



Imperial Oil & Gas

EP 187

Appendix 12

Bushfire Management Plan

IMP 5-1

Document Control

Date	Rev	Description	Author(s)	Reviewed	Approved
05/02/24	1	Issued as an Appendix of EMP IMP 5-1	Vic F.	Peter S., Rachel L., Kelvin W., Nicholas F. Trent S., Vicky C.	Robin P.

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1 Introduction

This Bushfire Management Plan has been developed as part of the suite of documents under the EMP IMP 5-1 and to comply with Section A.3.7 of the *Code of Practice: Onshore Petroleum Activities in the Northern Territory 2019 (the Code)*. This Bushfire Management Plan applies to the Activity to be carried out in the CPP Area.

2 Background

The CPP Area is in the Australian tropical savannah zone and generally comprised of open woodland with grassland. Historically, the CPP Area has been regularly burnt using Traditional Owner's fire management practices. This practice of regular burns reduces the risk of significant hot fires and allows for a cooler, less intense burn.

More recently, the CPP Area has been increasingly used for cattle grazing, and as a consequence, many new fence lines and fire breaks have been constructed through the exploration area. As a part of grazing management practices towards the end of the dry season, the CPP Area is regularly burnt to reduce fuel loads and promote new pasture growth through the following wet season. Further background bushfire information is provided in the EMP **Section 4.2.10**.

The Activity includes the clearing of 226 ha, the construction of new well pads, access tracks, gravel pits and the extension of existing gravel pits, water bore pads and well pads. Flowlines and supporting infrastructure including the Carpentaria Gas Plant (CGP), Water Handling Station (WHS), and campsite will be constructed.

3 Analysis of Baseline Information

3.1 Information Source

Baseline fire information has been sourced from the North Australia and Rangelands Fire Information (NAFI) website [NAFI, 2024]. These data have reviewed and analysed, and the results used in the information presented below. As this Activity will be carried out over an extended period, this document will be reviewed annually for currency of baseline information.

3.2 Fire Frequency and Time Since Last Burn

Parts of the CPP Area have been burnt at different frequencies between 2013 and 2022 (**Figure 3.2—1**). The times since the last fires for the same period are shown in **Figure 3.2—2**.

