IT DISASTER
RECOVERY PLAN

July 2024

Version History

Revision	Date	Name
1 - initial	1/7/2024	Tim Sargent JH Computer Services

Contents

1 Activation of this Plan

To activate this plan in the event of a disaster, turn to PART SIX (Procedures)

1.1 Authority to Activate this Plan

The Chief Executive Officer (CEO) has the exclusive authority to activate this Plan by process of declaring a disaster.

If the CEO is unavailable, the Executive Manager Corporate Services (EMCS) may also declare an IT disaster.

Key trigger issues that may lead to activation of the Plan are:

- Total loss of all communications
- Total loss of power
- Flooding of the premises
- Loss of a building
- Data Breach
- Any Corrupted/encrypted files found
- Disgruntled employee causing deliberate damage

2 Overview and Scope

2.1 Overview

A disaster is an event that significantly reduces the ability for Shire of Pingelly (the Shire) to provide normal services to its clients. Typically, an outage to the core IT systems of the Shire exceeding 24 hours is deemed to be a disaster.

This Plan details the communications structure, roles and responsibilities of the Crisis Management Team (CMT).

The CMT is responsible for managing the rapid and orderly resumption of core systems to the Shire in the event of a disaster. Consequently, the members of the CMT must have the appropriate authority and skills to accomplish their assigned tasks.

IT hardware and software problems, while they might in some instances be significant, will be resolved through normal problem resolution methods. Typical disasters involve an unscheduled event that causes the primary site to be inaccessible for an indefinite period of time. A disaster declaration begins the formal disaster recovery process outlined in this document.

2.2 Aim

The aim of this Plan is to set out the mitigation, preparation, warning, response and business continuity arrangements for the core IT systems of the Shire which are supported by JH Computer Services (JHCS), 26 Hardy Street, South Perth WA 6151.

As described in Section 5.3, continual review and change of this Plan will occur annually – or with significant business change - with the aim of improving existing resilience against damage to the business in the event of an actual disaster or outage.

2.3 Objectives

The objective of this Plan is to provide restoration and continuation of the core IT systems for the Shire when a disaster occurs. This is accomplished by developing and maintaining a detailed IT Disaster Recovery Plan (DRP) that will organise and govern disaster recovery operations.

The DRP must:

- Provide the information and procedures necessary to;
    - respond to an occurrence;
    - notify personnel;
    - assemble recovery teams;
    - recover data; and
    - resume functions at the current or alternate site as soon as possible after a disaster has been declared.
- Create a disaster recovery structure detailed enough to provide guidance to all interrelated groups, yet flexible enough to allow Shire staff and teams to respond to whatever type of disaster may occur.
- Identify those activities necessary to resume full services at the reconstructed disaster site or new permanent facility.
- Establish a return to "business as usual" environment.

NOTE: Availability of backup data is critical to the success of disaster recovery. Backup and restore processes that include scheduling data management, off-site storage and data restorations are day-to-day processes covered in operating procedure manuals.

Good practices are assumed, as are the availability of backup media that can be readily restored.

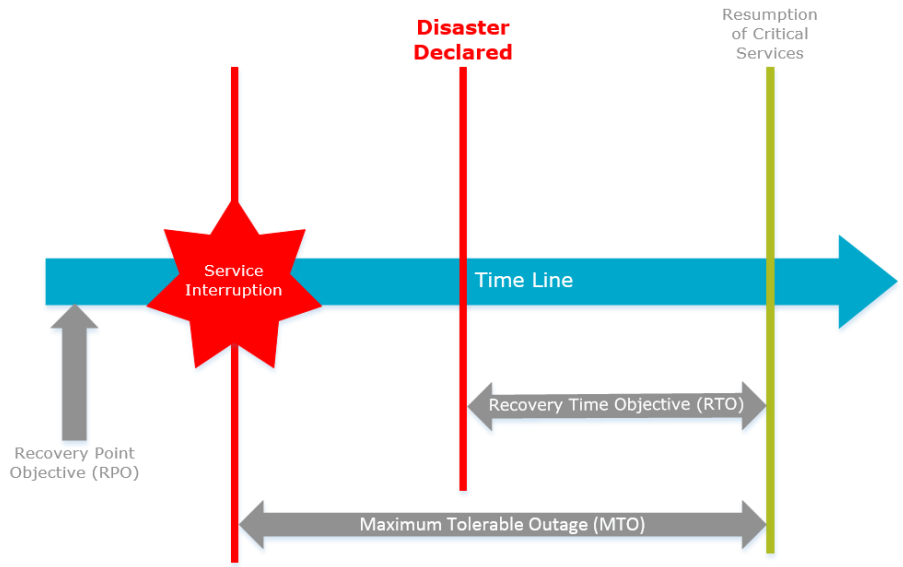
2.4 Recovery Time Frames

The following information forms part of the Shire of Pingelly Business Continuity Plan.

- **Low Impact Disasters.** Low impact disasters include those that will affect a small number of business operations, have a maximum downtime of 10 hours, and have no effect on the Shire Administration Building. At worst, the impact of such a disaster could affect a small aspect of all business functions, for example the loss of access to a software application resulting from a computer virus or human error, or the loss of telephone services throughout the Administration and other strategic Shire buildings. When such a disaster occurs, priority will be set at restoring the affected area, implementing any manual procedures that may replace the electronic processes and recovering any lost data.
- **Medium Impact Disasters.** Medium impact disasters affect most business operations, have a maximum downtime of up to 24 hours but generally have no impact on the Shire's general operations. At worst, these disasters can hamper business functions and cause significant disruptions to daily operations and tasks. The BIA shows that the above disasters are capable of causing power outages, structural damage or equipment loss/damage. More specifically, if any of these disasters were to fall upon the server room, a complete network failure is estimated to be the most likely outcome, impacting the operations of all departments. In this instance the recovery of data would involve the replacement of all damaged/lost equipment (network servers, printers, PCs and so forth), as well as the restoration of data from backup sources. Priority would be placed on network servers in order to restore the IT network as

soon as possible. The spare server would take around 48 hours to commission.

- **High Impact Disasters.** High impact disasters will affect most, if not all business operations, generally have a maximum downtime of up to 5 days, and will require the relocation of staff to the Crisis Centre. In the event of a high impact disaster JHCS will ensure the Shire's IT systems are brought back on-line as soon as practicable in order to maintain process continuity and service delivery. The distinguishing factor between a medium impact disaster and a high impact disaster is its effect on the Shire Administration Centre. A fire may completely destroy the building and all of its contents, including vital records and equipment and in the worst possible scenario, even cause injury or death. Floods and severe storms also have the ability to significantly damage or destroy vital records and equipment. In the event of a high impact disaster, the DRP will be actioned to its full extent, with priority being placed on the relocation of staff and resources to the Crisis Centre and the restoration of all critical business functions.
- **Maximum Tolerable Outage (MTO)**. The maximum tolerable outage is the amount of time the Shire's critical business functions may be unavailable before business operations are severely impacted. The MTO encompasses all activities from point of impact to point of recovery completion (as described in Section 5.1).
- **Recovery Time Objective (RTO)**. The recovery time objective is the time taken to recover the in-scope services for the Shire, from disaster declaration to business as usual.
- **Recovery Point Objective (RPO)**. The recovery point objective is the point from which recovery of lost data must take place.



