all remedial action be successful will be a 15% improvement in productivity. The recommendations which will provide the largest gains are those dealing with;

- a) Training
- b) Using skills of ex Interpreters
- c) Interpreting only those areas that will be operated over.

Note: Some of these recommendations have been implemented already.

#### 3.2 Large Impact - Longer to Implement

Most of the 8 recommendations in this group while requiring the assistance of other branch's to implement can be follow up on by the I/L dieback.

The estimated gain should all remedial action be successful will be a minimum of 30%. The recommendations which will provide the larges gains are those dealing with;

- a) Seasonal limitations (award, planning, equipment);
- b) Inflexible team sizes. (Implemented to a large degree already).

#### 3.3 Small Impact - Quick to Implement

Action on the 8 recommendations in this group can be initiated by the Disease Standards Officer and the Section Managers.

#### 3.4 Small Impact - Longer to Implement

The DIER group feel it may not be cost effective to initiate action across all regions on this group of recommendations and recommend that it remains with each section manager to consider which recommendations in this group are worth following up in their region.

#### 4. CONCLUSION

The "easy to change" things will result in minor improvements in efficiency relative to the "hard to change" things which will result in significant improvements in productivity.

The three areas that will result in the largest gains will be;

- a) maximising use of single interpreter teams;
- b) using ex interpreters based in Districts;
- c) applying enterprise bargaining to develop a win-win situation so productivity improves and interpreters gain as well.

The Manager, Human Resources Branch, has welcomed the initiative to change interpreter work practices and while warning that any changes maybe slow in coming, has urged the DIER group to provide information to support changes to him as soon as practical.

5. WHERE TO FROM HERE

1. Obtain steering team, section manager, branch manager and regional endorsement of the D.I.E.R. recommendations. This includes allocating the responsibility of follow up to the I/L dieback and section managers as defined in the recommendations.

2. Monitoring

Allocate the role of monitoring the implementation of these recommendations to a team consisting of;

- a) The I/L dieback
- b) E.P.B. - Senior Environmental Officers
- c) A representative from operations

## APPENDICES

- Appendix 1 Product Survey
- Appendix 2 Interpretation System Description
- Appendix 3 Analysis of interpretation time
- Appendix 4 Deployment Flowcharts
- Appendix 5 Issues
- Appendix 6 Root Causes
- Appendix 7 Root Cause Summary and Potential Gains
- Appendix 8 Recommendations

## APPENDIX 1

## INTERPRETER PRODUCT - USE OF SURVEY

|                         | DISTRICT |    |     |   |   |   |   |   |    |   |   |    |
|-------------------------|----------|----|-----|---|---|---|---|---|----|---|---|----|
|                         | MU       | JD | RE* | H | C | K | B | N | MA | P | W | AL |
| 1. Planners             |          |    |     |   |   |   |   |   |    |   |   |    |
| 1.1 Logging hygiene map |          |    |     |   |   |   |   |   |    |   |   |    |
| hazard map              |          |    | Y   |   |   |   |   |   |    |   |   |    |
| moist/dry map           |          |    |     |   |   |   |   |   |    |   |   |    |
| veg. map                |          |    | Y   |   |   |   |   |   |    |   |   |    |
| JSI map                 |          |    |     |   |   |   | Y |   | Y  |   |   |    |
| cell report             |          |    | Y   |   | Y | Y | Y | Y | Y  |   | Y |    |
| 1.2 Regional landuse    |          |    |     |   |   |   |   |   |    |   |   |    |
| dieback distrib. map    |          |    | Y   |   |   |   |   | Y |    |   |   |    |
| hazard info.            |          |    |     |   |   | Y |   | Y |    |   |   |    |
| interps - consult       |          |    |     |   |   | Y |   |   |    |   |   |    |
| 2. Recreation Planners  |          |    |     |   |   |   |   |   |    |   |   |    |
| dieback dist & letter   | Y        |    |     | Y | Y |   |   |   |    |   | Y | Y  |
| hazard map              | Y        |    |     |   | Y |   |   |   |    |   | Y | Y  |
| 3. Logging Ops (Dist)   |          |    |     |   |   |   |   |   |    |   |   |    |
| 3.1 Coupe Prep.         |          |    |     |   |   |   |   |   |    |   |   |    |
| log plan - hygiene map  | Y        | Y  |     | Y | Y | Y | Y | Y | Y  |   | Y | Y  |
| m/d map                 |          |    |     | Y | Y | Y |   |   | Y  |   |   |    |
| veg map                 |          |    |     | Y | Y | Y |   |   | Y  |   |   |    |
| haz plan                |          | Y  |     | Y | Y | Y | Y | Y | Y  |   | Y |    |
| 1:4500 photos           | Y        |    |     |   |   |   |   |   |    |   | Y |    |
| demarcation map         | Y        | Y  |     |   |   |   |   |   |    |   |   |    |
| interp. consult.        | Y        |    |     | Y |   | Y |   |   | Y  |   | Y |    |

\* RE = Dwellingup Research

[illegible]

[illegible]

INTERPRETATION SYSTEM FLOWCHART  
OVERVIEW

1. PRIORITY/PLANNING
2. PREPARATION
3. OFFICE
4. FIELD
5. MAPPING
6. CELL REPORT
7. HANDOVER

## INTERPRETATION SYSTEM FLOWCHART

### DETAIL

#### 1. PRIORITY/PLANNING

- 1.1 Get 5 Year Logging Plan
- 1.2
  - a) List of J coupes by year
  - b) Check interpretability
- 1.3.1 Visit district to determine priority
- 1.3.2 Check priorities against burning plan
- 1.4 Request photography  
(C.F.R. START)
- 1.5 Design 12 month interpretation programme

#### 2. PREPARATION

- 2.1 C.F.R. and S.F.R. order photos (by financial year)  
(SWAN START)
- 2.2 Receive photos, record
- 2.3 Check quality, quantity
- 2.4 Re-order missing/poor quality film
- 2.5 Liaise with customer, determine customer requirements, determine sub cell boundaries.
- 2.6 Check fire, logging history, previous interpretation, determine initial access (affects priorities) NOT S.F.R.
- 2.7 Checks done where necessary (as at 12/02/92) (S.F.R.)

#### 3. OFFICE

- 3.1 Define cell boundary on film and cell map.
- 3.2 Initial interpretation of film
  - 3.2.1 By eye (Swan)
  - 3.2.2 By 3-power (All - SFR & CFR x 2 interpreters)  
(All - Swan - 2 interpreters). Discuss with K.H.
  - 3.2.3 By 8-power (Swan as at 12/02/92 interpreter x 2).  
(CFR difficult areas only)

- 3.2.4 Identify and record photo gaps.
- 3.2.5 Plan G.R.I.M. work. check areas to field visit (e.g. gravel pits, old landings, uninterp areas, JSI areas). (CFR only)
- 3.2.6 Transfer ISD's only adjacent photos (Swan only)
- 3.3 Transfer ISD's only fightline plan (SFR)

#### 4. FIELD

- 4.1 Obtain quarantine permit. Make it known how long and where you will be working. Put location on co-ordination board in district.
- 4.2 Obtain suitable vehicle (Swan)
- 4.3 Field reconnaissance, access
- 4.4 Begin interpretation based on customer requirements.
  - 4.4.1 Map on photos and demarcate disease boundaries.
  - 4.4.2 Check uninterpretable areas.
  - 4.4.3 Check ISD's
  - 4.4.4 Sample
  - 4.4.5 Map demarcation boundaries (Swan)
  - 4.4.6 Map vegetation, hazard, landform (CFR only).  
Swan - vegetation only).
  - 4.4.7 Map risk categories associated with infections (CFR & SFR only).
  - 4.4.8 Check N.E.Q. roads
  - 4.4.9 Check JSI areas in the field (CFR only)
  - 4.4.10 Check areas outside that influence call.
  - 4.4.11 Check SDF areas

