Heytesbury Underground Gas Storage (HUGS) Pipeline

Attachment J – Part 1

Environmental Management Plan

Heytesbury Underground Gas Storage Project

HUGS PIPELINE PL007732

Environment Management Plan

REV 1

This is the preliminary proof of concept HUGS Pipeline Environmental Management Plan to support license application for the proposed HUGS Pipeline – PL007732

UNCONTROLLED WHEN PRINTED

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1. TERMS & ABBREVIATIONS

Relevant terms and abbreviations used in this document are listed in Table 1

Table 1: Terms & Abbreviations

Abbreviation or Term	Description
Activity Area	Area to be used or developed for the construction of the HUGS Pipeline (as defined by the 'Activity Description' in CHMP 18865).
APGA	Australian Pipelines and Gas Association
AS2885	Refers to the Australian Standard for Pipelines – gas and liquid petroleum. AS 2885 specifies requirements for design and construction of onshore pipeline systems
CaLP	Catchment and Land Protection
CHMP	Cultural Heritage Management Plan
CP	Cathodic Protection
°C	Degree Celsius
EMAC	Eastern Maar Aboriginal Corporation
EMP	Environment Management Plan
EPA	Environment Protection Authority
ERP	Emergency Response Plan
ESV	Energy Safe Victoria
EVC	Ecological Vegetation Classes
GED	General Environmental Duty
HAZID	Hazard Identification
HDD	Horizontal Directional Drilling
HSE	Health, Safety and Environment
HSEMP	Health, Safety and Environment Management Plan
HUGS	Heytesbury Underground Gas Storage
HUGS Project	Encompasses drilling of Mylor wells, associated well infrastructure at the MFCT wellsite, construction of a connecting pipeline to the North Paaratte production station, tie-ins, commissioning and operations within multiple legal jurisdictions.
HUGS Pipeline project	Encompasses the construction of a connecting pipeline from the MFCT wellsite to the North Paaratte Production Station within the jurisdiction of the Pipelines Act

IGF, Iona	Iona Gas Facility (formerly referred to as Iona Gas Plant) The Iona Gas Facility consists of Iona and Seamer-2 wells, the gas processing trains and associated facilities inside the Iona Gas Facility fence boundary (part of the Petroleum Production Licence PPL-2
IGSF	Iona Gas Storage Facility The Iona Gas Storage Facility includes the Iona Gas Facility under Petroleum Production Licence PPL-2, the remote sites under Petroleum Production Licence PPL-1 that include North Paaratte, Wallaby Creek, Grumby fields and their associated flowlines and gathering pipelines, and the remote sites under Petroleum Production Licence PPL-4, 5, 6, 7, 9, and 10 that include the Heytesbury well sites
IMS	Integrated Management System
JHA, JSA	Job Hazard Analysis, Job Safety Analysis
LDAD	Low Density Artefact Distribution
Lochard Energy (Proponent)	Lochard Energy (Iona Operations) Pty Ltd I 608 441 729
Maximo	Lochard electronic system for recording HSE observations and incidents
Meridian	Lochard electronic document management system
MFCT	Mylor, Fenton Creek and Tregony
MFCT wellsite	Area of land where drilling will be undertaken and residual well infrastructure will remain.
MPag	Megapascal gauge
NP-4&5	North Paaratte-4&5 wells/wellsite
NPMS	North Paaratte Metering Station
NPPS	North Paaratte Production Station
OEMP	Operations Environmental Management Plan
OHS	Occupational Health and Safety
Pipelines Act	Refers to the *Victorian Pipelines Act 2005*
Pipelines Regs	Refers to the *Victorian Pipelines Regulations 2017*
PPL	Production Petroleum License
Principal Contractor	The appointed entity under the *Occupational Health and Safety Regulations 2017*, VIC, Reg 333 – who Lochard Energy authorises as the Principal Contractor to manage or control the workplace to the extent necessary to discharge the duties imposed on a Principal Contractor (Owner)
RAP	Registered Aboriginal Party
Remotes / Remote sites	North Paaratte and Wallaby Creek wellsite facilities, gathering lines, MEG supply lines, NPPS and NPMS

SFARP	So Far As is Reasonably Practicable
SIMOPS	Simultaneous Operations
Stakeholder	A person or organisation potentially affected by, or with an interest in the Project
TMP	Traffic Management Plan
WC	Wallaby Creek
WC-2	Wallaby Creek-2 well/wellsite

2. INTRODUCTION

2.1 BACKGROUND

Lochard Energy is the proponent of the Heytesbury Underground Gas Storage (HUGS) project, which will expand the storage capacity of the Iona Gas Storage Facility (IGSF). The HUGS Project will provide additional security of supply and reliability to the growing demands for energy storage in the eastern Australian energy market, which will help support the transition to a lower carbon future.

In order to connect the MFCT wellsite to the Iona Gas Storage Facility, a new pipeline is required ('HUGS Pipeline').

The HUGS Pipeline is a new 5.3km, 300mm (DN300) nominal diameter pipeline that will transport gas, and potentially hydrogen in the future, to and from the proposed new wellsite and underground gas storage fields. The HUGS Pipeline will tie into Lochard Energy's existing pipeline network from North Paaratte Production Station (NPPS) (Iona DN300 gathering line) see Figure 1 below.