2.4.1 Flood Disaster Recovery

Event	Site destroyed by flood
Mitigation	Offsite backup replication to private cloud
What to do	Servers activated in the cloud and vpn connectivity to remote users
Expected Downtime	2 business days

2.4.2 Fire Disaster Recovery

Event	Site destroyed by fire
Mitigation	Offsite backup replication to private cloud

What to do	Servers activated in the cloud and vpn connectivity to remote users
Expected Downtime	2 business days

2.4.3 Act of Sabotage

Event	Disgruntled employee destroys data
Mitigation	Regular server backups
What to do	Restore from onsite backups
Expected Downtime	Within the hour – up to 1 business day (depending on act)

2.4.4 Data Breach

Event	Data breach such as ransomware
Mitigation	Active monitoring of servers and 365 tenancy for ransomware activity via cyber security products
What to do	Gateway Disable outbound traffic, full virus scan of every device and full restore of servers from backup
Expected Downtime	Within the hour – up to 1 business day

2.4.5 Critical IT Business Function Recovery Time Objectives

Service Area	Function	Recovery Time Objective (days)
Finance	Accounts Payable	5
Finance	Accounts Receivable	10
Finance	Banking and Taxation	1
Finance	Licensing	3
Finance	Payroll	1
Customer Service	Customer complaints	3
Customer Service	Customer enquiries	3
Records	Records management	3
Records	Cemetery reservations and interments	5
Records	Incoming mail	3
Insurance	Insurance management and claims	3
Media & Communications	Communications and media management	1
Media & Communications	Website management and maintenance	3
Governance	Elected member liaison and support	1

2.5 Scope of Recovery

The purpose of this Plan is to address a significant outage of the core IT infrastructure at the Shire and will therefore only cover Information Communication Technology (ICT) Services.

2.5.1 Exclusions

- This DRP does not address the recovery of non-IT related Shire business operations during a disaster, such as manual fallback procedures, and/or resynchronisation of business processes. Responsibility for this resides within the relevant groups within the Shire.
- Any development or test environments.
- All standard exclusions, such as Core Application maintenance & telecommunication maintenance.

2.5.2 Recovery Validation

- Post-recovery, system health checks are performed by JHCS.
- Validation checks are performed by JHCS.

2.5.3 General Exclusions

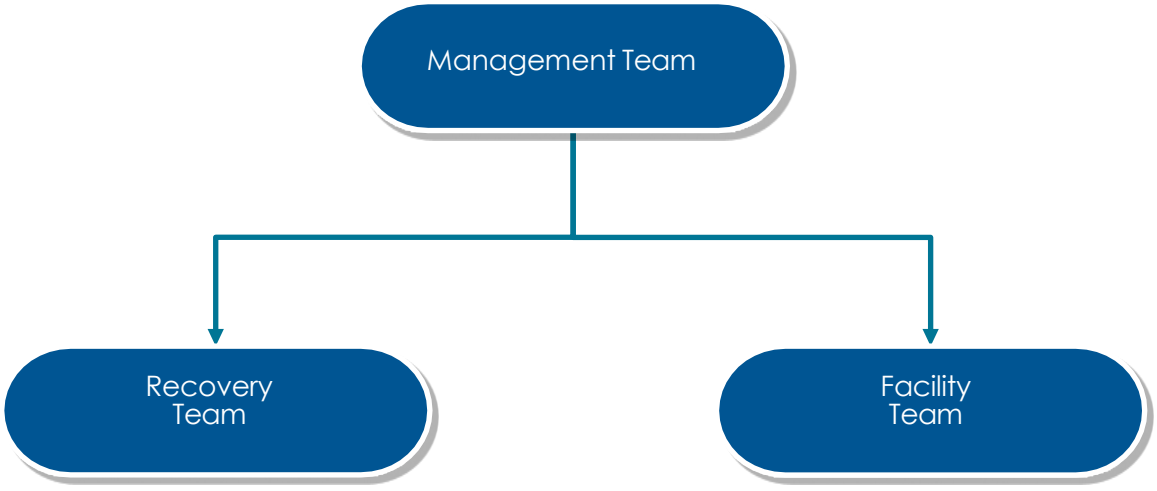
- A disaster of such magnitude that there are not enough personnel to resource the recovery in order to meet the Shire's objectives.

3 Organisation

3.1 The Crisis Management Team

The Crisis Management Team (CMT) includes three (3) sub-teams responsible for the successful execution of the IT DRP. These teams are:

- **The Management Team –** responsible for managing the recovery, and communicating with vendors, key clients, stakeholders and the Shire senior management. This Team is also responsible for the on-going recovery program and for keeping this Plan current during a disaster.
- **The Recovery Team –** responsible for restoring computer services at alternate facilities (if required). The Recovery Team will also restore computer service at the restored original facilities (if available).
- **The Facility Team –** responsible for damage assessment, damage mitigation, salvage, and the physical restoration of the office environment.

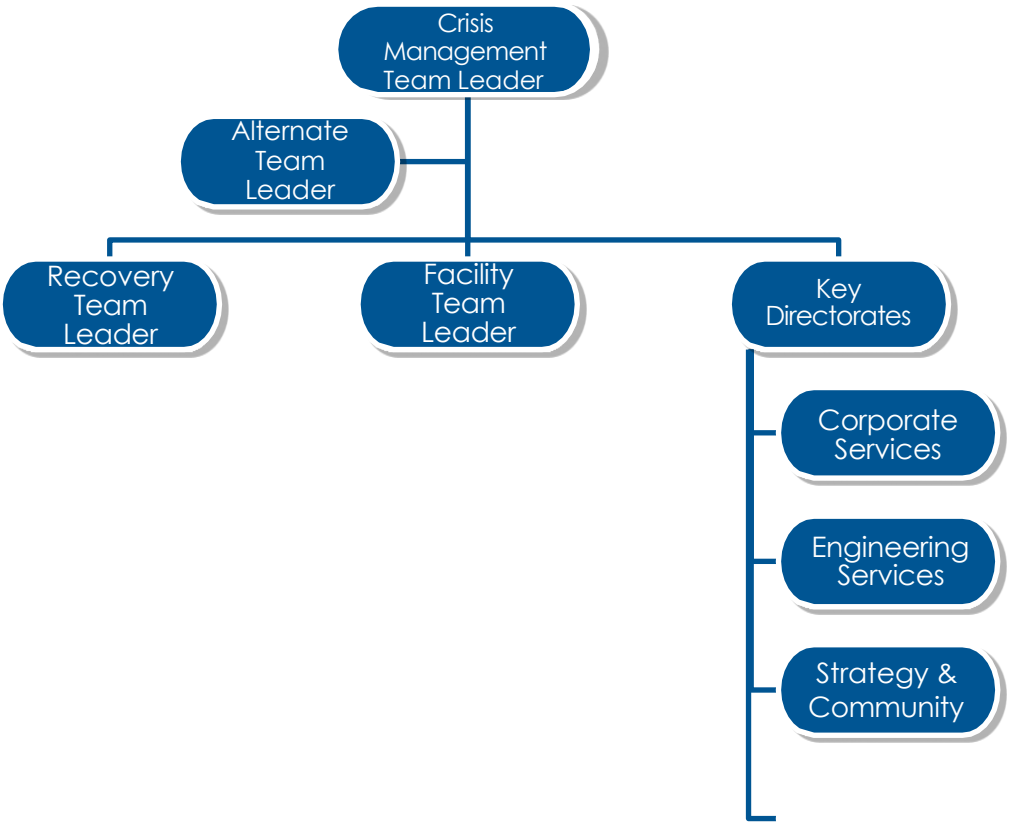


3.2 The Management Team

The Management Team is responsible for deciding on the course of action and coordinating all activities during the recovery period. The table below shows the kinds of skills and authority levels needed for Management Team membership.