#### 5. MAPPING

- 5.1 C.F.R.
  - 5.1.1 Transfer boundaries 1:4500 diapositives to 1:4500 prints.
  - 5.1.2 Transfer boundaries - 1:4500 diapositives to 1:20000 prints. *1:4500 BASE PLAN*

- 5.1.3 Send 1:20000 prints to LIB who produce ~~1:25000 mylar fight line map with disease, P. 281~~ *DIGITISE BASE*  
uninterpretable and suspect armillaria.
- 5.1.4 Ensure all sample results returned
- 5.1.5 Add hygiene categories to base map.  
*DIGITISE BASE PLAN ON G.I.S.*  
CONTINUE THEN FROM POINT \*\* BELOW
- 5.2 S.F.R.
- 5.2.1 Transfer disease boundaries - 1:4500  
diapositives to 1:25000 mylar fightline map  
(base map). Transfer also done onto 1:25000  
black and white, and then to 1:25000 mylar
- 5.2.2 Ensure all sample results returned
- 5.2.3 Plot hygiene categories.  
  
CONTINUE THEN FROM POINT \*\* BELOW
- 5.3 SWAN
- 5.3 A Orthophotos available
- i) Transfer disease and suspect,  
demarcation boundaries - 1:4500  
diapositives to 1:4500 orthophotos.
  - ii) Ensure all sample results returned.
  - iii) Plot hygiene boundaries onto  
orthophotos
  - iv) Send to ALCOA for digitizing to 1:20000  
map.
  - v) Check 1:20000 map, replot if necessary.  
If OK go to CELL REPORT.
- 5.3 B Orthophotos not available
- Same as for S.F.R.
- \*\* 5.4 Prepare the following maps -
- ~~Vegetation (CFR only)~~
  - Hazard (CFR only)
  - Hazard/Landform (SFR only)
  - ~~JSI (CFR only)~~
  - ~~Moist/dry (CFR only)~~

Dieback distribution (road alignments/access routes) (All)

Demarcation maps (Swan only)

6. CELL REPORTS

- 6.1 Tabulate all information gained in steps 1 - 5.
- 6.2 Write document
- 6.3 Ensure standardization and edit.
- 6.4 Liaise with interpreters who have worked on other parts of the cell (Swan only).

7. HANDOVER

- 7.1 Handover to district staff (SFR & CFR only)
- 7.2 Go through maps and report content to ensure they understood content (forest rep and treemarkers) (Preferred in field).
- 7.3 Field trip if necessary.
- 7.4 Follow up action as required (e.g. locate boundaries, especially uninterp boundaries).
- 7.5 Uninterp boundaries taped (Swan and SFR)

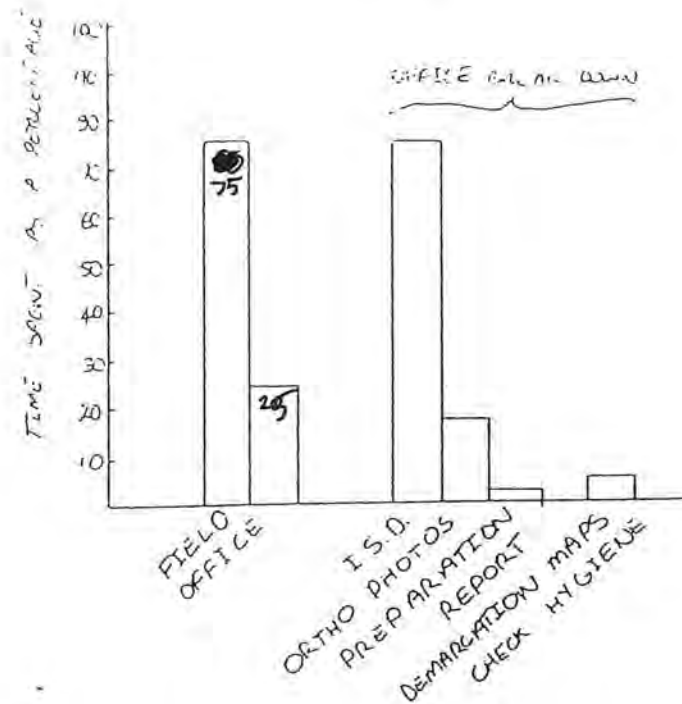
CFR AND SFR COMPLETE

Swan only -

- 7.6 a) Handover demarcation map (sometimes in field. (Individual areas don't get individual reports).
- b) Handover cell report when all priorities completed.

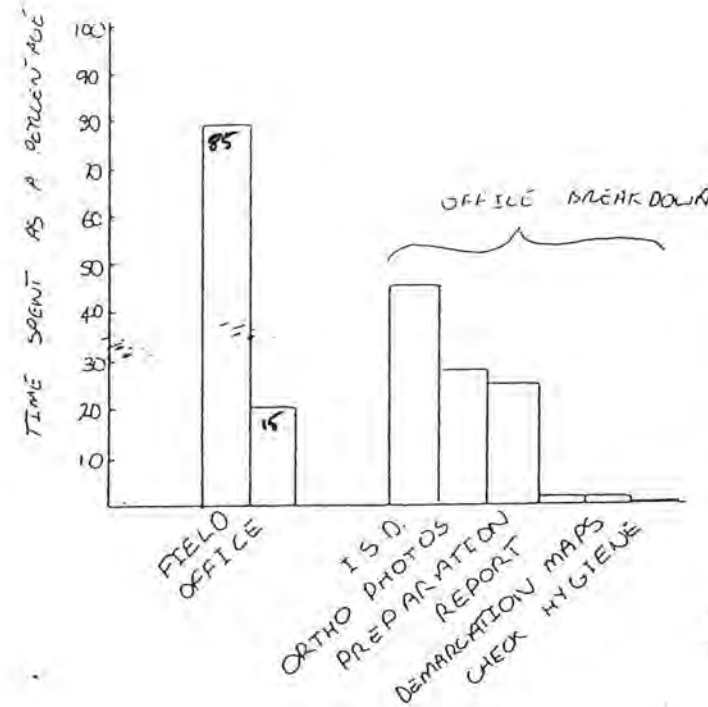
SWAN COMPLETE

CELL 146 SERPENTINE  
AREA 949 Ha  
TOTAL TIME 1300hours



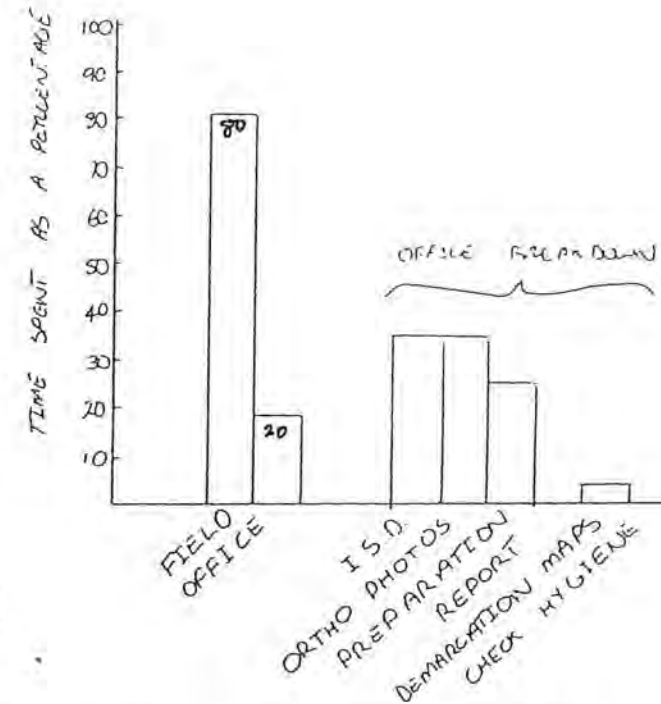
COST PER HECTARE 18.04  
HECTARES PER DAY 11.6  
SAMPLES TAKEN 72  
DAILY ROUND TRIP 70 minutes