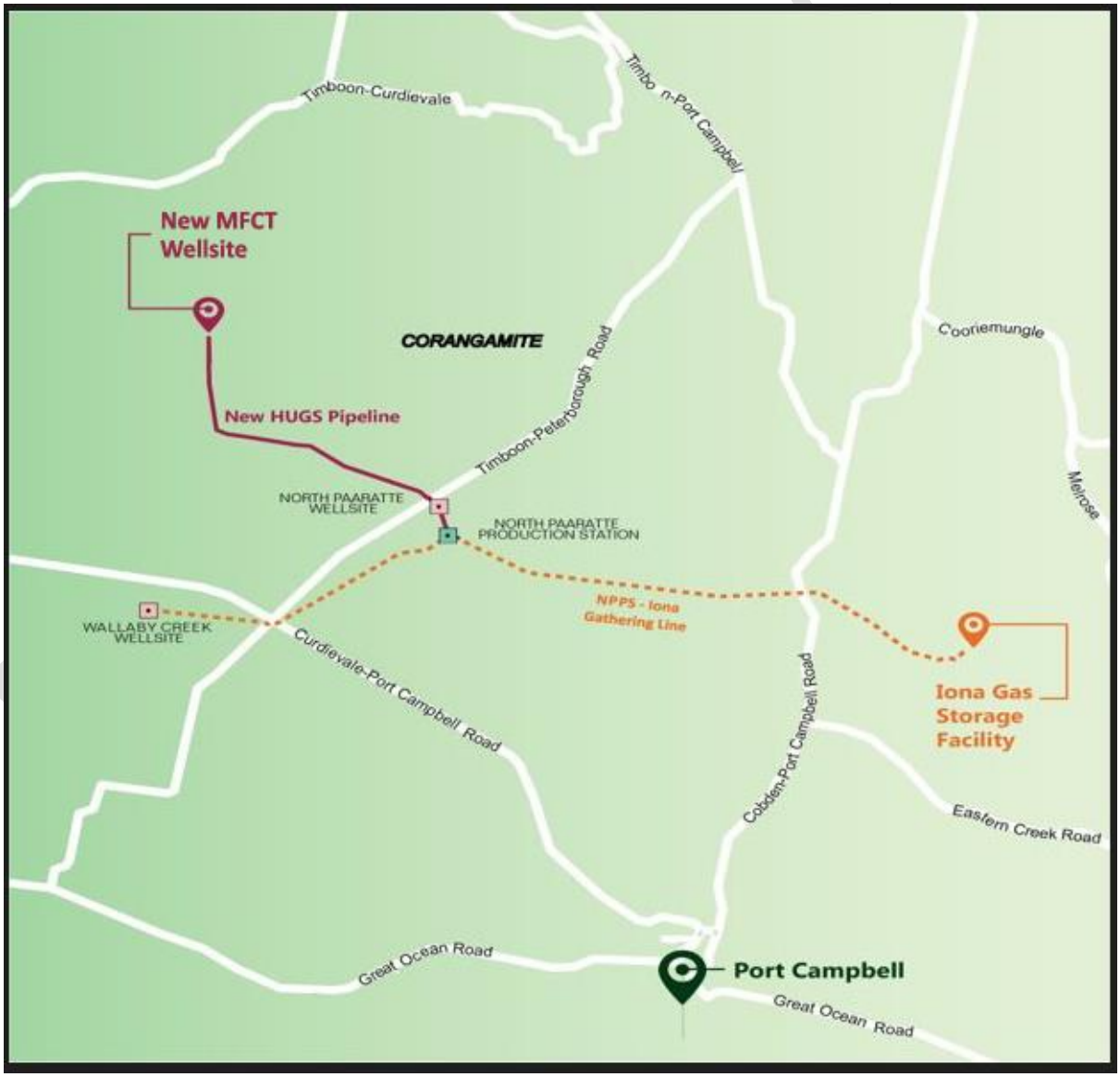

Figure 1: HUGS Project Location Overview and the Iona Gas Storage Facility

This EMP has been prepared in support of Pipeline Licence application PL007732 in accordance with Section 133 of the Victorian Pipelines Act 2005 ('Pipelines Act') [Ref: 1] which requires proponents to prepare and submit an Environment Management Plan prior to commencing any pipeline operations.

2.2 PURPOSE

The purpose of this Environment Management Plan (EMP) is to establish an effective environmental framework that clearly defines the effective management controls for the construction of the HUGS Pipeline.

This EMP has been prepared in accordance with the requirements of the Pipelines Act [Ref: 1] and Pipelines Regs [Ref: 2], as administered by the Victorian Minister for Energy and Resources and supported by the DEECA. This EMP:

- describes the HUGS Pipeline project;
- describes the existing environment that may be affected by the pipeline construction, including identifying the relevant values and sensitivities (if any) of that environment;
- identifies and assesses the environmental risks arising directly or indirectly from the pipeline construction and potential emergency situations;
- defines environmental performance objectives and environmental performance standards, against which environmental performance shall be measured;
- describes consultation undertaken with relevant entities; and
- describes an implementation strategy used to ensure the environmental risks are eliminated or minimised as far as reasonably practicable, and the environmental performance objectives and standards are achieved.

A concordance table detailing the specific requirements for this EMP from the Pipelines Act [Ref: 1] and Pipelines Regs [Ref: 2] has been included in Appendix 1.

2.3 OBJECTIVES

The overall environmental objectives of this EMP are as follows:

- clearly identify all environmental, social and cultural aspects with the potential to be impacted by Construction of the HUGS Pipeline.
- minimise environmental impacts resulting from the construction of the HUGS Pipeline;
- to eliminate or mitigate all identified environmental risks to so far as reasonably practicable (SFARP);
- minimise disturbance to surrounding landholders, residents and sensitive receptors;
- Ensure all relevant legal and regulatory environmental requirements are documented, communicated to the project team and complied with; and
- Describe the processes and systems from the Lochard Energy Integrated Management System (IMS) that will be implemented to manage environmental risks and impacts from the HUGS Pipeline construction.

2.4 SCOPE

This EMP has been prepared to incorporate all activities associated with the construction of the HUGS Pipeline project. This covers 'early works', initial ground clearing and site establishment activities, construction, reinstatement and rehabilitation of the activity area.

It is intended that this EMP will remain active until rehabilitation objectives have been achieved following which an updated environment management plan will be prepared for operation of the HUGS Pipeline.

3. LEGISLATIVE AND REGULATORY FRAMEWORK

Lochard Energy and its contractors will comply with all relevant Commonwealth and State legislation and will manage compliance via the following systems and processes:

- a HUGS compliance register will be used to collate and track all commitments for the various phases of the HUGS Pipeline project;
- some aspects of project compliance will be informed and managed by the Iona Integrated Management System. The Management of the Iona Compliance Register [Ref: 3] procedure identifies legislative and other requirements applicable to IGF operations. The Iona Facilities Compliance Register [Ref: 4] details these requirements; and
- the Lochard Energy 'Environmental Essentials' www.enviroessentials.com.au online reference source provides access to environmental legislative information for all employees and which is independently updated regularly to capture changes in environmental law and guidance materials.

A summary of relevant legislation and its applicability to the HUGS Pipeline project is provided in the following sections.

3.1 APPLICABLE COMMONWEALTH LEGISLATION

Commonwealth legislation applicable to the HUGS Pipeline construction is summarised in Table 2. Information on further assessments, submissions and actions undertaken by Lochard Energy to support compliance with particular legislation is provided in the following sections.

Table 2: Commonwealth Legislation

Legislation	Applicability	Administering Department
Environment Protection and Biodiversity Conservation Act 1999 (Cwth) (EPBC Act)	Addresses those actions that are likely to have a significant impact on a Matter of National Environmental Significance (MNES) are subject to an assessment and approval process.	The Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW)
Native Title Act 1993 (Cwth) (NT Act)	Sets out processes for native title groups to negotiate agreements with other parties in relation to the use of land and waters.	Native Title Unit Attorney-General's Department

3.1.1 Native Title Act 1993

Lochard Energy engaged King & Wood Mallesons (KWM) to undertake an assessment for native title [Ref: 5]. This assessment found that native title has been wholly extinguished with respect to the land comprising the proposed Pipeline route due to 'previous exclusive possession acts' (PEPAs), as per sections 23B, 23C and 23E of the Native Title Act 1993 (Cwth) [Ref: 6] and sections 13H and 13I of the Land Titles Validation Act 1994 (Vic) [Ref: 7].