Use this table to determine team membership assignments. One person could have more than one of the responsibilities. For example, the Management Team Leader often has authority for public relations and financial authority.

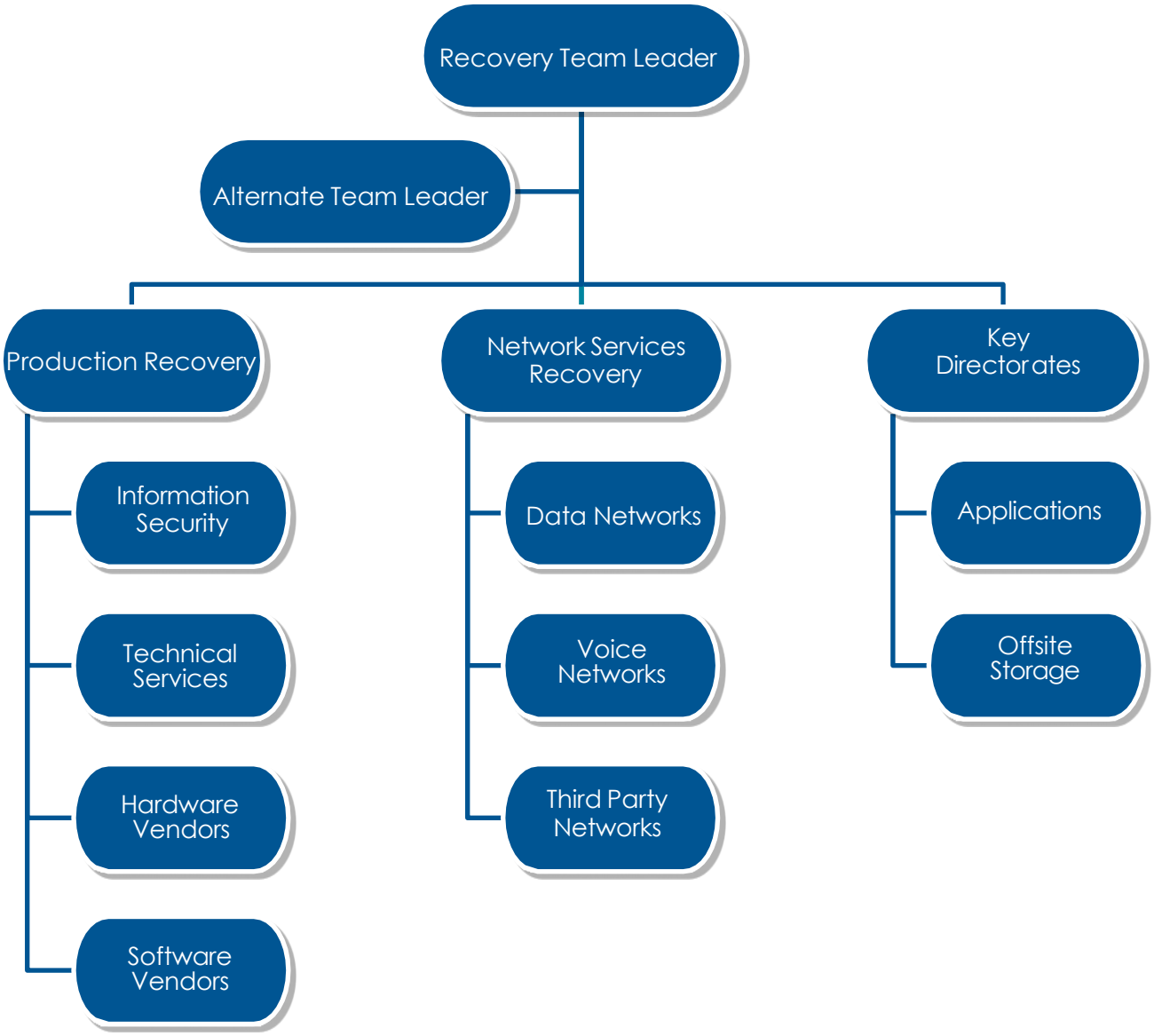
Refer to Section 4.1 for details on Management Team members, roles and responsibilities.



3.3 The Recovery Team

The purpose of the Recovery Team is to establish operations at an alternate-processing site or restore services at the disaster effected site.

Refer to Section 4.2 for details on Recovery Team members, roles and responsibilities.

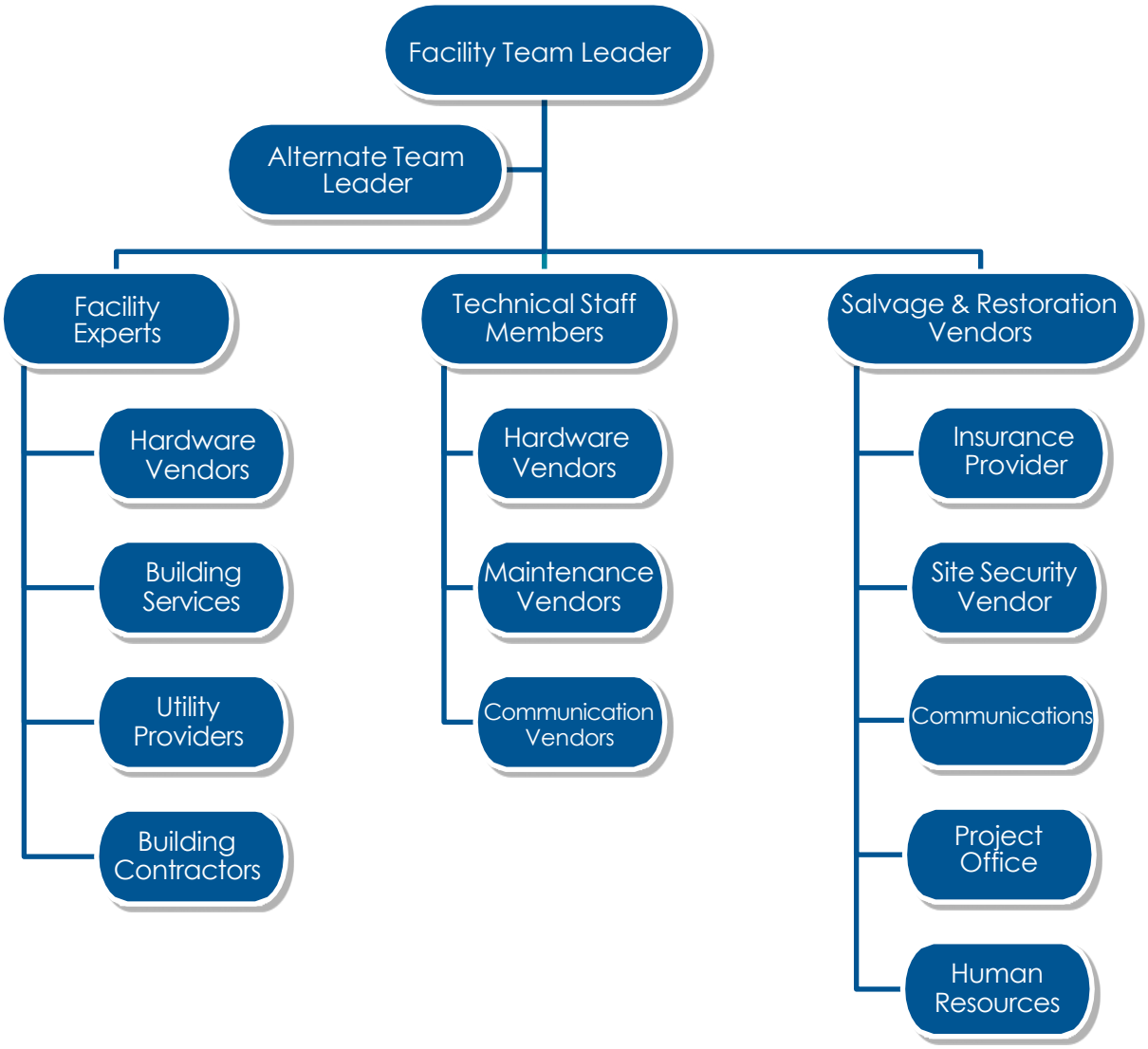


3.4 The Facility Team

The purpose of this Team is to secure, salvage, and restore the Shire office location to operational status as quickly as possible. The Team may also be needed to prepare an alternate facility for occupation. The skills required of team members include knowledge of computing and network hardware. The Facility Team leader is also a member of the Management Team. The table below shows the kind of skills and authority levels needed for Facility Team membership.