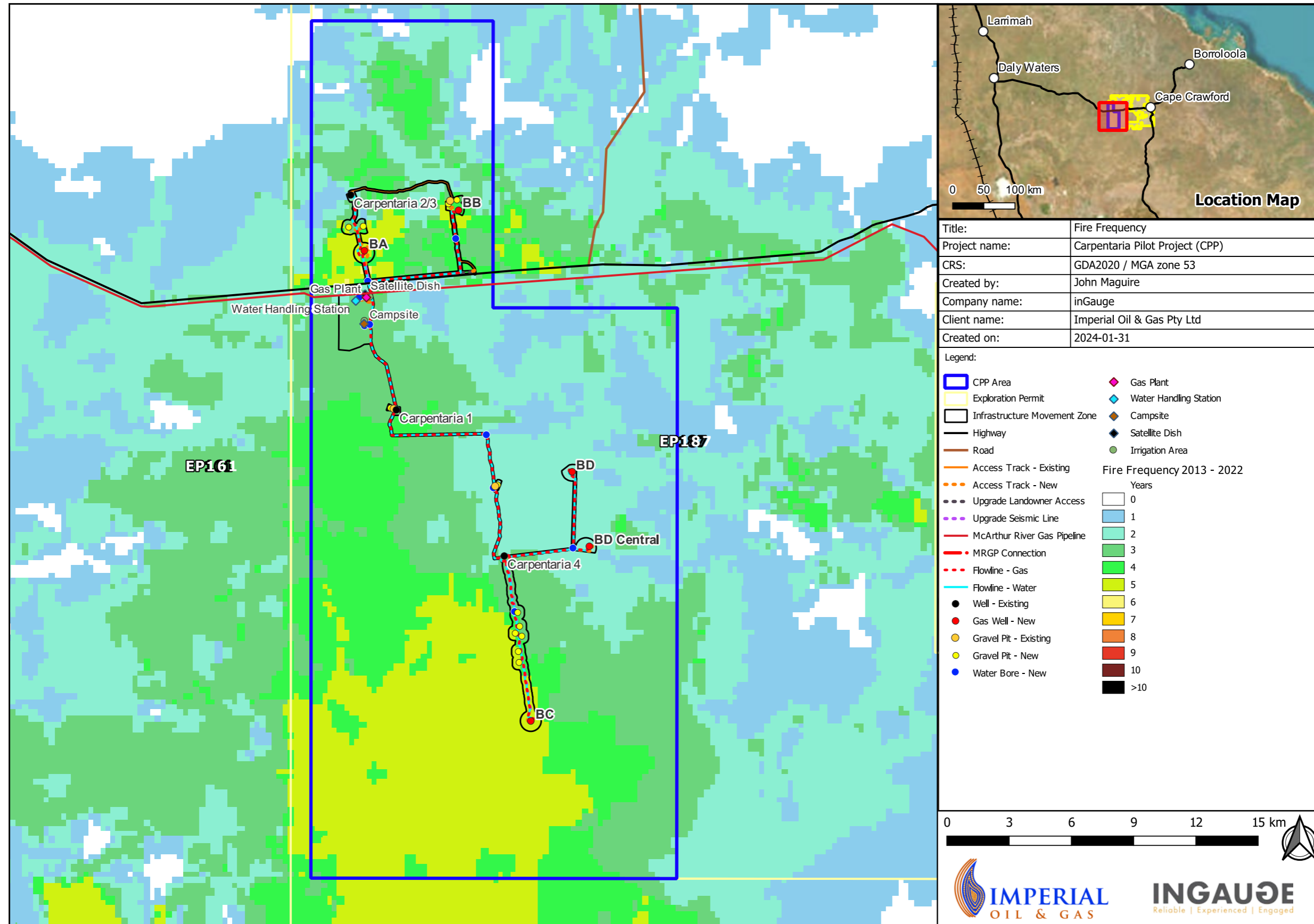


Figure 3.2—1 CPP Area Fire Frequency 2013-2022

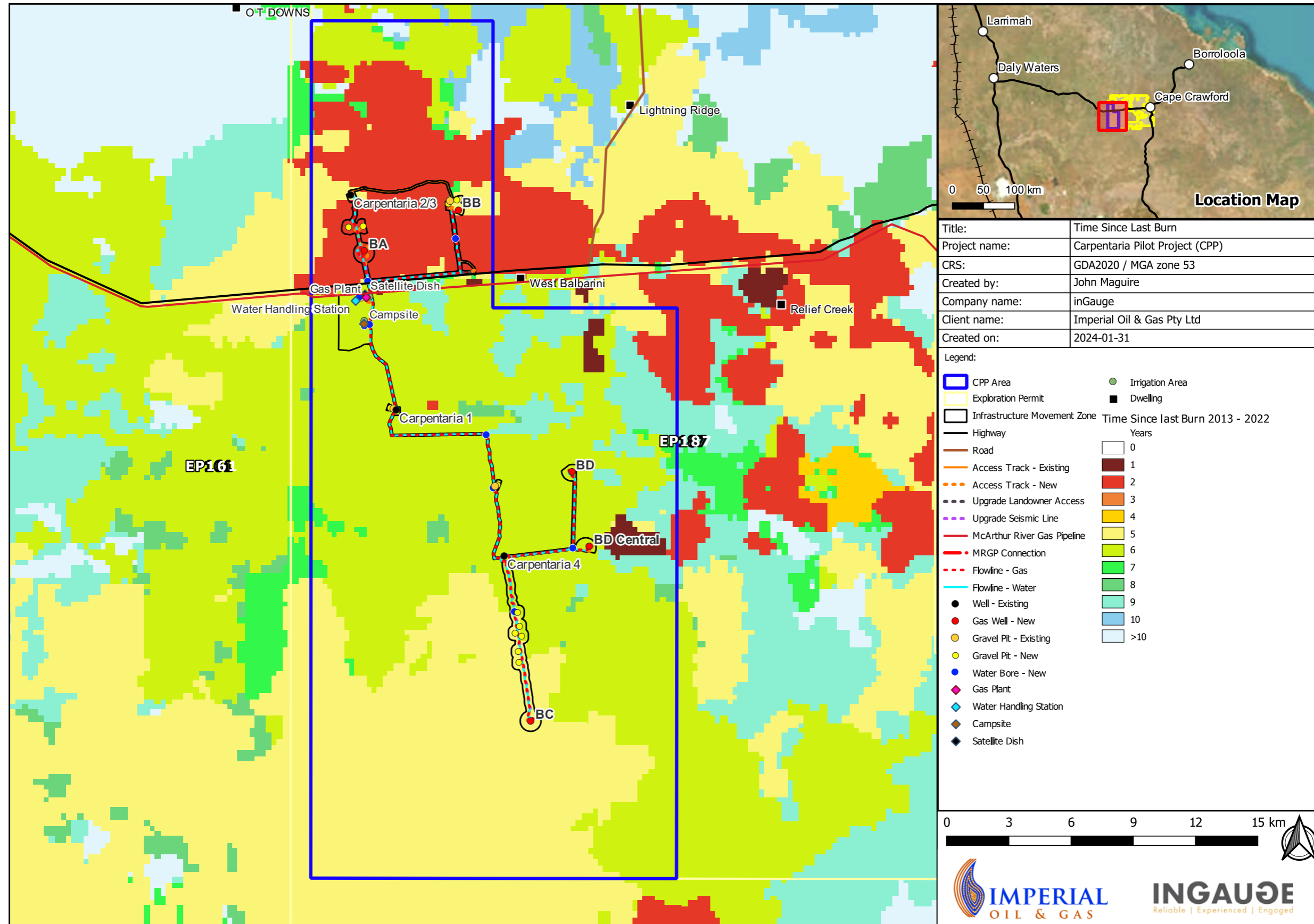


Figure 3.2—2 CPP Area Time Since Last Burn

4 Impacts on Existing Fire Management

The CPP Area is within the Savanna Fire Management Zone in the Northern Territory. The Savanna Regional Bushfire Management Plan 2022-23 (SRBMP) (Bushfires NT - Natalie Chester 2022) has been developed, in accordance with the *Bushfires Management Act 2016* (NT) to support community-wide fire management within the Savanna Fire Management Zone [BUSHFIRE NT, 2022].

The Fire Management Objectives of the SRBMP are detailed in Section 7 of the SRBMP, and include:

- Safety and asset protection
- Management of land and resources - using fire to manage native flora and fauna utilising indigenous knowledge and cultural practices
- Conservation - biodiversity enrichment, research, habitat protection, bushfire suppression and cultural protection
- Carbon abatement - including reducing greenhouse emission and carbon sequestration
- Pastoralism - protection of life and property, and weed and pasture management
- Edge burning - to protect corridors for road, rail, power, water, gas, and riverine corridors
- Mining and exploration – protection of life, property, and assets
- Tourism – protection of life, property and assets and exclude fire from specific areas to conserve natural features