CELL 147  
AREA 836 Ha  
TOTAL TIME 1176hours



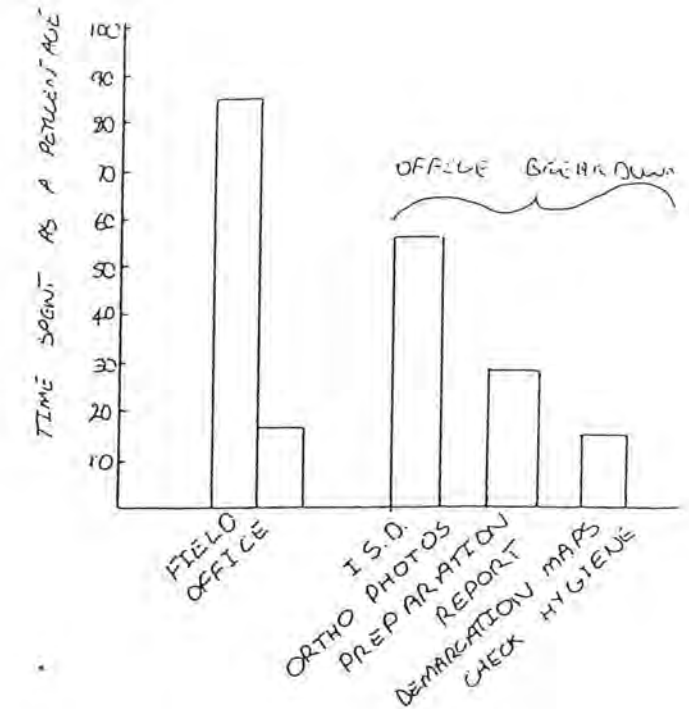
COST PER HECTARE 18.46  
HECTARES PER DAY 11.4  
SAMPLES TAKEN 49  
DAILY ROUND TRIP 80 minutes

CELL 146 FROLLETT  
AREA 737 Ha  
TOTAL TIME 568hours



COST PER HECTARE 10.12  
HECTARES PER DAY 20.8  
SAMPLES TAKEN 66  
DAILY ROUND TRIP 80 minutes

CELL 158  
AREA 134 Ha  
TOTAL TIME 172hours



COST PER HECTARE 16.85  
HECTARES PER DAY 12.4  
SAMPLES TAKEN 7  
DAILY ROUND TRIP 110 minutes

### APPENDIX 3

#### ANALYSIS OF INTERPRETATION TIMES

| Planning 1                            | Mgr  | Depty Mgr. | Snr. Int. | Team 1 | Team 2 | Team 3 | Team 4 | RPO | LIB | EPB | Alcoa | District |      |      |     | Time |     |     |
|---------------------------------------|------|------------|-----------|--------|--------|--------|--------|-----|-----|-----|-------|----------|------|------|-----|------|-----|-----|
|                                       |      |            |           |        |        |        |        |     |     |     |       | D/M      | FDIC | FREP | T/M | SW   | CFR | SFR |
| Get 5 yr Log Plan                     |      |            |           |        |        |        |        |     |     |     |       |          |      |      |     |      |     |     |
| List all J coupes by year             |      |            |           |        |        |        |        |     |     |     |       |          |      |      |     |      |     |     |
| Check interpretability                | N/A  |            |           |        |        |        |        |     |     |     |       |          |      |      |     |      |     |     |
| Determine Inter. Priority             | <br> | <br><br>   |           |        |        |        |        |     |     |     |       |          |      | <br> |     |      |     |     |
| Check priorities against burning plan |      | <br><br>   |           |        |        |        |        |     |     |     |       |          |      |      |     |      |     |     |
| Request photography                   |      | <br>       |           |        |        |        |        |     |     |     |       |          |      |      |     |      |     |     |
| Design 12 month interp. programme     |      | <br>       |           |        |        |        |        |     |     |     |       |          |      |      |     |      |     |     |

|          |                                       |          |                        |
|----------|---------------------------------------|----------|------------------------|
| Legend - | Primary responsibility for the task   | Patterns | Applies to all regions |
|          | Advice completing the task            |          | Svan Region            |
|          | Assist the person with responsibility |          | Central Forest Region  |
|          | Inspects                              |          | Southern Forest Region |

| Preparation                                                        | Section Mgr. | D/Sect. Mgr.                                                                                                                                                             | Snr. Interp.                                                                                                                                                           | Team 1                                                                                                                                                                                                                                                      |                                                                                     | Team 2 |  | Team 3 |  | Team 4 |  | RPO | LIB                                                                                 | EPB | Alcoa                                                                                | District |      |      |                                                                                                                                                                              | Time |     |     |
|--------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|--|--------|--|--------|--|-----|-------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------|----------|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|
|                                                                    |              |                                                                                                                                                                          |                                                                                                                                                                        | LDR                                                                                                                                                                                                                                                         |                                                                                     | LDR    |  | LDR    |  | LDR    |  |     |                                                                                     |     |                                                                                      | D/M      | FOIC | FREP | T/M                                                                                                                                                                          | SW   | CRF | SFR |
| Order Photos                                                       |              | <br>   |                                                                                       |                                                                                                                                                                            |                                                                                     |        |  |        |  |        |  |     |  |     |                                                                                      |          |      |      |                                                                                                                                                                              |      |     |     |
| Receive Photos and Record                                          |              |                                                                                                                                                                          | <br> | <br>                                                                                      |                                                                                     |        |  |        |  |        |  |     |                                                                                     |     |                                                                                      |          |      |      |                                                                                                                                                                              |      |     |     |
| Check Quality Quantity                                             |              |                                                                                                                                                                          |                                                                                       | <br><br> |    |        |  |        |  |        |  |     |                                                                                     |     |                                                                                      |          |      |      |                                                                                                                                                                              |      |     |     |
| Re-order Missing Poor Quality                                      |              |                                                                                                                                                                          |                                                                                       | <br>                                                                                      |                                                                                     |        |  |        |  |        |  |     |  |     |                                                                                      |          |      |      |                                                                                                                                                                              |      |     |     |
| Liaise - Customer - Repts<br>Determine Sub - Cell Boys             |              | <br> |                                                                                                                                                                        | <br>                                                                                    |                                                                                     |        |  |        |  |        |  |     |                                                                                     |     |  |          |      |      | <br> |      |     |     |
| Check Fire Log History<br>Prg. Interp.<br>Determine Initial Access |              |                                                                                                                                                                          |                                                                                                                                                                        | <br>                                                                                  |  |        |  |        |  |        |  |     |                                                                                     |     |                                                                                      |          |      |      |                                                                                                                                                                              |      |     |     |

|                                                                                       |                            |                                                                                       |                                     |                                                                                       |                                        |                                                                                       |                        |
|---------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|------------------------|
| Legend -                                                                              |                            |  | Primary responsibility for the task | Patterns                                                                              |                                        |  | Applies to all regions |
|  | Advise completing the task |  | Swan Region                         |  | Assists the person with responsibility |  | Central Forest Region  |
|  | Inspects                   |  | Southern Forest Region              |                                                                                       |                                        |                                                                                       |                        |