The Facility Team is tasked with conducting an in-depth damage assessment with recommendations to management on required repair or restoration activities. Concurrent with performing their evaluation procedures, members are responsible for initiating and monitoring recovery tasks assigned to their functional areas. Each team has its own chapter of detailed instructions later in this Plan.

Refer to Section 4.3 for details on Facility Team members, roles and responsibilities.



4 Roles and Responsibilities

4.1 Management Team

Management Team membership, roles and responsibilities are summarised in the table below.

Team Member	Role/Responsibility
Crisis Management Team Leader	CEO/ Executive Manager to oversee recovery. Authority to declare a disaster.
Alternate Crisis Management Team Leader	Full authority to act if Team Leader is not available.
Facility Team Leader	Oversee facility, security, damage assessment, salvage and reconstruction.
Recovery Team Leader	Knowledge of computer operations, systems & networks.
Communications	Authority to speak for the organisation.
Human Resources	Knowledge and authority to make Human Resources decisions.
Finance	Authority to spend the amounts required to fund recovery in the first days.

4.2 Recovery Team

Recovery Team membership, roles and responsibilities are summarised in the table below.

Team Member	Role/Responsibility
Recovery Team Leader	Internal IT resources - knowledge of computer operations, systems, etc. • Request/Retrieve the off-site backup data • Establish the command centre, as described in section 5.6. • Advise staff at alternate sites of a disaster alert prior to a disaster being declared. • Advise staff at alternate sites of a declared disaster. • Advise staff at alternate sites of a stand down from alert if recovery is not to be affected at the site or the disaster is not declared. • Liaise with site management and personnel.
Alternate Team Leader	Full authority to act if Team Leader is not available.
Production Operations Recovery:	Restore IT operations, print services and IT security services.
Network Services Recovery - Data: Network Services Recovery - Voice:	Aid in the recovery of voice and data network infrastructure. Includes recovery of hardware components, connectivity to the recovery site and recovery of critical network software. Liaison with relevant telephony vendor(s).
Server Recovery:	Aid in the recovery of critical servers and applications. Liaison with relevant application vendor(s).

4.3 Facility Team

Facility Team membership, roles and responsibilities are summarised in the table below.

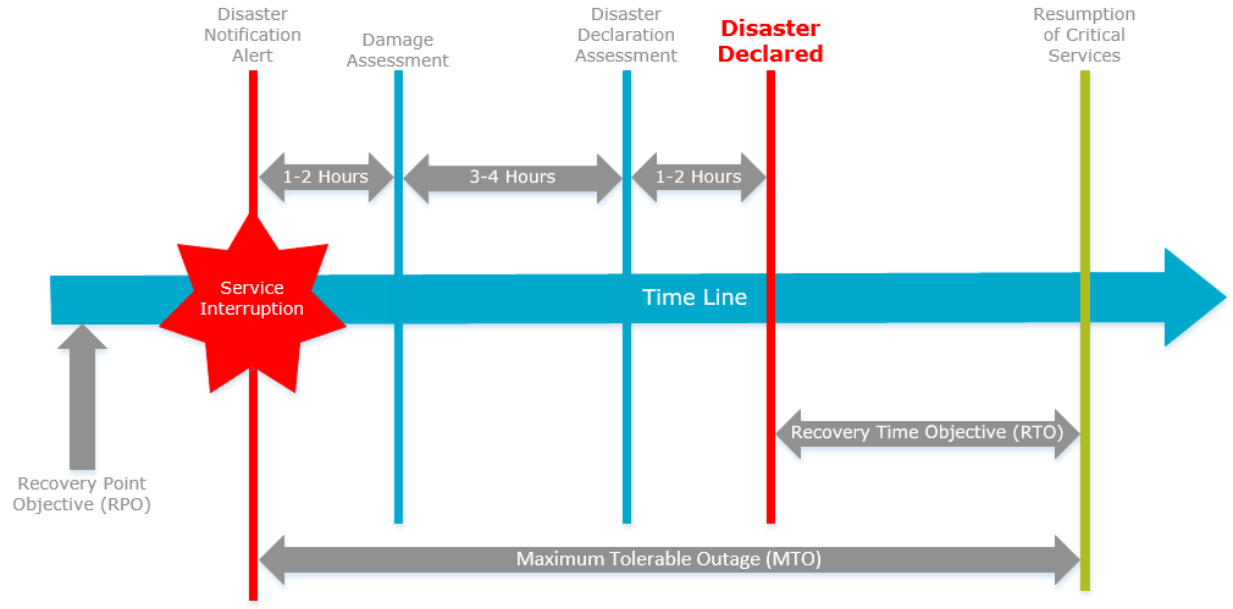
Team Member	Role/Responsibility
Facility Team Leader	Authority and knowledge to deal with damage assessment, damage mitigation, salvage, restoration, alternate site installation, etc.
Alt. Facility Team Leader	Authority and knowledge to act in place of the team leader.
Hardware Experts:	As required, depending upon the situation. Liaison with 3rd party hardware vendors.
Technical Staff Members:	Will be sourced from JHCS to assist with salvage, restoration, etc.

5 Processes

5.1 Recovery Strategy

Following the occurrence of a suspected disaster, there are **three** processes that will take place prior to the activation of the actual recovery process:

- **Disaster Alert Notification** – to notify CMT members, recovery teams, and the offsite media storage provider (JHCS) that a disaster may have occurred or is evolving.
- **Damage Assessment** – to ascertain whether a disaster has occurred, assess the extent of the damage and to assemble the recovery teams if necessary.
- **Disaster Declaration Assessment** – to ascertain if the predetermined Maximum Tolerable Outage is likely to be exceeded and that invoking the IT DRP and its associated procedures is necessary.



If there is a major incident where the damage is not widespread and the Shire is not seriously affected, it may not be obvious to the person(s) who detected such an incident whether it

constitutes a disaster, especially when the damage is confined and local. Where possible, it is expected that the usual problem management procedures be followed in dealing with such incidents.