As the pipeline route includes the land on which the MFCT Wellsite will be developed as well as East and West Road from which the site is accessed these are included in the KWM assessment findings [Ref: 5].

3.1.2 EPBC Act 1999

The Ecological Due Diligence Assessment completed by Ecology & Heritage Partners [Ref: 8] found that the project activities are highly unlikely to have a significant impact on any matter of National Environmental Significance, and as such a referral under the EPBC Act [Ref: 9] is not required.

3.2 APPLICABLE VICTORIAN LEGISLATION

Victorian legislation applicable to the HUGS Pipeline construction is summarised in Table 3. Information on further assessments, submissions and actions undertaken by Lochard Energy to support compliance with particular legislation is provided in the following sections.

Table 3 Applicable Victorian Legislation

Legislation	Purpose	Project Relevance	Administering Department
Pipelines Act 2005 *Pipelines Regulations 2017*	The primary act and regulations governing the construction and operation of high pressure pipelines in Victoria.	This EMP has been prepared to be consistent with Part 7 of the Pipelines Regs – Environment Management Plans. Lochard Energy are seeking a Pipeline licence to construct and operate the HUGS Pipeline which would be issued in accordance with the provisions of Division 3 of the Act.	Department of Energy, Environment and Climate Action Energy Safe Victoria
Aboriginal Heritage Act 2006 *Aboriginal Heritage Regulations 2018*	Construction and operation of the HUGS Pipeline represents a high impact activity which is partially within an area of cultural heritage sensitivity. This fulfils the requirement for a Cultural Heritage Management Plan (CHMP) [Ref: 10] under Part 2, Division 1 of the Cultural Heritage Regulations 2018.	Lochard Energy have prepared CHMP 18865 which was approved by the Eastern Maar Aboriginal Corporation on 10 November 2023 pursuant to Section 64[1] of the Aboriginal Heritage Act 2006. Lochard Energy are required to construct and operate the HUGS Project in accordance with the compliance	Department of Premier and Cabinet

Legislation	Purpose	Project Relevance	Administering Department
		requirements of CHMP 18865 [Ref: 10].	
Catchment and Land Protection (CaLP) Act 1994 (Vic)	Provides for the establishment and operation of Catchment Management Authorities. Provides for the control of noxious weeds and pest animals.	A Project Weed and Biosecurity Management has been developed that includes consideration of noxious weed species and pest animals (Appendix J).	Agriculture Victoria as part of the Department of Energy, Environment and Climate Action Corangamite Catchment Management Authority
Climate Change Act 2017	This Act provides legislative foundation for Victoria to manage climate change risks. It also drives Victoria's transition to a climate resilient community and economy with net zero emissions by 2050.	Climate resilience has been reviewed as part of the Pipeline's Basis of Design consistent with sec 22(b) of the Climate Change Act.	Department of Energy, Environment and Climate Action
Country Fire Authority Act 1958	Outlines the requirements for hot works permits within the Fire Danger Period and on a Total Fire Ban Day.	Lochard Energy will comply with the requirements for hot works permits from the CFA.	CFA Victoria
Environment Effects Act 1978	Requires certain works to have an environment impact assessment carried out prior to proceeding	Self-assessment undertaken. HUGS Pipeline does not meet referral criteria.	Department of Transport and Planning
Environment Protection Act 2017 (EP Act) *Environment Protection Regulations 2021 (EP Regs)* *Other subordinate regulations, policies and EPA Victoria publications*	The EP Act regulates environmental risk, pollution, waste and contamination in Victoria. The EP Act includes a general environmental duty (GED) minimise risks of harm to human health or the environment from pollution or waste so far as reasonably practicable.	This EMP embodies the GED and is consistent with the EP Act, EP Regs and relevant EPA Victoria publications.	Environment Protection Authority Victoria
Flora and Fauna Guarantee Act 1988 *Flora and Fauna Guarantee Regulations 2020*	Protection of listed communities, listed flora and listed fauna and aquatic species on public land.	The Pipeline study area was assessed for presence of FFG listed species and communities. No listed species or ecological communities listed under the Flora	Department of Energy, Environment and Climate Action

Legislation	Purpose	Project Relevance	Administering Department
		and Fauna Guarantee Act were identified during on-ground ecological assessment.	
Heritage Act 2017 *Heritage Regulations 2017*	This Act provides for the protection and conservation of heritage in Victoria, including the establishment of the Victorian Heritage Register (VHR) for places and objects, and the Victorian Heritage Inventory (VHI) for archaeological sites. Any impacts to VHR or VHI sites as part of the Project will require a permit or permit exemption under the Heritage Act.	No listed heritage items were identified within the HUGS Project Activity area during heritage assessment.	Department of Transport and Planning Department of Energy, Environment and Climate Action
Land Acquisition and Compensation Act 1986 *Land Acquisition and Compensation Regulations 2010*	This Act allows for and manages the acquisition of land and compensation payable where land is acquired. The Act allows for acquisition and compensation for purposes that include construction and operation of a gas pipeline.	The basis of calculation for compensation in relation to construction and the establishment of an easement is assessed with reference to Div 4 sec 151 of the Pipelines Act and sec 41(3) of the Land Acquisition and Compensation Act 1986.	Victorian Government Land Monitor
Livestock Disease Control Act 1994	This Act provides for the prevention, notification, monitoring and control of livestock diseases	A Project Weed and Biosecurity Management has been developed that includes consideration of pest plants, animals and pathogens (Appendix J).	Agriculture Victoria (Department of Energy, Environment and Climate Action)
Occupational Health and Safety Act 2004 (OHS Act) *Occupational Health and Safety Regulations 2017 (OHS Regs)*	The OHS Act and OHS Regs seek to protect the health, safety and welfare of employees and other people at work. It also aims to ensure that the health and safety of the public is not put at risk by work activities	A Project Specific Health and Safety Management Plan will be developed.	WorkSafe Victoria