| Office 3                              | Sect Mgr | D/Sect Mgr | Snr Int | Team 1                 |                 | Team 2 |  | Team 3 |  | Team 4 |  | RPO | LIB | EPB | Alcoa | District |      |      |     | Time |     |     |
|---------------------------------------|----------|------------|---------|------------------------|-----------------|--------|--|--------|--|--------|--|-----|-----|-----|-------|----------|------|------|-----|------|-----|-----|
|                                       |          |            |         | LDR                    |                 | LDR    |  | LDR    |  | LDR    |  |     |     |     |       | D/M      | FOIC | FREP | T/M | SW   | CFR | SFR |
| Define Cell Bdry on film and cell map |          |            | ⌂       | ■                      | ■               |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |
| Initial Interp Eye                    |          |            | ⌂       | ■<br>N/A               |                 |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |
| 3 Power                               |          |            | ⌂       | ■                      | ■               |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |
| 8 Power                               |          |            | ⌂       | ■<br>N/A               | ■               |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |
| Identify and record photo gaps        |          |            | ⌂       | 1/2 OF JOB<br>■        | 1/2 OF JOB<br>■ |        |  |        |  |        |  |     | ■   |     |       |          |      |      |     |      |     |     |
| Plan G.R.I.M. check areas to visit    |          |            | ⌂       | 1/2 OF JOB<br>■        | 1/2 OF JOB<br>■ |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |
| Transfer I.S.D.'s on adjacent photos  |          |            | ⌂       | 1/2 OF JOB<br>■<br>N/A | 1/2 OF JOB<br>■ |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |
| Transfer I.S.D.'s to flightline plan  |          |            |         | 1/2 OF JOB<br>■        | 1/2 OF JOB<br>■ |        |  |        |  |        |  |     |     |     |       |          |      |      |     |      |     |     |

|          |  |   |                                        |          |  |   |                        |
|----------|--|---|----------------------------------------|----------|--|---|------------------------|
| Legend - |  | □ | Primary responsibility for the task    | Patterns |  | ■ | Applies to all regions |
|          |  | ○ | Advice completing the task             |          |  | ■ | Svan Region            |
|          |  | △ | Assists the person with responsibility |          |  | ■ | Central Forest Region  |
|          |  | ⌂ | Inspects                               |          |  | ■ | Southern Forest Region |

| 4 Field                                                                        | Sect<br>Mgr | D/Sect<br>Mgr | Snr<br>Int | Team 1  |  | RPO | LIB | Alcoa | Operations |       |     | Time |     |     |
|--------------------------------------------------------------------------------|-------------|---------------|------------|---------|--|-----|-----|-------|------------|-------|-----|------|-----|-----|
|                                                                                |             |               |            | LDR     |  |     |     |       | R.U.F.     | F/Rep | T/M | SW   | CFR | SFR |
| Get quarantine permit<br>advice D.H.Q. where &<br>how long working             |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Get vehicle                                                                    |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Field reconnaissance<br>access                                                 |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Begin interpretation<br>based on customer<br>priorities                        |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Mark off ISD's on<br>photos & demarcate I.P.<br>mapping- Disease<br>boundaries |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Field Check<br>U/I areas                                                       |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Check ISD's                                                                    |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Sample                                                                         |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Map Demarcated<br>boundaries & old<br>blaze lines                              |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Map Veg, Landform<br>hazard                                                    |             |               |            | <br>    |  |     |     |       |            |       |     |      |     |     |
| Map risk categories<br>associated with infection                               |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Check NEQ Roads                                                                |             |               |            |         |  |     |     |       |            |       |     |      |     |     |
| Check WSI areas<br>in field                                                    |             |               |            | N/A<br> |  |     |     |       |            |       |     |      |     |     |
| Check influence areas<br>adjacent to cell                                      |             |               |            | <br>    |  |     |     |       |            |       |     |      |     |     |
| Check S.D.F areas                                                              |             |               |            |         |  |     |     |       |            |       |     |      |     |     |

Legend -

Primary responsibility for the task

Advises completing the task

Assists the person with responsibility

Inspects

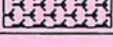
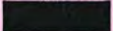
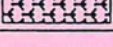
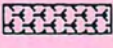
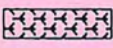
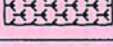
Patterns

Applies to all regions

Swan Region

Central Forest Region

Southern Forest Region

| Mapping 5                                                                         | Sect Mgr | O/Sea Mgr | Snr Int                                                                             | Team 1                                                                                                                                                                 | RPO | L.I.B.                                                                              | Alcoa | OPERATIONS |       |     | TIME |     |     |
|-----------------------------------------------------------------------------------|----------|-----------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|-------|------------|-------|-----|------|-----|-----|
|                                                                                   |          |           |                                                                                     |                                                                                                                                                                        |     |                                                                                     |       | RUF        | F/Rep | T/M | SW   | CFR | SFR |
| Transfer bdries 1:45000 diaposit to 1:4500 prints                                 |          |           |                                                                                     |                                                                                       |     |                                                                                     |       |            |       |     |      |     |     |
| Transfer bdries 1:45000 diaposit to 1:20000 prints                                |          |           |                                                                                     | <br> |     |                                                                                     |       |            |       |     |      |     |     |
| 1:20000 prints to L.I.B.<br>1:25000 Flight line map                               |          |           |                                                                                     |                                                                                       |     |  |       |            |       |     |      |     |     |
| With d 16 = u/i such, arm                                                         |          |           |                                                                                     |                                                                                                                                                                        |     |                                                                                     |       |            |       |     |      |     |     |
| Ensure all sample results returned                                                |          |           |    |                                                                                       |     |                                                                                     |       |            |       |     |      |     |     |
| Add hygiene categories to base map                                                |          |           |                                                                                     | <br> |     |                                                                                     |       |            |       |     |      |     |     |
| <u>SWAN</u><br>Transfer d16, sus demarcation bdries 1:4500 diah to 1:4500 ortho's |          |           |    |                                                                                       |     |                                                                                     |       |            |       |     |      |     |     |
| Plot hygiene bdries onto or the photo                                             |          |           |    |                                                                                       |     |                                                                                     |       |            |       |     |      |     |     |
| Send to Alcoa for digitising                                                      |          |           |                                                                                     |                                                                                       |     |                                                                                     |       |            |       |     |      |     |     |
| Check 1:20000 map, replot if necessary, if OK go to cenrepat                      |          |           |                                                                                     |                                                                                      |     |                                                                                     |       |            |       |     |      |     |     |
| Prepare Maps Veg                                                                  |          |           |  |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |
| Hazard                                                                            |          |           |  |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |
| Hazard/landsorm                                                                   |          |           |                                                                                     |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |
| JSI                                                                               |          |           |  |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |
| Moist/dry                                                                         |          |           |  |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |
| c/16 distn                                                                        |          |           |                                                                                     |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |
| Demarcation Maps                                                                  |          |           |  |                                                                                     |     |                                                                                     |       |            |       |     |      |     |     |

Legend -



Primary responsibility for the task

Patterns



Applies to all regions



Advices completing the task



Svan Region



Assists the person with responsibility



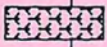
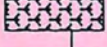
Central Forest Region