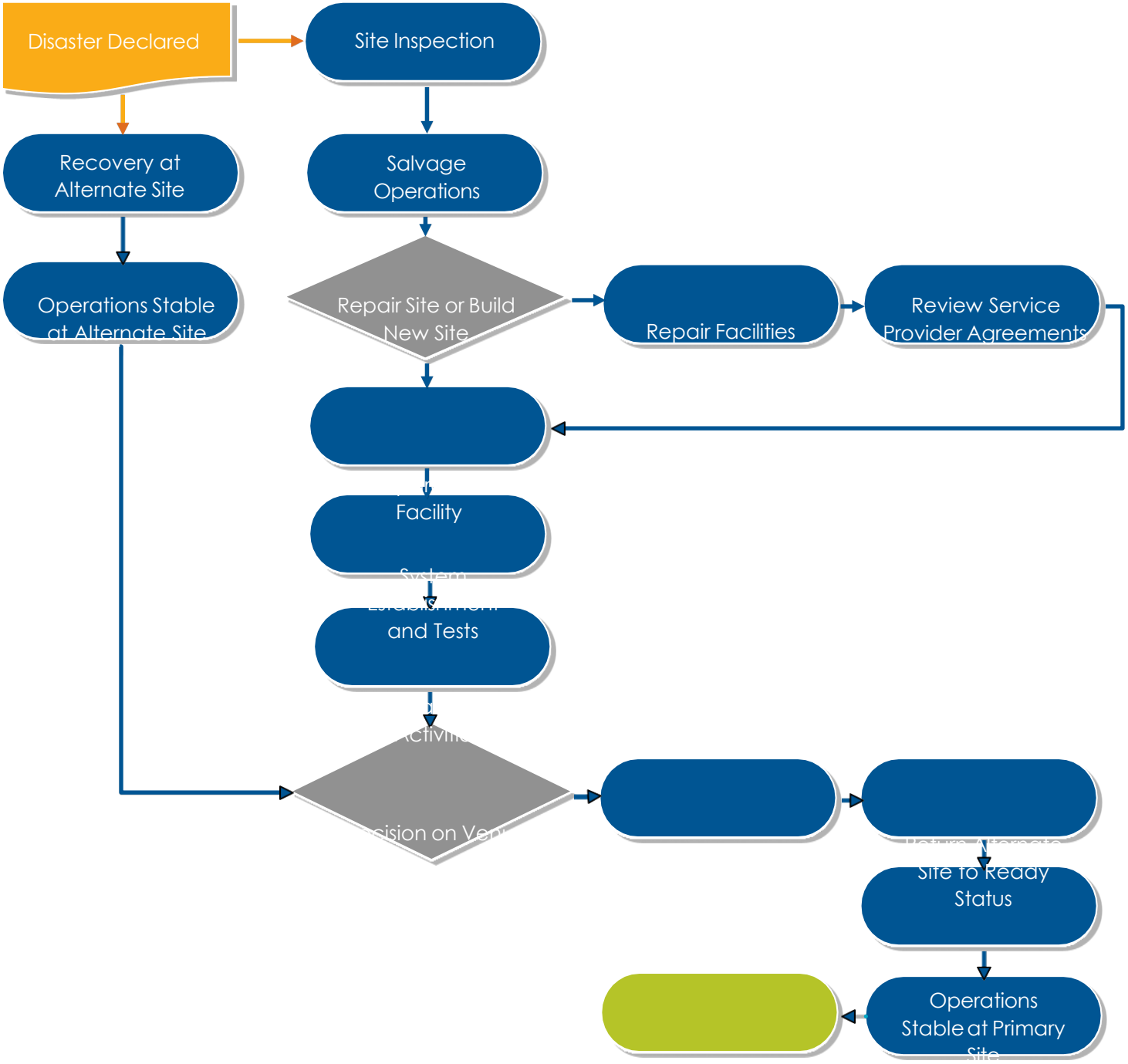
5.2 Business Resumption

This section provides the approach to restoring the Shire's disaster site or establishing a new office location. The extent and timing of the recovery activities will vary depending upon the nature of the disaster. These activities will need to be coordinated and planned as a parallel stream to establish stable operations at the recovery site. Detailed activities are contained in the Procedures section of this document.

The decision concerning the approach to re-establishing the Shire site and secondary sites should be made as soon as practically possible after a disaster occurs. This allows all the affected areas to adapt their procedures and staffing according to the expected length of the outage. The alternatives to be considered are:

1. The Shire of Pingelly Administration Office location is to be restored to original operating status. This will require the establishment of technical infrastructure according to current requirements and specifications.
2. The Shire of Pingelly Administration Office location is to be upgraded to preferred level of operating status. This will require:
    - establishment of new technical infrastructure according to revised requirements.
    - establishment of new facilities and services according to revised requirements.
3. A new office location is chosen. This will require:
    - assessment and risk analysis of the new site for suitability.
    - amended arrangements with JHCS to be established.
    - establishment of new technical infrastructure according to current requirements and specifications.
4. A secondary site is to become the new operations site. This will require:
    - assessment and risk analysis of the secondary site for suitability.
    - secondary site to beestablished.
    - communications, floor space and other facilities to be upgraded to be commensurate with the original operations site.
    - establishment of new technical infrastructure according to current requirements and specifications.
    - new arrangements with JHCS to be established.

5.3 Business Resumption Process



5.4 Debriefing

Prior to closure of a disaster situation and standing down of the Crisis Management Teams, a debriefing of all participants should be conducted. A debriefing will ensure that:

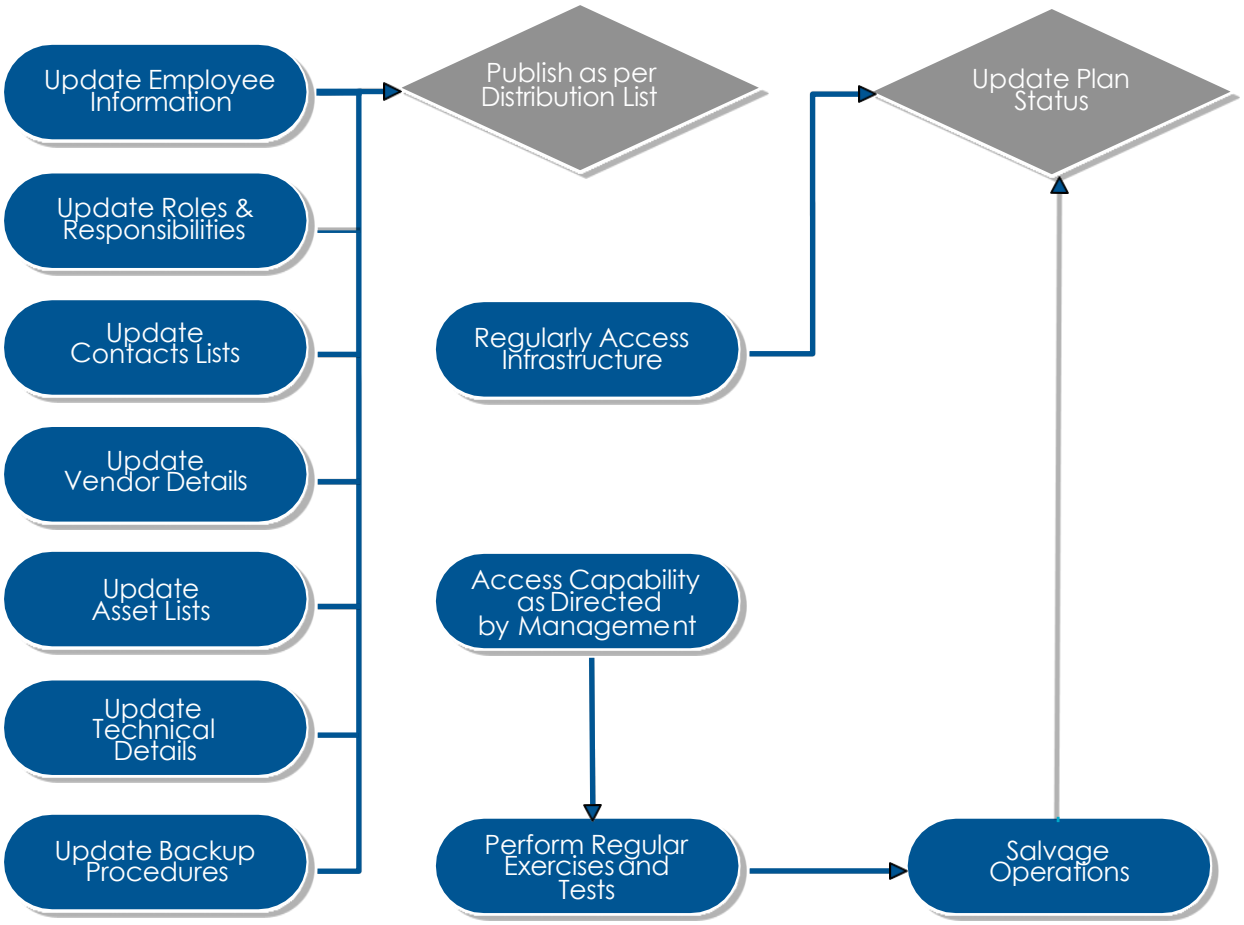
- all required recovery and normal business resumption tasks have been performed.
- ongoing system, business and client impacts are being addressed.
- the Shire can ascertain and understand the cause, nature and impact of the disaster on the organisation.