Legislation	Purpose	Project Relevance	Administering Department
Planning and Environment Act 1987 *Planning and Environment Regulations 2015*	This Act provides the framework for planning, land use and development within Victoria. Planning schemes prepared under the provisions of the Act apply to each municipality in Victoria. Matters are considered as part of the Pipeline Licence application process.	Under Division 9 section 85 of the Pipelines Act, Lochard Energy (Iona Operations) Pty Ltd are exempt from obtaining a planning permit under the Planning and Environment Act 1987 for the proposed pipeline. The HUGS Pipeline is not exempt from obtaining offsets for impacts to native vegetation. The offset requirement for native vegetation removal is 0.050 General Habitat Units and 2 Large Trees.	Department of Energy, Environment and Climate Action
Road Management Act 2004 (Vic) *Road Management (General) Regulations 2016*	Consent is required from the relevant road management authority to carry out works within road reserves.	Permits will be required from Corangamite Shire Council to enable the establishment and use of site access off: - East West Road - Boundary Road - Timboon-Peterborough Road - Gas Works Road	Corangamite Shire Council
Water Act 1989 (Vic) *Water (General) Regulations 2021*	This Act provides a legal framework for managing Victoria's water resources, including water supply catchments and groundwater and is relevant as the Project crosses three designated waterways.	A 'works on waterways' permit from the Corangamite Catchment Management Authority (CMA) is required prior to commencement of construction across any designated waterway.	Department of Energy, Environment and Climate Action
Wildlife Act 1975 *Wildlife Regulations 2013*	Authorisation for habitat removal may be obtained under the Wildlife Act. A Wildlife Authorisation under the Wildlife Act is required to take or	A suitably experienced and authorised resource shall be available to relocate	Department of Energy, Environment and Climate Action

Legislation	Purpose	Project Relevance	Administering Department
	destroy (including removal or relocation) protected or threatened wildlife.	any fauna that may become trapped in excavations or otherwise require removal or relocation from the construction ROW.	

3.3 RELEVANT STANDARDS AND GUIDELINES

Other relevant standards and guidelines, that may be applicable to the HUGS Pipeline are provided in Table 4.

Table 4 Relevant Standards and Guidelines Summary

Category	Title
Environment Reference Standard	*Ambient Air, Ambient Sound, Land, Water*
EPA Victoria Publications	*655.1 Acid Sulphate Soil and Rock*
	Industrial Waste Resource Guidelines: *IWRG300: Waste avoidance and reduction* *IWRG600.2: Waste categorisation* *IWRG702: Soil sampling* *IWRG701: Sampling and analysis of waters, wastewaters, soils and wastes*
	788 Best Practice Management: Siting, design, operation and rehabilitation of landfills
	824 Protocol for Environmental Management: Greenhouse Gas Emissions and Energy Efficiency in Industry 2001
	1287 Guidance for risk assessment of wastewater discharges to surface waters
	1669.4 Interim position statement on PFAS
	1739 Urban Stormwater Management Guidance
	1820.1 Construction guide to preventing harm to people and the environment
	1826.4 Noise limit and assessment protocol for the control of noise from commercial, industrial and trade premises and entertainment venues
	1827.2 Waste Classification Assessment Protocol
	1828.2 Waste disposal categories – characteristics and thresholds
	1834 Civil construction, building and demolition guide (November 2020)
	1836 PFAS and EPA: A quick reference guide from Victoria's environmental regulator
	1856 Reasonably practicable
	1894 Manage soil disturbance

	1895 Managing Stockpiles
	1896 Manage how you work within or adjacent to waterways
	1897 Manage truck and other vehicle movement
	1915 Contaminated land policy
	*1940 Contaminated land: Understanding section 35 of the Environment Protection Act 2017 [*Ref: 18*]*
	1955 Ambient air quality monitoring
	1961 Guideline for assessing and minimising air pollution in Victor–a - Framework for air quality management and monitoring for construction and operation
	1968.1 Guide to classifying industrial waste
	1977 Assessing and controlling contaminated land risks: A guide to meeting the duty to manage for those in management or control of land
	1991 Responding to harm caused by pollution
	2008.1 Notifiable contamination guideline: Duty to notify of contaminated land
DEECA	*Guidelines for the removal, destruction or lopping of native vegetation (2017)*
	Biosecurity Guidelines for Movement of Equipment AG1171 (2009)
Department of Environment (Commonwealth)	*Australian and New Zealand Environment and Conservation Council (ANZECC) Australia and New Zealand Guidelines for Fresh and Marine Water Quality (2000)*
	Guidelines for Water Quality Monitoring and Reporting (ANZG Australia 2018)
Other	*Australian Standard AS/NZS 2885 The Standard for Gas and Liquid Petroleum Pipelines*
	Australian Standard AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting
	Australian Standard AS 4482.1:2005 Guide to the investigation and sampling of sites with potentially contaminated soil
	Australian Standard AS 1940:2004: The storage and handling of flammable and combustible materials
	Australian Standard AS 2187.2 – 2006 Explosives- storage
	Australian Standard AS 4970 Protection of trees on development sites
	A Guide for Machinery Hygiene for Civil Construction (Civil Contractor's Federation, 2011).
	Code of Practice: Excavation Work (Safe Work Australia 2018)
	Compliance Code: Excavation (WorkSafe Victoria 2019)
	Best Practice Erosion and Sediment Control (International Erosion Control Association 2008) *Particularly Appendix P: Land-Based Pipeline Construction*
	Managing Urban Stormwater: Soils and Construction – 4th Edition ('Blue book') Particularly Volume 2A, installation of services.
	National Pollution Guidelines for Wildlife 2020

	Noise form Industry in Regional Victoria – EPA Victoria Publication 1411

3.4 CONCORDANCE TABLE

A concordance table has been included in Appendix A and maps the specific regulatory requirements in the Pipeline Act [Ref: 1] and Pipeline Regs [Ref: 2] for Lochard Energy for this EMP.

4. HUGS PIPELINE DESCRIPTION

4.1 PIPELINE OVERVIEW

The HUGS Pipeline project comprises the construction and operation of a DN300 pipeline extending from the MFCT wellsite to North Paaratte Production Station (NPPS).

The HUGS Pipeline is described as:

- 5.3 km buried high pressure (DN300) 300mm nominal diameter gas pipeline between the North Paaratte Production Station (NPPS) and the Mylor, Fenton Creek and Tregony (MFCT) wellsite
- Bi-directional and convey natural gas, hydrogen or a blend of both to and from the MFCT Wellsite and NPPS.
- Includes a buried fibre optic cable to connect the MFCT Wellsite control and monitoring system
- Includes a buried (DN50) 50mm nominal diameter mono-ethylene glycol (MEG) pipeline to supply MEG to inhibit hydrate formation and prevent internal pipeline corrosion.
- Include a DN300 pig launcher located at the MFCT Wellsite
- Include an offtake at the NP4/5 Wellsite to provide enhanced operability of the NP4/5 wells.

Lochard Energy has considered potential future hydrogen conveyance as a consideration in the design of the HUGS Pipeline. A hydrogen-ready design addresses the requirements of ASME B31.12 Hydrogen Piping and Pipelines.

The Pipeline route is provided in Figure 2.