Inspects



Southern Forest Region

| 6 Cell Reports                                                   | Sect<br>Mgr                                                                       | D/Sect<br>Mgr                                                                     | Snr<br>Int                                                                          | Team 1                                                                                                                                                                                                                                                      |                                                                                   | Team<br>2                                                                                        | C/O                                                                                | Inv. Ldr.<br>Rpo                                                                    | LIB | EPB                                                                                                                                                                            | Alcoa                                                                                                                                                                          | District                                                                              |      |                                                                                       |                                                                                                                                                                                | Time |     |     |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|
|                                                                  |                                                                                   |                                                                                   |                                                                                     | Ldr                                                                                                                                                                                                                                                         |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                | D/M                                                                                   | FOIC | F/R&L                                                                                 | TM                                                                                                                                                                             | SW   | CFR | SFR |
| Tabulate all information gained in steps 1-5                     |                                                                                   |                                                                                   |                                                                                     | <br><br> |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| Write report to set format                                       |                                                                                   |                                                                                   |                                                                                     | <br><br> |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| Liaise with other teams who have interpreted other areas in Cell |                                                                                   |                                                                                   |                                                                                     |                                                                                                                                                                            |                                                                                   | Other Teams<br> |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| Standards check and edit                                         |  |  |    |                                                                                                                                                                                                                                                             |  |                 |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| Type and Edit                                                    |                                                                                   |                                                                                   |                                                                                     |                                                                                                                                                                                                                                                             |                                                                                   |                                                                                                  |  |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| Review Report and Feedback                                       |                                                                                   |                                                                                   |                                                                                     |                                                                                                                                                                                                                                                             |                                                                                   |                                                                                                  |                                                                                    |  |     |                                                                                             |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| <b>7 Hand Over &amp; F/U</b>                                     |                                                                                   |                                                                                   |                                                                                     |                                                                                                                                                                                                                                                             |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       |                                                                                                                                                                                |      |     |     |
| Go through maps & report with customer                           |                                                                                   |                                                                                   |                                                                                     | <br>                                                                                   |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |   | <br>  |      |     |     |
| Field trip to sort out problem areas                             |                                                                                   |                                                                                   |  | <br>                                                                                  |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     | <br> |                                                                                                                                                                                |  |      |  | <br> |      |     |     |
| Assist customer to locate hygiene boundaries                     |                                                                                   |                                                                                   |                                                                                     |                                                                                                                                                                          |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                |                                                                                                                                                                                |                                                                                       |      |                                                                                       | <br> |      |     |     |
| Handover<br>Demarc. Map (Done at various times)                  |                                                                                   |                                                                                   |                                                                                     | <br>                                                                                  |                                                                                   |                                                                                                  |                                                                                    |                                                                                     |     |                                                                                                                                                                                | <br> |                                                                                       |      |  |                                                                                                                                                                                |      |     |     |

**Legend -**

-  Primary responsibility for the task
-  Advice completing the task
-  Assist the person with responsibility
-  Inspects

**Patterns**

-  Applies to all regions
-  Swan Region
-  Central Forest Region
-  Southern Forest Region

## ISSUES

1. Inconsistencies in GRIM survey products
2. Number of times photos are interpreted under 3 and 8 power is not uniform.
3. We may make some saving if 8 power takes a lot of time to only use it over the areas apparently dieback-free.
4. Differences exist between sections on the procedures for ordering of photos.
5. SFR use the concept and terminology "contingency coupes". Is the concept different/applicable/useful elsewhere?
6. SFR don't check HOCS before photo interpretation.
7. Daily disposition and notification of whereabouts to districts.
8. Allowances for variation in photo scale and the effects on accuracy of final map products.
9. Only some interpreters send prints to LIB for transfer to base on 25000 scale.
10. CFR (only) transfer from photos to prints at the same scale.
11. CFR (only) map potential JSI areas.
12. Differences exist between sections in how or whether negative sample points are recorded permanently.
13. Differences in procedures in moist and dry soil mapping.
14. Should we attempt to cover the production of all products in an expanded flowchart. Alternatively to produce other flowcharts for the other products.
15. Should we include GRIM on the main flowchart if we are only going to produce one.
16. Various maps are needed only as prerequisites for 7-Way Tests. If only dry soil operations are to be carried out then the list of products can be significantly reduced.
17. Uninterpretable boundaries are put in by interpreters in S.F.R. and Swan but not in C.F.R. If these later have to be picked up by the interpreters as a separate job, it may be inefficient.
18. Is there consistency in products provided for Willowdale by Swan-based interpreters compared with the requirements or other operational control within the C.F.R.

19. A comparison/evaluation of the need for uniform procedures and standards across the regions is identified.

ROOT CAUSES

|                                                              | RESPONSE |      |
|--------------------------------------------------------------|----------|------|
|                                                              | IMPACT   | TIME |
| <b>PLANNING</b>                                              |          |      |
| Not quarantining of non-DRA areas                            | L        | S    |
| Lack of enforceable lead times                               | L        | S    |
| Seasonal limitations                                         | L        | S    |
| Inadequate advice from customers                             | L        | Q    |
| Don't interpret areas not to be logged                       | L        | Q    |
| Planners don't apply interp. windows                         | L        | S    |
| Operations often precede interpretation                      | L        | S    |
| Poor co-ordination and scheduling by customers and inventory | L        | S    |
| Interpreters restricted to reg. boundaries                   | S        | Q    |
| Leave taken during prime interp. times                       | S        | Q    |
| <b>MANAGEMENT</b>                                            |          |      |
| Uniformity of standards                                      | L        | S    |
| Rigid work hours (local)                                     | L        | Q    |
| Inability to maintain morale                                 | L        | S    |
| Don't interpret areas which won't be cut                     | L        | Q    |
| Lack of use of ex-interpreters                               | L        | S    |
| Loss of skills of ex-interpreters                            | L        | S    |
| Out-of-date manual                                           | S        | Q    |
| Lack of communication (skills/applicn)                       | S        | S    |
| Improved prioritization of interp/other jobs                 | S        | Q    |
| Poor planning (uninterp due to burning)                      | L        | S    |
| Inadequate monitoring/supervision - local and inter-regional | L        | S    |
| Inadequate exchange of ideas                                 | S        | S    |
| S/M's forced to respond to crisis managt                     | L        | S    |
| <b>CURRENT WORK PRACTICES</b>                                |          |      |
| Are all interp. steps needed all the time                    | S        | S    |
| Delays in LIB transfer of boundaries                         | S        | S    |
| Time spent interpreting film                                 | S        | S    |
| Time spent on JSI maps                                       | S        | Q    |
| Inflexible team size                                         | L        | S    |
| Lack of productive time in the field                         | L        | S    |
| Planners don't apply interp windows                          | L        | S    |
| <b>TRAINING</b>                                              |          |      |
| Lack of training                                             | L        | Q    |
| Loss of skills of ex-interpreters                            | L        | Q    |
| <b>SERVICE</b>                                               |          |      |
| Sample turn-around time excessive                            | S        | Q    |

**PEOPLE**

|                                                      |   |   |
|------------------------------------------------------|---|---|
| Flagging morale                                      | L | S |
| Lack of career path (interp/other)                   | L | S |
| Inadequate selection process (incl conscript)        | L | S |
| Lack of contractor security/opportunities            | L | S |
| Loss of experienced staff<br>(successional planning) | L | S |

**EQUIPMENT**

|                                                        |   |   |
|--------------------------------------------------------|---|---|
| Equipment fails in wet weather                         | L | S |
| Delay in photo delivery (SFR)                          | L | Q |
| Lack of research into application of<br>new technology | L | S |