- financial impacts are clearly identified and documented for insurance claims.
- lessons learned are clearly identified and incorporated into a knowledge database for future IT DRP development and disaster management.
- deficiencies in the current process are clearly identified to allow projects to be established to rectify or mitigate them.

A report should be produced covering the above-mentioned aspects. This should be contained in a central knowledge register with lessons learned incorporated into new IT DR Plans.

5.5 Maintain IT DR Plan Documentation

The IT DRP will be updated annually, or when significant business change occurs, and should be maintained as illustrated in the chart below.

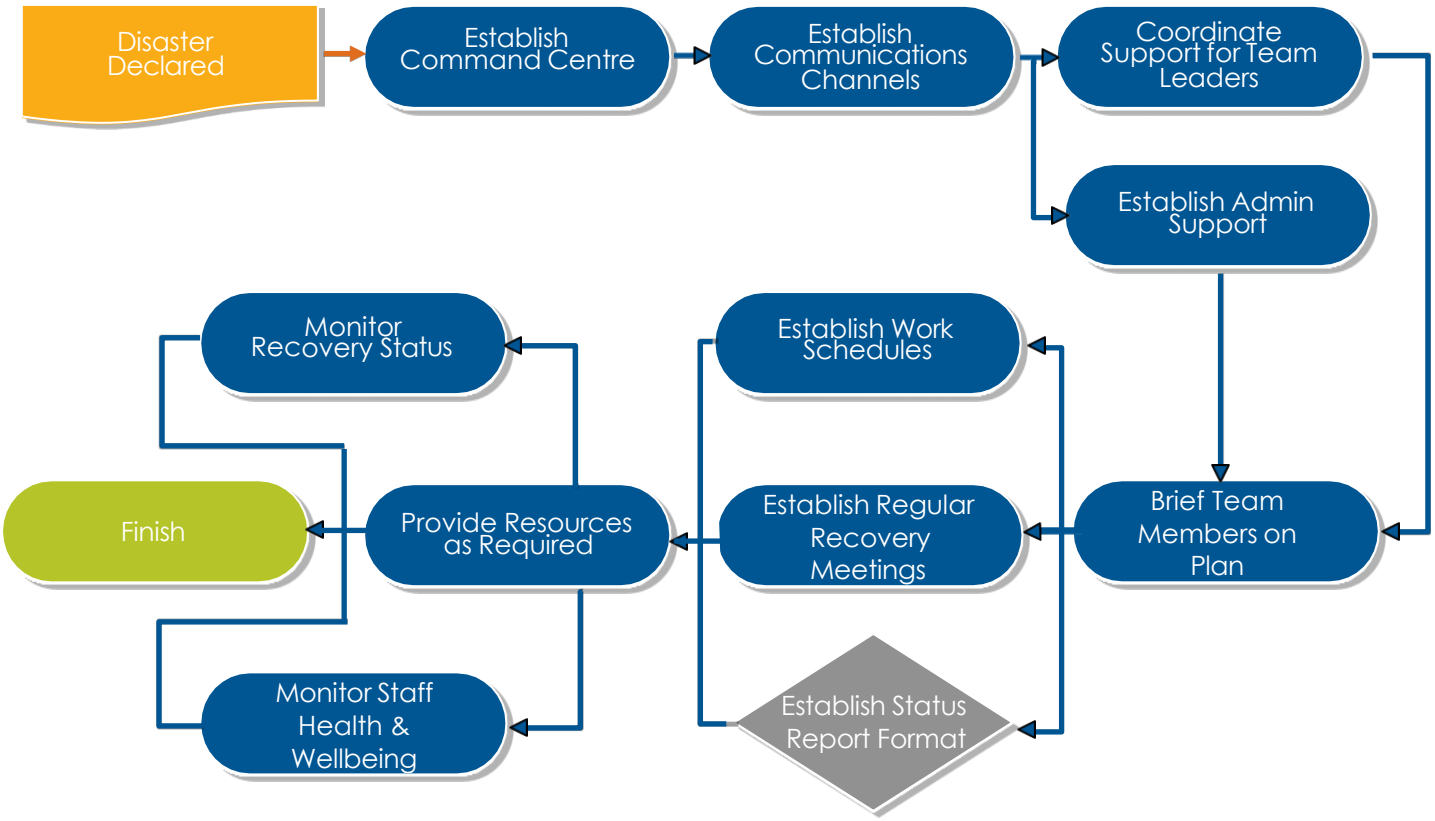


On an on-going basis, JHCS will:

- periodically assess the conditions, status, capabilities and availability of backup computers, PCs, LAN, telecommunication configurations, and the Shire's facilities.
- perform special studies requested by the Management Team to improve the efficiency of equipment and recovery procedures.
- prepare periodic status reports for the Management Team.
- coordinate business recovery tests and prepare test results and recommendations for plan improvement.
- maintain and distribute this Plan.

5.6 Command Centre Operations

The Command Centre will be the physical office that will be used in the event of a major disaster, the place where staff and stakeholders will first gather to establish the direction for dealing with the disaster at hand. Setting up and operating the Command Centre is the responsibility of the Management Team Leader, with activities as shown in the figure below.