- Defence - protection of life, property, and assets.

The SRBMP identified three risks with a high-risk rating, and these are detailed in Section 9.2 of the SRBMP. The three risks and their controls as they apply to the Activity are discussed in the EMP and its Appendices, listed in **Table 4—1**.

Table 4—1 SRBMP High Risks and Controls

Risk	Controls
Detrimental impacts of Gamba Grass and Fire Weeds.	<ul style="list-style-type: none"> • EMP Section 4.14. • Weed Management Plan (Appendix 04). • Rehabilitation Management Plan (Appendix 03).
Damaging fires crossing property boundaries through loss of cooperation between neighbours. Land managers with an insufficient level of expertise in fire management.	<ul style="list-style-type: none"> • Bushfire Management Plan (Appendix 12), in particular Sections 5 and 6. • Stakeholder Engagement (EMP Section 5) • Emergency Response (Contingency) Plan (Appendix 09).
Risk of recurring wildfires impacting multi-tenure fire and land management objectives.	<ul style="list-style-type: none"> • Bushfire Management Plan (Appendix 12), in particular Sections 5 and 6. • Emergency Response (Contingency) Plan (Appendix 09). • Stakeholder Engagement (EMP Section 5). • Controls detailed in Description of the Activity (EMP) - Section 3, in particular Sections 3.4 and 3.9, and Table 3.4—1.