**ENVIRONMENT**

|                                      |   |   |
|--------------------------------------|---|---|
| Seasonal limitations                 | L | S |
| Poor access to job (SFR)             | S | Q |
| Equipment design                     | S | S |
| Lack of productive time in the field | L | S |
| Planners don't apply interp windows  | L | S |

**AWARD AND POLICY**

|                                                         |   |   |
|---------------------------------------------------------|---|---|
| Seasonal limitations                                    | L | S |
| Restrictive hours prevent minimizing<br>travelling time | L | S |
| Inflexible award conditions - can't accrue<br>hours     | L | S |
| Restrictive transfers policy                            | S | S |
| Leave taken during prime interp time                    | S | Q |

**PRODUCT**

|                                     |   |   |
|-------------------------------------|---|---|
| Excessive time spent on orthophotos | S | S |
|-------------------------------------|---|---|

## SUMMARY ROOT CAUSES AND LIKELY GAINS (LARGE IMPACT ONLY)

### LARGE IMPACT - QUICK IMPLEMENT

| No. | Root Cause                                          | Description                                                                                                                                                                           | Gains(% ,days,weeks, months)                                                           |
|-----|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1*  | Lack of Training                                    | In the past have spent many team months checking and redoing work carried out by inappropriately trained interpreters.<br>Mostly fixed already.                                       | upto 8-10 team weeks-Swan                                                              |
| 2*  | Monitoring                                          | Lack of an inter-regional monitoring system to monitor standards,introduce new technology and to check targets are being achieved.                                                    | Overlaps with all other recommendations.                                               |
| 3   | Rigid work hours(local)                             | Interpreters not always able to work flexible hours,thus are not able to maximise time spent in field on dry days.                                                                    | minimum of 3% (Swan calculation)                                                       |
| 4*  | Loss of skills of ex-interpreters                   | Districts do not always use ex-interpreters on district interpreting jobs.                                                                                                            | Saving of 2 team months/yr in CFR and Swan region.<br>Up to 10-15 team days/yr in SFR. |
| 5*  | Photo delivery delays                               | Considerable delay between requesting and receiving diapositives.                                                                                                                     | 2-4 days/ann per interpreter team.                                                     |
| 6*  | Interpreting areas which are later not operated on. | Time is wasted when areas are interpreted but the interpretation information is not used.                                                                                             | Minimum of 4 interpreter team weeks per region.                                        |
| 7   | Not recognizing interpretation windows              | Mainly confined to SFR. There are optimum periods for interpreting particular vegetation types, particularly after burning.<br>-Note over 80% of interpreters time is spent in field. | 5-10 team days.                                                                        |

\* Fixed or in process of being fixed

# SUMMARY ROOT CAUSES AND LIKELY GAINS

## (LARGE IMPACT ONLY)

### LARGE IMPACT - LONGER TO IMPLEMENT

| No. | Root Cause                                          | Description                                                                                                                                                                                                                   | Gains(% ,days,weeks, months)                                                                                                                                                                     |
|-----|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1*  | Lack of enforceable lead times                      | Short notice requests by Districts disrupts interpreter work's programmes                                                                                                                                                     | Upto 5 team days per annum per Region                                                                                                                                                            |
| 2   | Seasonal Limitations                                | A significant amount of interpreter time is lost due to inability of interpreters to work in wet conditions. Better planning, equipment and changes to award conditions will lead to significant improvements in productivity | Upto 25% improvement in productivity.                                                                                                                                                            |
| 3   | Flagging Morale                                     | Morale is low within the interpreters for a number of reasons. Specific areas have been identified for action.(see 4,5,6)                                                                                                     | Improvement in root causes 3,4,& 5 will partly come from taking remedial action which addresses all other root causes and by taking action to address the morale problem. Gain not quantifiable. |
| 4   | Lack of career path for interpreters                | See 3 above                                                                                                                                                                                                                   |                                                                                                                                                                                                  |
| 5   | Inadequate selection process                        | See 3 above                                                                                                                                                                                                                   |                                                                                                                                                                                                  |
| 6   | Lack of Contractor Security                         | See 3 above                                                                                                                                                                                                                   |                                                                                                                                                                                                  |
| 7   | Lack of Research into Application of new technology | The application of new but as yet unknown technology to identify hazard,disease presence & apply more efficient interpretation methods in the field has not been investigated.                                                | Not quantifiable but potentially big gains.                                                                                                                                                      |
| 8*  | Inflexible Team Size                                | Maximising the use of single person teams will improve productivity. (Partly implemented already).                                                                                                                            | Between 10 - 25%.                                                                                                                                                                                |

\* Fixed or in process of being fixed

RECOMMENDATIONS

## LARGE IMPACT AND QUICK TO IMPLEMENT:

- (1)
- LACK OF TRAINING (SUBJECT - TRAINING).
- ✓

## THE PROBLEM:

Inexperienced interpreters making mistakes necessitating work having to be redone. This is highly inefficient and leads to customer dissatisfaction and low interpreter morale and confidence.

## RECOMMENDED ACTION:

- i) Incorporate an annual review of interpreter performance to ensure training programmes are successful when assessed against success criteria yet to be nominated. ✓
- ii) A training and development plan to be drawn up by the Disease Standards Officer and the Dept Training Officer which recognises the needs of both new and current interpreters. ✓

The training plan and the interpreters programmes should be reviewed periodically to ensure the appropriate level of training is maintained. ✓

## LIKELY IMPACT:

- i) Interpreters will get it right the first time thus increased efficiency, lower costs, greater customer satisfaction (mostly fixed already 8-10 interpreter team weeks improvement in productivity). *9/10 time*
- ii) Higher interpreter morale and confidence leading to greater efficiency.
- iii) Greater potential to use one person interpreter teams.

## TIME BEFORE RESULTS ACHIEVED:

Within 3 months of completing training programme.

## WHO SHOULD FIX:

Inventory Leader Dieback to arrange training programme.

## WHEN TO START:

Already started, basic course held, advance course being designed. Monitoring of results still required.

**RESOURCES:**

Existing staff from within Inventory and Environmental Protection Branches.

*Exclude all intngs.*

(2) MONITORING (SUBJECT - MANAGEMENT).

THE PROBLEM:

- i) There is no inter-regional monitoring system in place which identifies if level of interpreter training is appropriate. */ her*
- ii) While individual Section Managers have systems in place to determine if annual works programmes are on target, there is no predetermined remedial action. */ S/M's*

RECOMMENDED ACTION:

- i) Refer recommended action under (i) Lack of Training.
- ii) Prepare and implement a monitoring plan which:
  - [a] identifies, prior to the start of each financial year, all work interpreters will carry out including the special jobs (powerline, mining company belt lines, NP work, training, burn boundaries, special jobs for Region and Districts).
  - [b] clearly prioritise this work and provide early feedback to customers which project will not be done.
  - [c] [b] will be done at quarterly review meetings.

LIKELY IMPACT:

- i) Early advice, on a Departmental wide basis, as to whether the annual interpreters programme can be met.
- ii) Knowing (i) will enable remedial action to be planned earlier.

TIME BEFORE RESULTS ACHIEVED:

Monitoring system can be put in place by 30 September 1992.

WHO SHOULD FIX:

- i) I/L Dieback, DSO, Dept Training Officer.
- ii) I/L Dieback.

(3) Rigid Work Hours (local) (Subject - Management).

THE PROBLEM:

Interpreters restricted in some areas to using their judgement to work flexible hours and thus unable to maximise time spent in field on dry days.