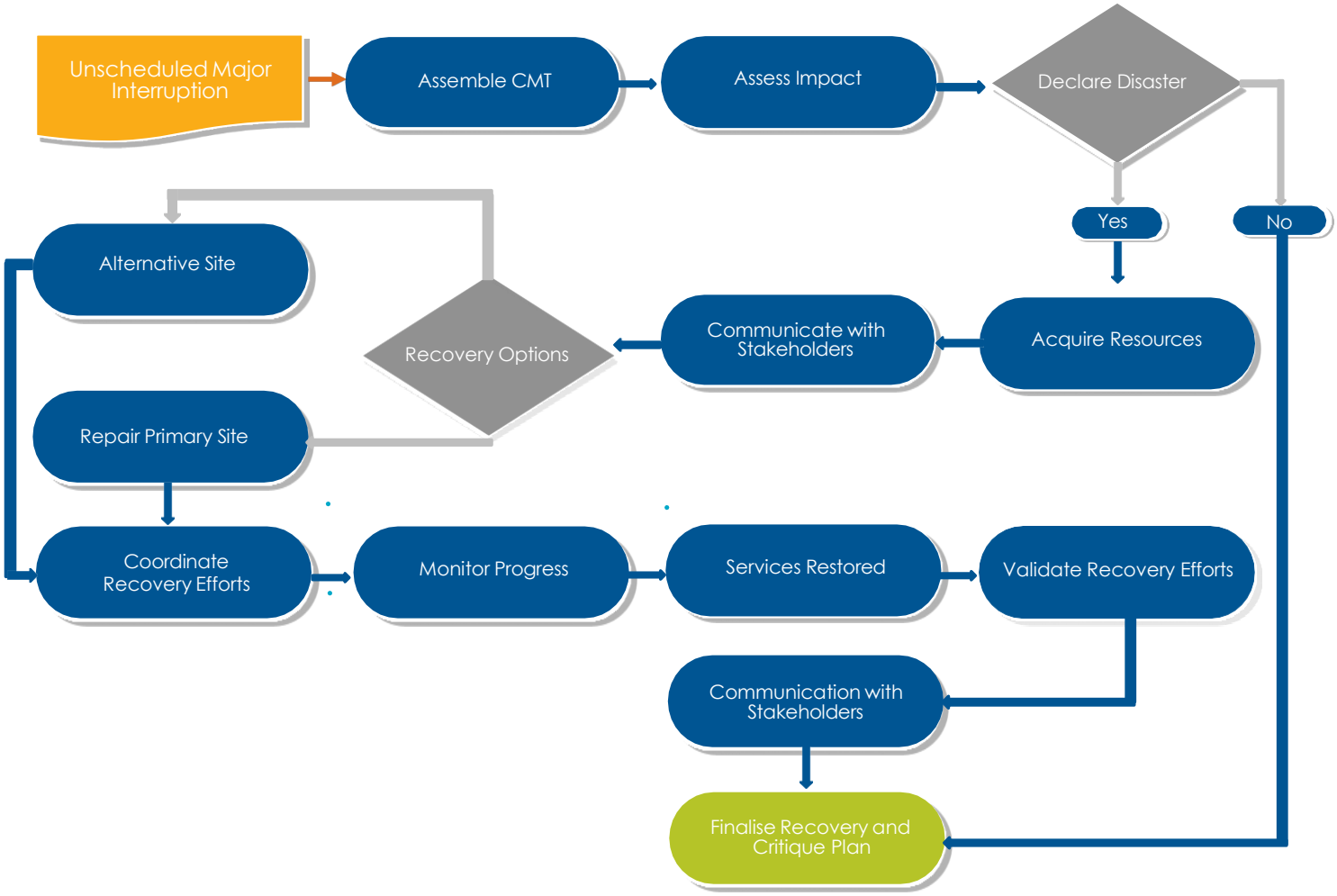


6 Procedures

6.1 Management Team

6.1.1 Management Team Actions Overview

The Management Team is responsible for the entire disaster recovery process; from when the Team is established until all services have been returned to the office location or new location. The Management Team Leader or delegate, with input from relevant key personnel, has the exclusive authority to declare a Disaster and consequently activate this Plan.



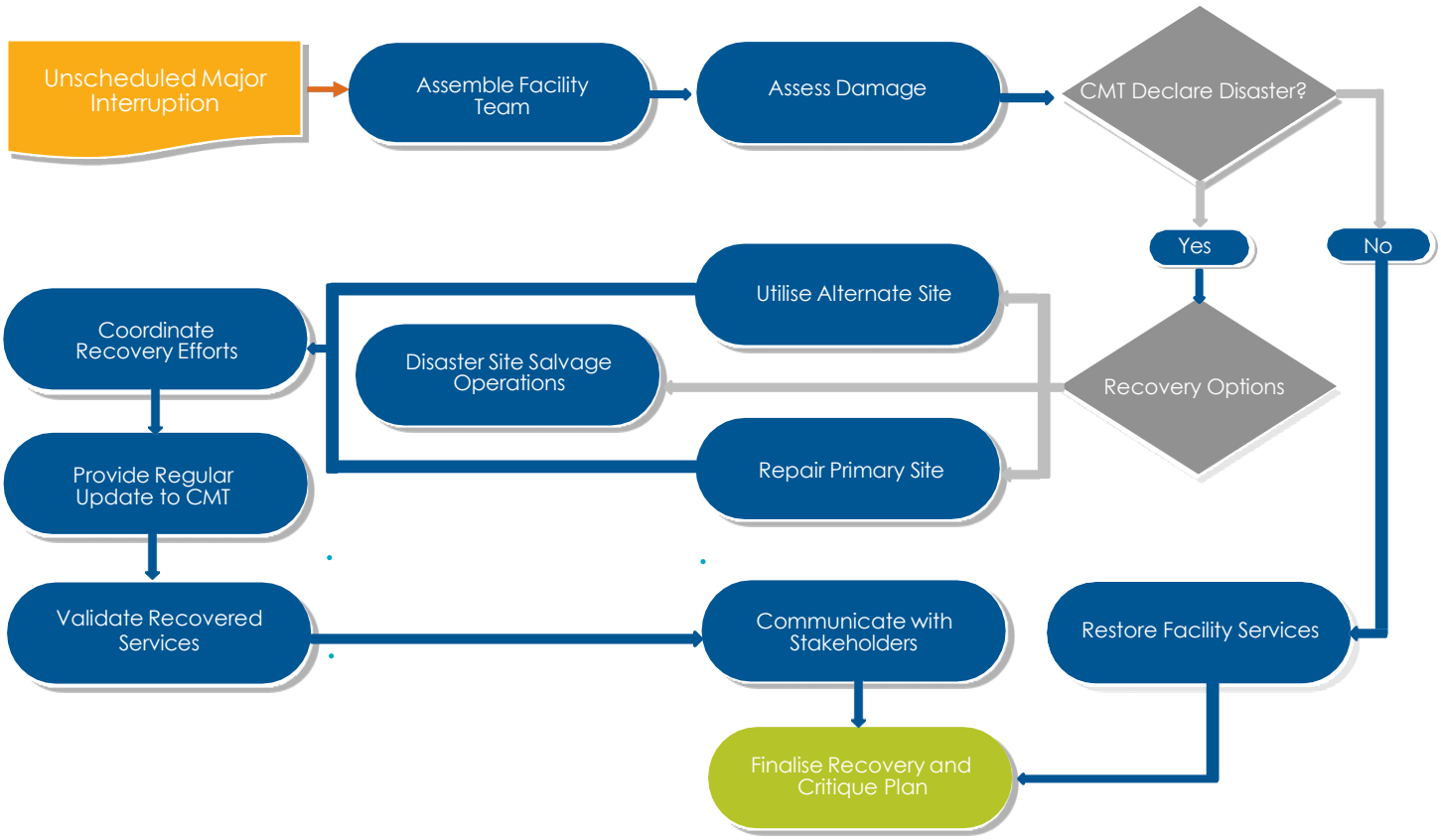
6.1.2 Management Team Actions

No.	Action Step	Responsibility	Time	Resources	Process Time	Comments
1	Assemble key staff	Management Team Leader				
2	Assess Damage	Facility Team				
3	Decide whether to declare a disaster or not. If **YES, go to Step 7.**	Management Team Leader				
4	Restore functions at Shire of Pingelly office location	Each Team Leader				
5	Debrief of the recovery	Management Team Leader				
6	Finish	If Disaster alert is stood down				
7	**DECLARE A DISASTER - Initiate recovery to alternate site**	Authorised individuals named in the Management Team				
8	Communicate with groups and coordinate recovery	Management Team Leader				
9	Acquire equipment and supplies	All Teams				
10	Build new or rebuild office location	All Teams				
11	Monitor progress	Management Team Leader				
12	Move to new or rebuilt office location	All Teams				
13	Discontinue use of alternate site	Management Team Leader				
14	Debrief of event (Assess plan)	Management Team Leader				

6.2 Facility Team

6.2.1 Facility Team Actions Overview

Prior to activating the Facility Team, the designated Facility Team leader should remain close to the scene of the disaster to help direct Emergency Services personnel. If evacuation is necessary, all personnel should immediately proceed to the pre-determined location, well clear of the building. A head count must be taken there to ensure that no one has been left behind, including visitors, contractors, etc. If there have been any injuries, immediately identify those people who can offer medical help, such as first aid.