5 Infrastructure Design, Construction and Operation

The well pads, CGP and WHS (facilities) are designed with a ring-fire access trail/fire break approximately 8 m wide, with approximately 4 m fire breaks around water bore pads. Any areas between the well pad and CGP fence line and fire breaks e.g., to skirt obstacles, will have large vegetation removed, as a reduced fuel load area, to minimise the risk of causing a fire in the surrounding environment.

All above-ground enclosed tanks will be designed and constructed to any standards that apply in the Northern Territory for the type of structure and be able to withstand bushfires.

To reduce the risk of fire, all facilities, plant, and equipment will be operated and maintained to manufacturer's requirements. Standard configuration includes spark arrestors on vehicles and diesel generators.

During recovery of gas on an appraisal basis, a flare may be installed at each well head. The area set aside for installation of flares will have a 20 m radius fuel load exclusion zone. At the CGP, a flare system will be installed for the safe disposal of gas during CGP plant upsets or abnormal conditions. The flare setup at the CGP will include a minimum exclusion zone of 20 m for flammable materials. Depending upon final layout of the CGP and proximity of vegetation, radiant heat modelling may be done to inform adjustments to both the exclusion radius and the flare configuration at the CGP.

The welding temperatures for PE pipe used in constructing flowlines are not high enough to be considered a potential source of ignition.

6 Fire Management Practices

6.1 Fire Access Trails and Fire Breaks

Fire access trails and fire breaks approximately 8 m wide will be established throughout the CPP around facilities as part of the civil construction works. These fire access trails and fire breaks will be maintained during operations as required. Access roads and tracks may also act as fire breaks.

6.2 Seasonal Conditions and Fire Load Assessment

As noted in **Section 3** of this Plan, seasonal fire load assessment updates using NAFI information will be carried out at Activity sites throughout the duration of the Activity. These assessments will inform maintenance requirements to ensure that the fire breaks are effective.

6.3 Annual Fire Mapping

Annual mapping utilizing the available information from the NAFI database will be conducted for the CPP Area to monitor changes to fire frequency (<https://www.firenorth.org.au/>).

If a fire occurs in the CPP Area during the Activity, Imperial (in consultation with land managers) will map the extent of the fire effects within the immediate area and provide DEPWS with the information.

6.4 Controlled Burns

There will be no controlled burns under this EMP. However, the land holders and Traditional Owners may conduct controlled burns in the area.

6.5 Monitoring of Bushfire Alerts

The Site Supervisor will monitor the NAFI website and Secure NT website daily. The Site Supervisor will liaise with relevant land holders/pastoralists if a fire on adjacent properties threatens the CPP Area or infrastructure.

6.6 Coordination with Landholder/s and Other Land Users

Imperial has ensured that the Activity does not affect the land managers' fire management obligations and strategies, through the land use agreement process. An extension of the land use agreement has been discussed and reviewed with the land managers to ensure there are no unforeseen impacts on the existing fire management regime from the Activity.

During the operation of the Activity, the Site Supervisor will liaise with relevant land holders/pastoralists if it is considered that any element of the Activity may affect them.

6.7 Local Bushfire Brigades

Imperial may support the local fire brigade if the need arises.

7 Fire Control Measures

7.1 First Response Actions

On identification of a fire incident, the first on site will immediately check for the status of other people and extent of the fire, and report to the Site Supervisor. The report to the Site Supervisor should indicate the:

1. Location
2. Other people present
3. Extent of incident
4. Need for assistance
5. Intentions to assist. (NB Assistance only if within training and ability levels.)

Imperial's Site Supervisor/Incident Commander will assess the incident and activate the Emergency Response (Contingency) Plan if required.