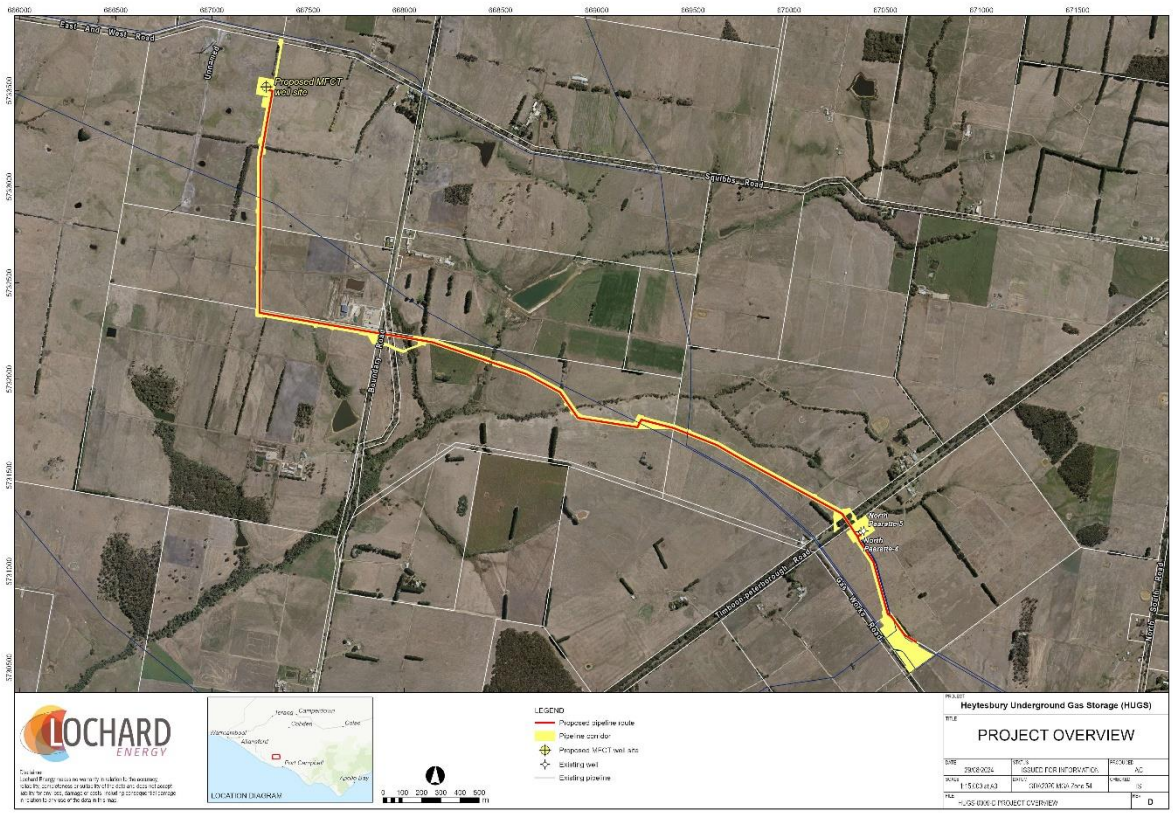

Figure 2: Pipeline Route

4.2 PIPELINE CONSTRUCTION WORKS

The HUGS Pipeline will be constructed and operated in accordance with the Pipeline licence and associated consent conditions as well as the requirements of AS2885: Pipelines – Gas and Liquid Petroleum [Ref: 21][Ref: 22]. The HUGS Pipeline will be bi-directional, allowing gas to flow into and to be withdrawn from underground storage.

Construction activities include:

Early Works / Site Access

- survey to mark the extent of the pipeline activity area;
- trimming and clearing of vegetation, removal of trees and shrubs, surface rocks to enable vehicle access and establishment of boundary fencing;
- installation of temporary fencing and gates to define and secure the pipeline activity area;
- establishment of site buildings, offices, laydown areas, site camp, etc;
- mobilisation to site of personnel, plant, machinery and equipment;
- vegetation clearing; and
- grading of topsoil.

Construction Works

- pipeline stringing;
- pipe bending and welding;

- pipe coating and testing;
- trenching and horizontal directional drilling;
- pipe laying (including trench breaker installation and cathodic protection (CP) installation);
- backfilling and compaction;
- reinstatement;
- hydrostatic testing; and
- commissioning

Detailed descriptions of each of these construction activities can be referenced in section 7 of the APGA Code of Environmental Practice [Ref: 32].

Increased pipeline wall thickness and burial depth will be used for horizontal directional drilling (HDD) sections as an additional protection measure.

Access to the pipeline corridor will be via the existing road network via, East & West Road, Boundary Road, Timboon-Peterborough road and Gas Works road. Temporary access points will be created to enable HGVs and light vehicles to enter on to the pipeline activity area. Access tracks will be less than 10m wide and made with crushed rock. Access tracks will be constructed in accordance with Council works within road reserve permit conditions.

Reinstatement of the pipeline and ancillary areas (camp, site offices, extra work space, access tracks) will be in accordance with any permit conditions and to the satisfaction of the landowner or Crown land manager.

4.3 PIPELINE OPERATION AND MAINTENANCE

Once the pipeline is operational this EMP will remain in place for the first 24 months following the pipeline being granted consent to operate. This will enable the completed reinstatement to rehabilitate with defects being monitored, identified and rectified.

Following the completion of the 24 month period, and with the satisfactory completion of the close out audit, it is intended to seek approval that the continued operation of the pipeline will be undertaken in accordance with Lochard Energy's Operational EMP (OEMP) [Ref: 33].

Provision for pipeline decommissioning will be provided in the OEMP [Ref: 33].

4.4 SCHEDULE AND MILESTONES

The HUGS Project will be developed in stages, with the first major stage being the drilling of the gas storage well(s) targeted for 2024, with pipeline construction to commence during the summer of 2024/2025. Summer construction is preferred to minimise impact to the land and environment and, where possible, avoid wet ground conditions.

Proposed timing for the HUGS Pipeline construction is detailed Table 5 below.

Table 5 HUGS Pipeline Construction Schedule

Year	Month	Activity
2024	Q4	Commence pipeline, wellsite and IGP works

2025	Q1 – Q2	Pipeline construction
	Q1 – Q2	Drilling of gas storage well(s)
	Q4	Complete construction of well site and IGP upgrades
2026	Q1	Commissioning of Pipeline
	Q1-Q2	Gas storage facility and pipeline operational

Lochard Energy has carefully considered the project timeline and in consultation with landowners and occupiers and will attempt to schedule activities to have the least impact possible on their operations and the environment.

5. DESCRIPTION OF THE ENVIRONMENT

5.1 BIODIVERSITY

To understand biodiversity values within the study area, on ground assessment was completed in August, 2022 by Ecology and Heritage Partners [Ref: 8] to identify where any native vegetation, flora, fauna and habitat values may be present – including Flora and Fauna Guarantee Act 1988 listed species.