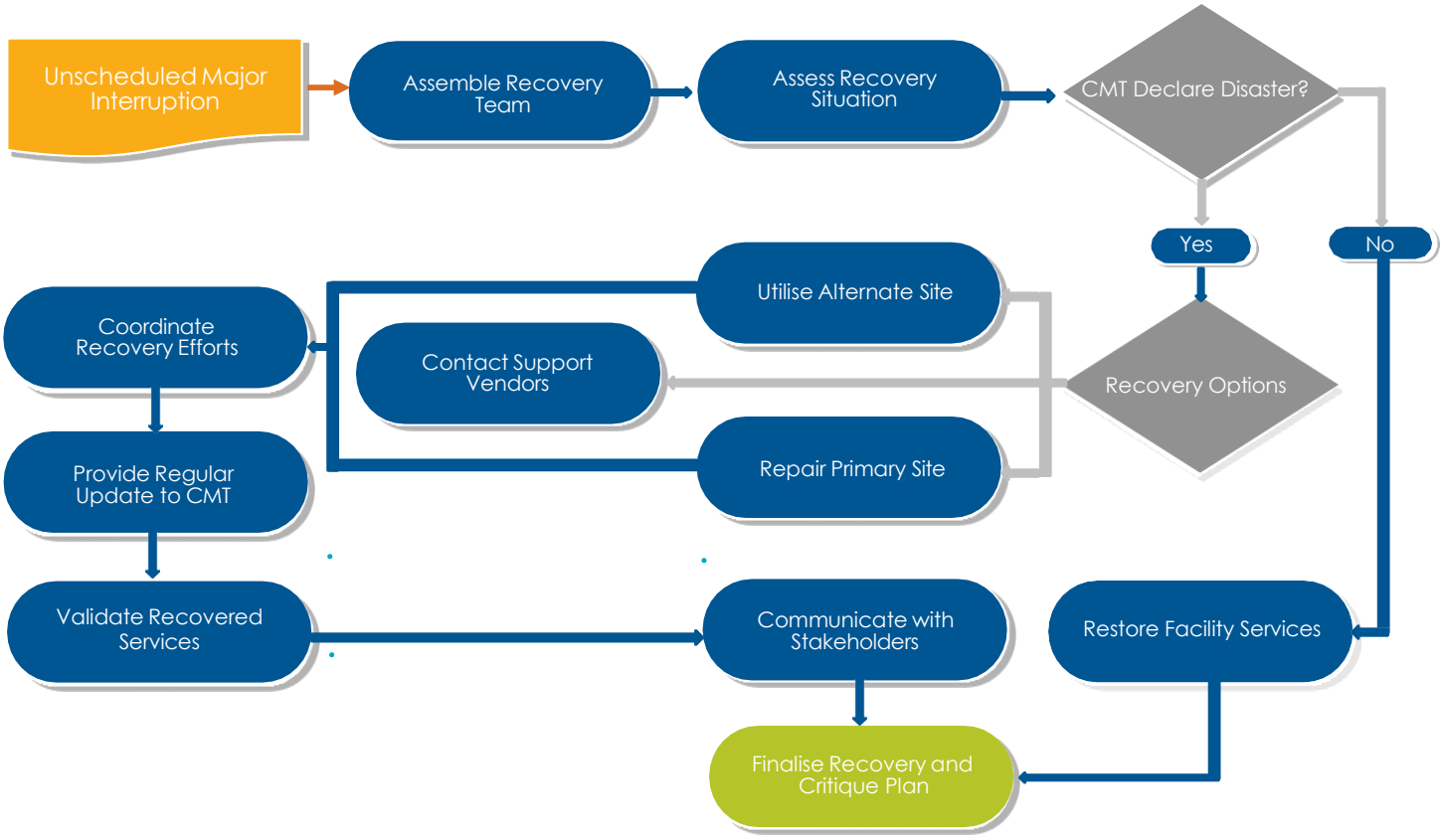
6.2.2 Facility Team Actions

No.	Action Step	Responsibility	Time	Resources	Process Time	Comments
1	Activate facility team	Management Team Leader				
2	Disaster site evaluation & salvage	Facility Team Leader				
3	Relocate or rebuild office location. **If decision is to relocate, go to step 10.**	Facility Team Leader				
4	Plan Office Location Rebuild	Facility Team Leader				
5	Hold Recovery Status Meeting	Management Team Leader				
6	Coordinate Move back to Shire of Pingelly Office Location	Facility Team Leader				
7	Discontinue use of alternate location if one was required	Facility Team Leader				
8	Delivery plan critique	Facility Team Leader				
9	Finish	Management Team Leader				
10	Assist Alternate Site selection	Facility Team Leader				
11	Coordinate Move to alternate location	Facility Team Leader				
12	Discontinue use of office location	Facility Team Leader				
13	Delivery critique of BC Plan	Facility Team Leader				
14	Finish					

6.3 Recovery Team

6.3.1 Recovery Team Actions Overview

This section contains the procedures to be followed by the Recovery Team. The Recovery Team includes the hardware, software, and communications experts who travel to the alternate site. The Recovery Team restores the software and data onto an alternate-computing platform and restores communications from that platform back to the users.



6.3.2 Recovery Team Actions

No.	Action Step	Responsibility	Time	Resources	Process Time	Comments
1	Activate recovery team	Management Team Leader				
2	Is main office and existing infrastructure available for recovery? **If NO, go to Step 7.**	Management Team Leader				
3	Restore data communications	Recovery Team Leader – JH Computer Services				
4	Recover or rebuild affected servers from latest available backup	Recovery Team Leader – JH Computer Services				
5	Testing of recovered systems	Management Team Leader – JH Computer Services				
6	Debrief - Review plan - Finish	Recovery Team Leader				
7	Build alternate site - Transfer operations	Recovery Team Leader				
8	Restore or implement data communications	Recovery Team Leader – JH Computer Services				
9	Recover or rebuild affected servers from latest available backup	Recovery Team Leader – JH Computer Services				
10	Testing of recovered systems	Management Team Leader – JH Computer Services				
11	Coordinate move to new/rebuilt office location	Management Team Leader				
12	Post disaster - migrate live data / servers to new or salvaged infrastructure	Recovery Team Leader – JH Computer Services				
13	Debrief - Review plan effectiveness	Recovery Team Leader				

7 Appendix A – Contact List

7.1 Shire of Pingelly

Position	Name	Phone ext.	Mobile
Chief executive Officer	Andrew Dover		
Executive Manager Corporate Services	Zoe Macdonald		
Executive Manager Engineering Services	Mike Hudson		

7.2 JH Computer Services

Position	Name	Email	Mobile
General Manager	Tim Sargent	tim@jhcs.com.au	0413 842 244
IT Support	Boris Stojic	boris@jhcs.com.au	0447 591 084
IT Support	Jye Dalziel	jye@jhcs.com.au	
General helpdesk		support@jhcs.com.au	9367 9499