7.2 Site Design and Operation

In terms of site design and operation:

- Tanks will be designed to withstand bushfires and placed on the well pad within the ~ 8 m well pad fire break.
- The well pad flares, if deployed, will be designed to reduce the likelihood of radiant heat igniting adjacent flora. The area set aside for the flare will have a 20 m fuel load exclusion zone and be located on the well pad within the ~ 8 m fire break.
- The CGP flare will be designed to meet the requirements of API 521 and sized to meet maximum plant production, including potential abnormal conditions.
- Flaring at the CGP during the appraisal phase would occur only due to process upsets or during construction and commissioning of the plant. Flaring at the well pad is only likely to occur in the clean-up phase of the well on occasions where produced gas cannot be sent to the CGP.
- There will be fire extinguishers in all operating plant, the campsite, CGP, and in the Site Supervisor's vehicle.

7.3 Fire Management Measures

The following measures and controls will be in place:

- Fire response equipment on-site during civil construction.
- Fire breaks and access trails for fire management will be ~ 8 m wide around facilities, except approximately 4 m wide around water bores. Access roads and tracks may also act as fire breaks.
- Any areas between fire access trails and the well pad and the CPP Area fence lines will have large vegetation removed.
- All well pad and CGP works will be carried out within the confines of the fire breaks and fire access trails.
- Hot work permits will be used for any activity that has the potential to create heat, sparks, or flames. Hot work permits will be revoked on extreme fire hazard days.
- Fire access trails will be monitored for grassy weeds and controlled where necessary.
- Fire breaks will be monitored, maintained and inspection records will demonstrate that fire breaks are routinely checked and cleared of fire-risk material for the duration of the Activity.

- Any reduced fuel load areas between fire breaks and the well pad and CGA area fence lines will be monitored and maintained, to ensure any regrow of large vegetation is removed.
- The Site Supervisor will monitor the NAFI website daily and liaise with relevant land holders/pastoralists about potential fire control measures if a fire threatens the CPP Area or infrastructure.
- During the operation of the Activity, the Site Supervisor will liaise with relevant land holders/pastoralists if it is considered any CPP activities may affect their fire management practices.
- All machinery and vehicles will be parked in areas of low fire risk where possible.
- Permits under Section 46 of the *Bushfires Management Act 2016 (NT)* will be sought if flaring is required during NT declared fire danger periods.

7.4 Training

All personnel will be trained at site inductions and annually in:

- Activity fire prevention and management measures.
- Firefighting equipment location, and operation and communication requirements.
- Use of hot work permits for any equipment that has the potential to create heat, sparks, or flames, and which could initiate a fire, such as welding, angle grinding, etc.
- Restricted smoking areas and requirements.
- The Bushfire Management Plan and Emergency Response (Contingency) Plan procedures.
- Familiarity with the Bushfire Management Plan one pager (**Section 9** of this Plan).

8 Emergency Contact Details

Table 8—1 Emergency Contact Details

Entity	Contact Details
Emergency	000 or 112 mobile
Boorroloola Volunteer Fire Services	0411 191 824 Borroloola.NTFRS@pfes.nt.gov.au
Bushfire NT Katherine Office	08 8973 8871 BushfiresNT.Katherine@nt.gov.au
Fire Incident map	https://pfes.nt.gov.au/incidentmap/
Katherine Fire Station	(08) 8973 8014
NAFI North	http://www.firenorth.org.au/nafi3/
National Response Centre	1800 076 251
Secure NT (Fire Bans)	https://secrent.nt.gov.au/alerts

9 Bushfire Management Plan One-Pager

Imperial has drafted a one-page Bushfire Management Plan using the guidelines provided by DEPWS. This one-pager will be updated, printed, and utilised in on-site inductions, and referenced in conjunction with the Emergency Response (Contingency) Plan (**Appendix 09**).