The assessment identified that the study area is a highly modified, predominantly agricultural landscape with much of the surrounding vegetation being non-indigenous or cleared

Several terrestrial species listed under the FFG Act that rely on wetland and riparian habitats may opportunistically utilise areas within the pipeline easement, however as boring is proposed for areas containing wetland and riparian vegetation no potential habitat will be impacted.

Impacted Ecological Vegetation Classes impacted by the Pipeline Corridor include EVC 16 Lowland Forest (0.061ha) and EVC 165 Damp Heath Scrub (0.001ha).

5.2 WEED PRESENCE

Two noxious weeds listed under the Catchment and Land Protection Act were recorded within the study area. Spear thistle (restricted) and Blackberry (Controlled - also a Weed of National Significance) were described in the Biodiversity Assessment as being 'scattered throughout the study area'.

Construction and operation of the pipeline will cause disturbance to active and dormant noxious weed seed stock, which has the potential to cause spread. Controls for weed management are included in the Weed and Biosecurity Management Plan (Appendix J).

5.3 HERITAGE

5.3.1 Aboriginal Cultural Heritage

The pipeline is located with the Eastern Maar Aboriginal Corporation (EMAC) Registered Aboriginal Party (RAP) jurisdiction. A mandatory Cultural Heritage Management Plan (CHMP) has been prepared for the HUGS Pipeline in accordance with the Aboriginal Heritage Act, 2006. CHMP 18865 (prepared by Ochre imprints, a specialist archaeology consultant) was approved by EMAC on 10 November, 2023.

The 'activity area' referred to in the CHMP defines a broad corridor of land that was included in all stages of cultural heritage assessment (this involved both aboriginal and non-aboriginal heritage assessment). The CHMP 18865 activity area is larger than but incorporates the pipeline corridor presented in this application.

5.3.2 Cultural Heritage In The Activity Area

The heritage assessment was undertaken by way of Desktop, Standard and Complex Assessments.

Two (2) Aboriginal places occur in the activity area: Victorian Aboriginal Heritage Register (VAHR) 7420-0031, a previously registered artefact scatter and a LDAD, VAHR 7420-0063, which

comprises three subsurface stone artefacts identified during the fieldwork undertaken to inform this CHMP.

Whilst VAHR 7420-0031 is located within the activity area, the pipeline corridor has been narrowed to 15m wide for approximately 22m in proximity to this location to ensure that a sufficient 'No Go Zone' can be established around the place. The pipeline corridor realignment ensures that all Registered Aboriginal Places will be avoided.

5.3.3 Historic Heritage

A due diligence review of the Victorian Heritage Register (VHR) or Victorian Heritage Inventory (VHI) listed sites, statutory databases, previous assessments and land use history of the study area has not identified any known or potential historical heritage sites within the pipeline corridor.

Historic heritage was also given due consideration during archaeological assessment but no items or artefacts were identified during survey.

5.4 AMENITY

5.4.1 Site Receptors And Proximity

Site receptor descriptions and proximity to the pipeline are detailed in the below sections

5.4.2 Noise

To quantify the extent of impact that noise generated by construction of the pipeline, a comprehensive noise impact assessment has been prepared to analyse the extent to which noise generated during pipeline construction will impact residential receptors. Noise was modelled across 59 residential receptors, the closest being 219m from the Pipeline Corridor and the furthest away being 5.291km away based on nighttime compliance levels..

Pipeline construction noise will be received at a level that is greater than 4dB above background levels at six residential receptors whilst marginal exceedance (<3dB) will occur at one further residential receptor. Of the seven residences, five are directly affected landholders. Table 6 - Residential receptor impact overview provides an overview of the impacted residential receptors.

Table 6 - Residential receptor impact overview. Residential receptor impact overview

Table 6 - Residential receptor impact overview (Nightime Limits)

Receptor reference	Pipeline KP	Distance from Pipeline Corridor (m)	Impacted during Pipeline Construction?	Is the resident a directly affected landholder?
R1	0.65	398	Yes	Yes
R2	0.8	381	Yes	Yes
R3	0.8	216	Yes	No

R4	0.6	383	Yes	No
R12	3.8	675	Yes (<3dB)	Yes
R13	4.5	670	Yes	Yes
R14	4.95	750	Yes	Yes

5.4.3 Visual Amenity

The area surrounding the pipeline activity area is generally a rural pastoral landscape. The existing Timboon West wind farm consists of two wind towers, the closest turbine is approximately 250m from the western edge of the pipeline tie in at the MFCT Wellsite.

5.4.4 Air Quality

Air quality in the existing environment may be impacted from time to time by traffic movements on unsealed roads, agricultural activities, or soil erosion of exposed land during windy events.

5.4.5 Roads / Traffic

Road use in the immediate vicinity of the HUGS Pipeline is consists of:

- low volume local traffic and those relating to farming/dairy activities transiting on East and West Road;
- buses that service the surrounding area for the local schools have defined periods throughout the morning and afternoon. Lochard Energy's project and operational traffic management plans are specific to avoid heavy vehicle movements at these times; and
- tourists who travel the Great Ocean Road and terminate their journey in Peterborough or Port Campbell. Their return journey to Melbourne would generally involve travel of the Cobden - Port Campbell Road, however may include the use of Boundary Road or the Timboon-Peterborough Road which will both be used to access to the HUGS Pipeline alignment.

5.5 CLIMATE

The climate of the region is characterised by cool wet winters and mild drier summers. Long-term temperature averages for the area range from a mean minimum of approximately 7 deg C in July through to a mean maximum of approximately 22 deg C in February. The annual rainfall average is approximately 890mm, with the highest rainfall and highest humidity levels in the months through winter [Ref: 38]. January and February are statistically the driest months but are subject to occasional heavy showers.

The area can receive extreme coastal weather conditions, with storms and high winds (contributing to the 'Shipwreck Coast' history). By way of example, the average wind speed for 2021 was 22.5 km/hr with the strongest gust speed of 113km/hr in October [Ref: 39]. Prevailing 3 pm winter winds are from the north to west and prevailing 3 pm summer winds are from the south.

Mean monthly temperature and rainfall data from the Warrnambool Airport meteorological station (090186), which commenced observations during 1998, are presented in Figure 3.