*Not amenable Work arrangement  
is awkward being ended!*

*Dase*

**RECOMMENDED ACTION:**

- i) Analyse all options available to Section Managers and advise accordingly. This includes considering use of camping, longer working and shorter working days. NOTE: All interpreters want to be able to maximise hours worked on dry days in winter to improve efficiency.
- ii) Explain likely gains to Section Managers.
- iii) Section Managers to discuss options with their interpreters and report findings to Inventory Leader Dieback.
- iv) Section Managers to implement a flexible working hours policy which maximises interpreter time in field on dry days. *- This is fine if.*
- v) Review situation after 6 months.

**LIKELY IMPACT:**

- i) Greater interpreter efficiency due to increased interpreter time spent in field during dry conditions. Based on Swan Region estimate (Appendix 3) approximately 0.5 days/month will be gained per interpreter team. *(Not more)*
- ii) Higher interpreter morale. ✓

**TIME BEFORE RESULTS ACHIEVED:**

Immediate.

**WHO SHOULD FIX:**

- i) I/L Dieback
- ii) I/L Dieback
- iii) S/Managers
- iv) S/Managers
- v) I/L Dieback

**WHEN TO START:**

Within 1 month of DIER presentation.

**RESOURCES:**

Will be covered by existing staff.

(4) LOSS OF SKILLS OF EX INTERPRETERS (SUBJECT - MANAGEMENT).

*Dave*

**THE PROBLEM:**

Many Districts have ex interpreters who are not used as interpreters. This means they soon lose their skills and put unnecessary demands on Regional interpreters. This means the Department is losing a valuable resource when qualified interpreters are a scarce commodity.

**RECOMMENDED ACTION:**

- i) Devise a scheme (with advice from Human Resources) to ensure Regional and District Managers recognise and use the skills of ex interpreters posted to Districts. ✓
- ii) Devolve some interpreter responsibilities to Districts. (Implication of this is - having done this, listed interpreter duties to be borne by Districts, the D/M has the choice of using his ex interpreters, training his other staff or borrowing an ex interpreter from an adjacent District.) ✓ */ Her to recommend.*
- iii) Implement an ongoing skills maintenance training programme for ex interpreters. ✓ *Her + Roger.*
- iv) Train District staff involved in hardwood logging as interpreters. ✓ *check out & advise Dave*
- v) Provide recognition of retained skills or new skills achieved, in dieback interpretation by District staff (ie; make part of criteria progression). ✓ *Dave.*

**LIKELY IMPACT:**

- i) Greater use of ex interpreters will assist in achieving the annual interpreter programme. ✓ Impact on productivity will depend on extent to which Districts use ex interpreters. ✓
- ii) Will encourage District staff to gain interpreter skills. ✓
- iii) There will be a general improvement in the interpretation skills within Districts. ✓

**TIME BEFORE RESULTS ACHIEVED:**

6-12 months.

**WHO SHOULD FIX:**

- i) I/L Dieback with assistance from Human Resources.
- ii) Group - I/L Dieback, EPB rep., ROO Swan/Central & SFR.
- iii) I/L Dieback.
- iv) Group - I/L Dieback, TPB, EPB, ROO CFR.

**WHEN TO START:**

- (i) and (iii) within 1 month of DIER presentation.
- (ii) and (iv) within one month of completing Action Items (i) and (iii).

**RESOURCES:**

Will be covered by existing staff.

(5) DELAY IN PHOTO DELIVERY (SUBJECT - EQUIPMENT).

*Fixed*

**THE PROBLEM:**

There can be considerable delay between requesting and receiving diapositives from LIB (up to 38 working days from taking photographs to receiving diapositives). This leads to interpreters losing ideal field days. (Refer Appendix 2 for description of process)

**RECOMMENDED ACTION:**

Submit dates diapositives required 12 months in advance.  
Submit at same time shadowless photography programme priorities are submitted.

**LIKELY IMPACT:**

Early advice to LIB regarding diapositive requirement schedule will ensure they arrive at Sections on time, thus eliminating interpreters having to wait for photos. Potential gain 2-4 days per annum per interpreter team. ✓

**TIME BEFORE RESULTS ACHIEVED:**

Immediate. ✓

**WHO SHOULD FIX:**

I/L Dieback to send note to Section Managers and LIB confirming the above is in place.

**WHEN TO START:**

Immediately.

**RESOURCES:**

No additional resources.

(6) INTERPRETING AREAS WHICH ARE LATER NOT LOGGED (SUBJECT - PLANNING, MANAGEMENT).

*Done to send form.*

THE PROBLEM:

Interpretation is wasted when, after an area has been interpreted it is not operated on. Key reasons for this are:

- i) planners not identifying non-viable areas in consultation with Districts prior to interpretation;
- ii) mining companies changing direction of operations.

RECOMMENDED ACTION:

- i) Section Managers, in consultation with District staff to identify non-viable areas prior to interpretation.
- ii) Outside CALM control. Alcoa area aware of cost implications and are trying to minimise changes.
- iii) Review progress annually.

LIKELY IMPACT:

- i) Less area interpreted. (a minimum of 1-2 interpreter team weeks gain/annum)
- ii) Increased interpreter morale.

TIME BEFORE RESULTS ACHIEVED:

Immediate.

WHO SHOULD FIX:

- i) Section Managers.
- iii) I/L Dieback.

WHEN TO START:

Already implemented.

RESOURCES:

N/A

(7) PLANNERS DO NOT RECOGNISE AND APPLY INTERPRETATION WINDOWS (SUBJECT - PLANNING).

*How to check.*

THE PROBLEM:

Planners are not recognising the optimum period for accessing and interpreting particular vegetation types after burning, especially in the Southern Jarrah and Karri types.

**RECOMMENDED ACTION:**

- i) I/L Dieback to write to Regional Planners explaining what is required; give background to problem.
- ii) DSO to review and report progress to I/L Dieback in June and December of each year until further notice. *Discuss*

**LIKELY IMPACT:**

Time saving of 5-10 team days per year depending on period spent in vegetation type causing the problem. Gain will be mainly confined to SFR. *CR2.*

**TIME BEFORE RESULT ACHIEVED:**

Action will be implemented within one month of DIER presentation. Result within 12 months.

**WHO SHOULD FIX:**

- i) I/L Dieback, Regional Planners.
- ii) DSO.

**WHEN TO START:**

Within one month of DIER presentation.

**RESOURCES:**

Will be covered by existing staff.

## BIG IMPACT - LONGER TO IMPLEMENT:

### (1) LACK OF ENFORCEABLE LEAD TIMES.

*What about Dist.  
checking viability?  
Is this in Request form?*

#### THE PROBLEM:

Districts make interpretation requests at unreasonable short notice. Planners bring logging areas forward and require interpretation at very short notice. This interrupts the interpreters already demanding schedules.

#### RECOMMENDED ACTION:

- i) Better logging planning (TIPS addressing this). *Done.*
- ii) Examine and recommend on the option of using District staff to do "small" jobs, eg: burn boundaries, roads etc. (Refer 1.1 and 1.3) This will necessitate training operations staff in interpretation and defining the type of interpretation work they can do. *currently doing this check with interpreters OR USE OF X INTERPS*
- iii) Districts and Regions etc to advise Section Managers of their interpretation annual requirements by 1 May each year. Use "Dieback Interpretation Individual Job Request" form. *check if being used*
- iv) Review progress in 12 months.

#### LIKELY IMPACT:

- i) Improved lead time in logging planning (as a result of TIPS should lead to less calls from Districts for urgent interpreter assistance).
- ii) Districts become self sufficient in *(strip assessment) Road alignments.*

#### TIME BEFORE RESULTS ACHIEVED:

- i) Within one logging season of TIPS findings being implemented.
- ii) Immediately following implementation of Item 3 Action Item 1.