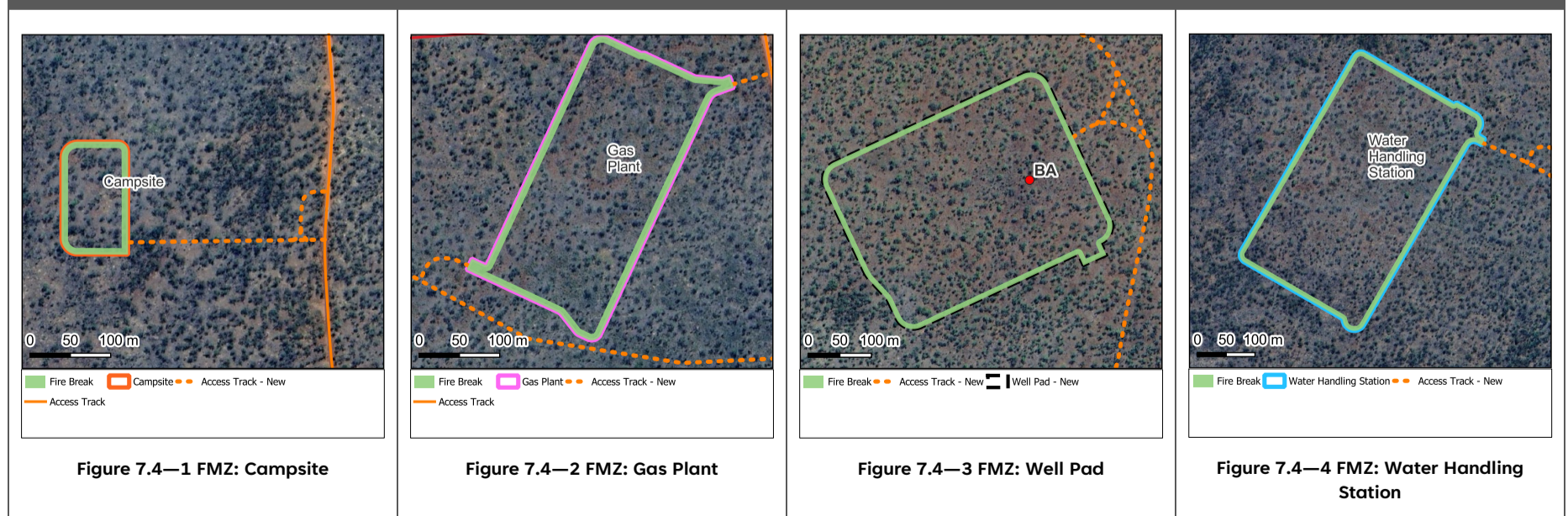
EP 187 BUSHFIRE MANAGEMENT PLAN 1 PAGER

STAKEHOLDER	CONTACT DETAILS	NAME	EP 187 FIRE MONITORING	
EMERGENCY	000		EP 187 Fire Weather Forecast Area:	CARPENTARIA EAST
Imperial Supervisor			Daily Fire Weather Forecasts:	http://www.bom.gov.au/nt/forecasts/fire-forecast-summary.shtml
Site Supervisor	██████████	██████████	Fire Ban Alerts:	https://securent.nt.gov.au/respond/bushfire-alerts#bushfiresntalerts
HSE Manager	██████████	██████████	Fire Danger Declarations:	https://securent.nt.gov.au/prepare-for-an-emergency/fires/bushfires/fire-danger-periods#fire-danger-period
Katherine Fire Station	(08) 973 8014	On Call Station Officer	Wildfire Maps:	www.firenorth.org.au/nafi3/
Borroloola Volunteer	0411 191 824	On Call Station Volunteer		
DEPWS	(08) 8999 5511	Onshoregas.DEPWS@nt.gov.au		
Land Managers (Carp 2/3)	██████████	██████████		
Land Managers (Carp 1)	██████████	██████████		
Bushfire NT Headquarters	(08) 8922 0844	bushfires.nt@nt.gov.au		
National Response Centre	1300 560 647			
Bushfires NT Katherine Office	(08) 8973 8871	BushfiresNT.Katherine@nt.gov.au		