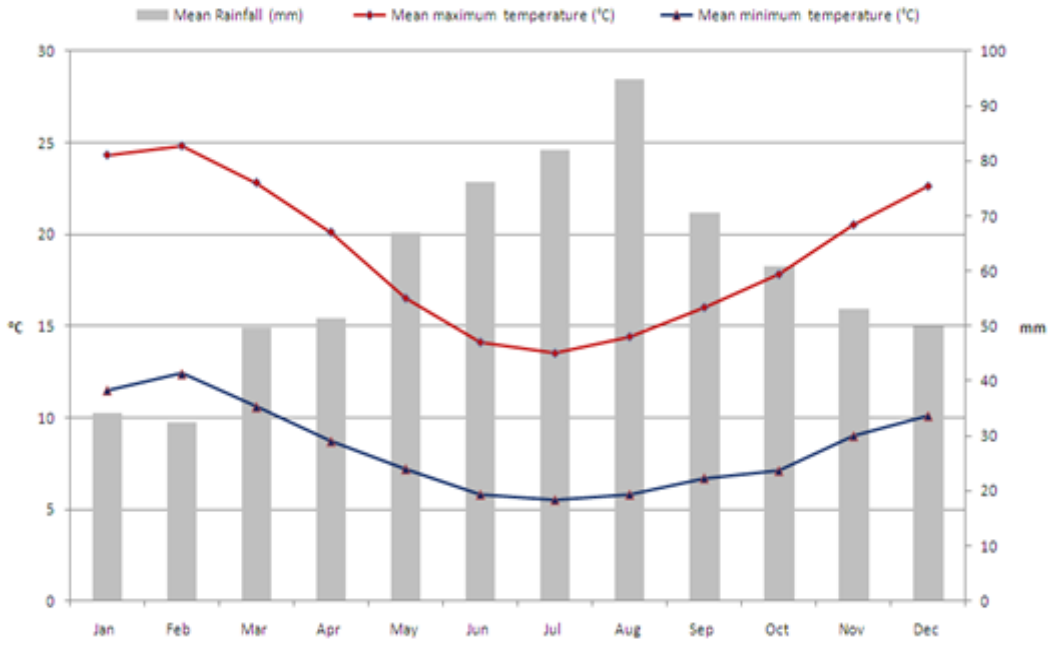

Figure 3: Mean Monthly Temperature and Rainfall Data (Warrnambool Airport)

5.6 LAND AND WATER

5.6.1 Geology

The HUGS Pipeline is located within the Port Campbell Embayment, a broad scale physiographic and geological division of the Otway Basin. During the late Tertiary and early Quaternary, a series of tectonic events deformed and uplifted the land. The landscape was further modified by erosion and the eruption of volcanic rocks in the northern part of this area.

Three major physiographic divisions of the Port Campbell Embayment are now recognised. The HUGS Pipeline lies within the Coastal Plain division, which forms a dissected plain that dips gently towards the sea [Ref: 40].

The 1:100,000 Port Campbell Embayment geological map [Ref: 41] indicates that the initial northerly tending section of the Croft alignment south of the Great Ocean Road, the HUGS Pipeline traverses Hanson Plain Sand (Tpb), intersected by the underlying Port Campbell Limestone (Lst), which weathers to form sandy loams and clay subsoils.

The Port Campbell Limestone terrain exhibits strong surface evidence of development of solution cavities, with abundant but sporadic sinkholes a prominent feature of some areas. Much of the area overlain by the thin sheet of Hanson Plain Sand also shows sinkhole type depressions at the surface, although often much more subtle [Ref: 40]. Lochard has conducted extensive geotechnical studies using Electrical Resistivity Imaging and have been able to confirm that the risk of sinkholes is low for the HUGS Pipeline.

The low relief topography and generally sandy soils present an environment of stable soil slopes. The geological attributes of the Otway basin are detailed in the Gutteridge Haskings Davey (GHD) Study [Ref: 40].

Most of the surface geology of the area is formed by exposures of tertiary sediments of the Heytesbury Group, consisting of shallow patches of Hanson Plain Sand overlying Port Campbell Limestone which itself overlies the Gellibrand Marl.

The Dilwyn Formation consists of dark brown, carbonaceous sandy clay and silt, interbedded with fine to medium-grained, clean to clayey sand, with minor coarse sand and gravel layers. It is an important aquifer in the region, providing the domestic water supply for several towns. It occurs lower in the geological profile, generally at depths of 200-500 metres but extends to a depth greater than 600 metres in the vicinity of Port Campbell. The Waarre Formation, which contains the gas reservoir, occurs further down the profile at depths of 1,000 to 2,000 metres.

5.6.2 Geomorphology

Uplift during the Pliocene period formed four main physiographic divisions in southwestern Victoria. The eastern division is the Otway Ranges, an uplifted section of the Otway Group. The central division consists of dissected tertiary sediments and is referred to as the Coastal Plain. Adjoining this to the north are the Volcanic Plains and Stony Rises.

On a regional scale, the HUGS Pipeline lies within the Coastal Plain physiographic division. The eastern half of the site consists of steeply incised valleys formed by slopes of the Gellibrand Marl and ridges capped by remnants of Port Campbell Limestone and Hanson Plain Sand.

The Victorian Geomorphology Framework (VGF) provides a hierarchical classification of landforms and landscapes. Using this classification system, the HUGS Pipeline is located within the Western Plains geomorphic division (6), Sedimentary Plains subdivision (6.2) and the Dissected Plains unit 6.2.2.

The Dissected Plains unit 6.2.2 of the Paaratte/Heytesbury region demonstrates ridges and swales of strand lines left by the retreating late Tertiary (Neogene) sea, which has formed a rectilinear pattern of parallel arcuate tributaries running north-west to south-east, and so perpendicular to rivers draining south-west. The development of the drainage has been associated with the final uplift of the adjacent Otway Ranges. The deep dissection has exposed underlying Gellibrand marl, resulting in numerous landslides, many of which remain active. The soil types associated with unit 6.2.2 include acidic mottled texture contrast soils, acidic gradational soils, some sandy some with high organic matter content hydrology, refer Table 7.

Table 7: Soil Landforms in the Heytesbury Area

Soil/Landform	Approximate Location
Unit 176 - Gently undulating plains (Nirranda)	West of the Curdies River valley
Unit 162 - Undulating low hills (Paaratte)	East of the Curdies River valley

Soil-landform unit 176 is generally formed on Neogene sandy sediments and where dissection has occurred, exposed Neogene marl and limestone. The soils are acidic brown

texture contrast soils (Chromosols and Kurosols) on the plains and grey cracking clays (Vertosols) in the depressions. These moderately drained soils have low nutrient levels in the lighter topsoils due to the higher rainfall of this area.

Soil-landform unit 162 is comprised of the undulating low hills in the Timboon West area, characterised by broad crests and slopes that abruptly change to scarps and steep slopes lining the streams and rivers of the lower Heytesbury area. The area is generally formed on Neogene marl and limestone where dissection of later deposited Neogene sandy sediments has exposed the underlying sedimentary strata of marl and limestone. Soils of the low hills are typically acidic friable brown gradational soils (Dermosols). These soils are free draining but have low nutrient levels in the topsoil from leaching due to the higher rainfall of this area. Sandy cappings are also common with uniform sands (Podosols).