#### WHO SHOULD FIX:

- i) Planners.
- ii) I/L Dieback, ROO, DSO, EPB.
- iv) I/L Dieback.
- v) I/L Dieback, ROO.

(2) SEASONAL LIMITATIONS (SUBJECT - PLANNING).

THE PROBLEM: (Planning, Equipment, Award)

A significant amount of interpreter time is lost due to the inability of interpreters to carry out field work in wet conditions.

*Excessively*

RECOMMENDED ACTION:

i) Planning:

Section Managers to plan interpretation of known "wet" areas for summer. Section Managers to programme GRIM work for winter.

*Talk over with S/N's.*

ii) Equipment Limitations:

To counter the interpreters inability to use field stereoscopes and film during wet weather investigate:

*Later.*

- [a] water repelling agents for film and stereos;
- [b] use of omnichrome.

iii) Award: There is potential for significant increases in productivity if the award was changed.

- [a] Establish a project team consisting of a HRB rep., I/L Dieback, DSO and a Section Manager to examine and recommend options available, (eg: 10 hours per day, have extended leave in winter, maximum of 1 weeks holiday in summer, no RDO's during summer, in return for extra leave, pay loading similar to Wildlife Officers, etc. ✓)

*Get feedback & a status report.*

- [b] I/L Dieback to implementact.

LIKELY IMPACT:

By increasing the time spent in the field in summer, and applying better planning to where they work, interpreters believe interpreter teams could cover up to 6000 ha/annum instead of the 4500-5000/annum currently covered.

WHO SHOULD FIX:

- i) DSO to follow up (i) and (ii).
- ii) Project team consisting of HRB representative, DSO and a Section Manager to follow up (iii).

(3) FLAGGING MORALE.

THE PROBLEM:

Interpreter morale is low due to:

- i) Lack of career path within interpreter group. *Dave*
- ii) Lack of recognition of interpreter skills. *Dave*
- iii) Perception that interpreters are penalised as they do not have equal opportunity for advancement. *Dave*
- iv) Lack of visits by senior staff. *Her Roger Underwood will attend if asked.*
- v) Lack of work variety.
- vi) Being asked to have the same productivity in wet and dry conditions when it is impossible to do so.

RECOMMENDED ACTION:

- i) Project teams consisting of Human Resources Branch rep., DSO and one Section Manager to follow up items (i), (ii) and (iii).
- ii) I/L Dieback/DSO and Section Managers to follow up items (iv), (v) and (vi).

I/L Dieback to initiate action within one month of presentation of DIER findings.

LIKELY IMPACT:

Improvement in productivity cannot be quantified.

(4) LACK OF CAREER PATH FOR INTERPRETERS.

Covered in (3).

(5) INADEQUATE SELECTION PROCESS.

THE PROBLEM:

Interpreting is not viewed as a desirable occupation for the reasons described in (3). This has led, in part, to a conscription mentality being developed. ✓ *Her*

RECOMMENDED ACTION:

- i) Complete Recommended Action in Item (3).
- ii) Project team dealing with 3(ii) and 3(iii) to consider Interpretation ability should be a prerequisite to proceeding to L3,4,5, in Districts. ✓ *yes.*

(6) LACK OF CONTRACTOR SECURITY.

*Fixed*

THE PROBLEM:

The contract system offers no security leading to low morale; this affects efficiency.

RECOMMENDED ACTION:

- i) I/L Dieback to discuss the problem with Alcoa and in particular:
  - [a] possibility of full time employment with Alcoa, either as interpreters or in related areas.
  - [b] can contract interpreters be given 3 months notice of companies intent to renew contract.

LIKELY IMPACT:

Improvement in productivity cannot be quantified.

(7) LACK OF RESEARCH INTO APPLICATION OF NEW TECHNOLOGY

THE PROBLEM

*See*

*GIS - & Produced Locally*

In the past 2 yers there has been an absence of research into the use of new technology/methods in vegetation disease interpretation.

RECOMMENDED ACTION:

- i) Recently appointed DSO to establish communication links with Research, LIB, DOLA, CSIRO to examine potential areas for improvement and work required.
- ii) DSO to prepare a list of areas which require investigation and submit to I/L Dieback for approval.
- iii) I/L Dieback to prepare and monitor implementation of action plans.

LIKELY IMPACT:

Improvement in productivity cannot be quantified.

(8) INFLEXIBLE TEAM SIZE.

*See*

THE PROBLEM:

The advantage of splitting the traditional 2 person team is not developed equally in all Regions, meaning that in some conditions and vegetation types which can be adequately covered by 1 person, the 2 person team is used.

*Inexperienced Interpreters*

**RECOMMENDED ACTION:**

- i) Ensure all interpreters receive adequate training and are accredited to work alone.
- ii) Identify which conditions and vegetation types are more likely to be suitable for single person teams and ensure interpreters work alone at all times where this is possible.
- iii) Purchase sufficient equipment to permit this.
- iv) Train District staff to assist one person interpreter teams, eg: in demarcation.

**IMPACT:**

This has the potential to lift productivity by 10-25% depending on how often 2 person teams can be split. This depends on vegetation types and field conditions and equipment being available.

**WHO SHOULD FIX:**

- (i & ii) DSO, I/L Dieback, Section Managers.
- iii) I/L Dieback, Section Managers
- iv) EPB.

The above points are all considered to be big impact but will take longer to implement. It is recommended that should the steering team accept the recommendations that it be the responsibility of the Inventory Leader Dieback to ensure all recommendations are acted upon.

### **SMALL IMPACT, QUICK TO IMPLEMENT:**

It is recommended that the small impact, easy to fix issues be the responsibility of the DSO to follow up with individual Section Managers. The issues are:

1. Interpreters restricted to operate within their Region. ✓
2. Updated manual needs to be modified. ✓
3. Improved prioritisation of interpretation/other duties. ✓
4. Check that all steps in the interpretation process are required. ✓
5. Time spent on JSI maps is wasted. ✓
6. Sample turnaround time is excessive. ✓(SFR)
7. Poor field access to some areas. ✓
8. Delay in LIB transfer of boundaries ✓(CFR)

Each of the above were recognised to apply to at least one Region.

**SMALL IMPACT, LONGER TO IMPLEMENT:**

At the presentation it would be recommended that these issues be considered by Section Managers who should recommend to the I/L Dieback whether individual issues are worth following up.

The issues are:

1. Inadequate personnel management (covered in major recommendations).
2. Inadequate communication skills.
3. Inadequate exchange of ideas.
4. Excessive time spent interpreting film (Swan). (DSO to follow up Regional differences.)
5. Poor office equipment design (Swan). (DSO to follow up.)
6. Transfer of interpreters in summer. ✓

## 2) METHODOLOGY STEPS

- 2.1 Mission analysed and agreed to.
- 2.2 Product survey carried out and analysed.
- 2.3 Describe the current process.
  - 2.3.1 Interpreter production rates analysed.
  - 2.3.2 Interpretation process flow charted.
    - Regional differences analysed and taken back to each Region for follow up.
  - 2.3.3 Disposition flow charts completed.
- 2.4 Process and disposition flow charts analysed to determine where improvements can be made.
- 2.5 Cause and effect diagrams drawn up to analyse root causes.
- 2.6 Root causes categorised into:
  - Big impact, quick to implement;
  - Big impact, longer to implement;
  - Small impact, quick to implement;
  - Small impact, longer to implement.
- 2.7 Recommended action on each of the items in the first 2 categories (above) prepared. Action on the last 2 items a) will be implemented by the DSO and b) seeking direction from you.