FIRE MANAGEMENT OBJECTIVES	PREPAREDNESS PLANNING	ANNUAL WORKS CALENDAR
<p>Property Land Uses:</p> <ul style="list-style-type: none"> Gas exploration, cattle grazing. <p>Site Fire Management Aim:</p> <ul style="list-style-type: none"> To successfully construct and appraise exploration wells without a bushfire incident. <p>Fire Management Objectives: Manage the Activity to reduce the risk of fire impacting the following:</p> <ul style="list-style-type: none"> Human health and communities Flora communities Native Fauna Be prepared for fire events. <p>Limit the impact of any fire events:</p> <ul style="list-style-type: none"> Ensure personal safety Protect Imperial and landholder and other assets, and infrastructure. Coordinate fire management actions with pastoralists. Prevent human-induced bushfire ignitions that cause loss of life, property, or environmental harm. Pro-actively manage CPP fire breaks and fire access trails. 	<p>Based on the Australian Fire Danger Rating System (AFDRS).</p> <p>Moderate: Plan and prepare. Stay up to date and be ready to act if there is a fire.</p> <p>High: Be ready to act.</p> <ul style="list-style-type: none"> Be alert for fires in your area. Decide what you will do if a fire starts. If a fire starts, your life and property may be at risk. Avoid bushfire risk areas. <p>Extreme: Act now to protect your life and property.</p> <ul style="list-style-type: none"> These are dangerous fire conditions. Check your bush fire plan and that your property is fire ready. If a fire starts, take immediate action. If you and your property are not prepared to the highest level, go to a safer location well before the fire impacts. Reconsider travel through bushfire risk areas. <p>Catastrophic: For your survival, leave bushfire risk areas.</p> <ul style="list-style-type: none"> These are the most dangerous conditions for a fire. Your life may depend on the decisions you make, even before there is a fire. Stay safe by going to a safer location early in the morning or the night before. Buildings cannot withstand fires in these conditions. You may not be able to leave, and help may not be available. 	<p>Weekly Task: Check NAFI and Secure NT website for hotspot alerts, fire bans and planned burning. Liaise with local landowners as required during bushfire events.</p>

FIRE MANAGEMENT ACTIONS AND MITIGATION MEASURES	FIRE FIRST RESPONDER ACTIONS
<p>Infrastructure Protection Buffer</p> <p>The well pads, gas plant, water handling station, campsite and water bore pads designed with a fire break ~ 8 m (sometimes used for access) from the fence line. The flare fuel load buffer radius is 20 m.</p> <p>Infrastructure Fire Controls</p> <ul style="list-style-type: none"> Fire extinguishers will be located within all operating plant. Further fire equipment will be available in the Imperial Site Supervisor's vehicle, including blankets, at site offices where established. Ensure all machinery and vehicles will be parked in areas of low fire risk and be free of any combustible material. Ensure all personnel are trained and informed before the commencement of the activity relating to: <ul style="list-style-type: none"> Restricted smoking areas and requirements. Firefighting equipment operation and communication. Emergency Response (Contingency) Plan and procedures during a fire emergency (Appendix 09). Site Supervisor is to monitor NAFI regularly and liaise with the pastoralist if a fire threatens infrastructure. Smoking only in designated areas and fit with appropriate bins, no disposal of cigarette butts to land. An evacuation area/emergency muster point is established. Annual fire mapping with NAFI to monitor changes to fire frequency in the CPP Area. <p>Fire Breaks and Access Trails</p> <p>Create and maintain ~ 8 m fire breaks around well pads, CGP, WHS, Campsite and ~ 4 m fire breaks around water bore pads for fire management by grading, spraying, or slashing.</p>	<ul style="list-style-type: none"> On identification of a fire incident immediately check area for and status of other people and report to the Site Supervisor indicating the: <ul style="list-style-type: none"> Location Personnel present Extent of incident Need for assistance Intentions to assist. Only assist if within training and ability levels Imperial's Site Supervisor/Incident Commander will assess the incident and activate the Emergency Response (Contingency) Plan if required.

EP 187 FIRE MANAGEMENT ZONES (FMZ)



10 References

NAFI. (2024). *NT Infonet Reports*. North Australia & Rangelands Fire Information.
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