5.6.3 Surface Water

The Pipeline Route crosses two (2) named ephemeral watercourses (i.e. Skull Creek – KP2.372 and Leech Creek – KP2.872) and two (2) unnamed ephemeral watercourses (KP3.313 and 3.827). (Refer Appendix F)

All watercourses are low order streams with limited to no riparian corridor. Watercourse beds are defined by narrow low-sloping channels. Crossing locations have been selected to be at points where mature riparian vegetation is avoided and grass species are largely non-native.

There are farm dams for stock watering, located at various locations near to the Pipeline Activity Area. In some cases, these dams have been placed across existing watercourses. Figure 4 shows the surface water catchments in the HUGS Pipeline Area.

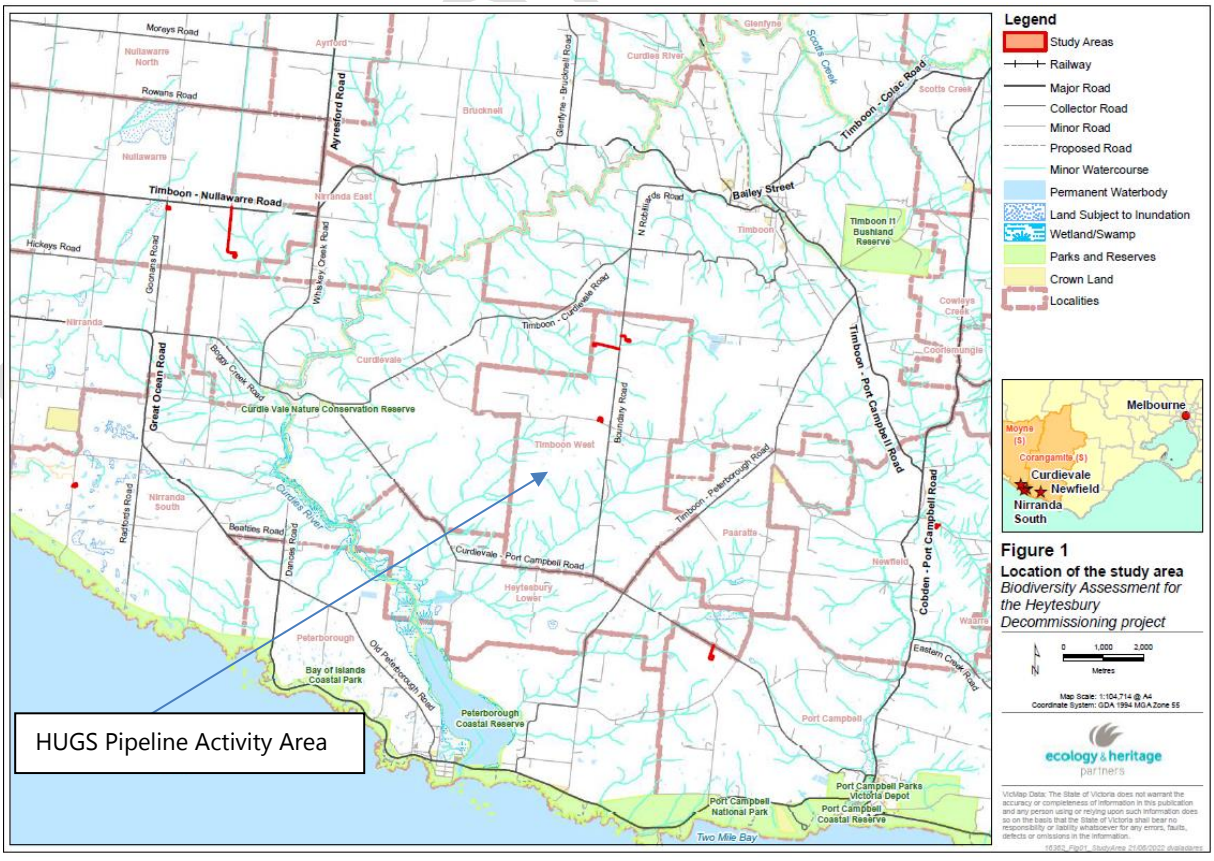

Figure 4: Surface Water Catchments in HUGS Pipeline Area

5.6.4 Groundwater

Lochard Energy will assess the likelihood of intercepting groundwater or in the case of HDD intercepting aquifers through the borehole drilling when geotechnical assessment is conducted. As the depth of pipeline trench is expected to be no greater than 1.8m beneath ground surface level and as no groundwater dependent ecosystems have been identified as having any connectivity to the pipeline corridor, the impact on groundwater is minimal.

The geotechnical boreholes will exceed the depth of trench and expected HDD profile depth in proximity to the HDD locations. This will give greater certainty regarding the likelihood of aquifer interception or water table interception.

5.7 SOCIAL ENVIRONMENT

5.7.1 Regional Context

The closest town to the Pipeline is Timboon, approximately 7km northeast, which has a population of approximately 1,200 people and provides hospital, P-12 schooling and larger emergency services support for the surrounding community.

Other nearby locations are Peterborough (10km southwest with a population of 247), Port Campbell (11km south south-east with a population of 487) and Princetown (27km southeast with a population of 241) [Ref: 42].

Timboon, Port Campbell and the surrounding area is a close-knit community of long-established families and comparatively new arrivals. Volunteering is strong across emergency services, health and conservation activities.

There are three gas facilities within the local area and the energy industry is a major source of employment within the region. Lochard Energy has a Community Liaison Committee for regular engagement with the community.

5.7.2 Economic Considerations

Three rural industries important to local employment and the economy are dairy, beef and prime lamb production. Economic contributions are enhanced by the number of supporting industries and companies found in nearby townships such as Timboon, Colac and Camperdown. These industries constitute the majority of land use in the area surrounding the HUGS Pipeline.

The exception is the Athena Gas Plant (Cooper Energy) and Otway Gas Plant (Beach Energy), the latter being located adjacent to the Lochard Energy IGP. All three gas plants are representative of the local gas industry which is an important economic contributor to the area, providing employment to local community members and support to local businesses.

Tourism is also very important to local employment and the economy. The Port Campbell township provides activities, restaurants and accommodation to visitors to the Great Ocean Road, Twelve Apostles and local beaches all year round but particularly during the

summer months. Gourmet food trails have been established over recent years bringing tourists for cheese, chocolate and wine tastings.

Pipeline construction is predicted to have no significant negative impact on or present risks to the local economy due to:

- pipeline construction personnel to be housed in a construction camp close to site;
- short alignment and short-term construction period;
- small overall number of construction personnel;
- timing of operations to be scheduled outside of peak tourism times where possible; and
- controls in place (as outlined in this EMP).

Construction works from the HUGS Pipeline will provide additional economic activity to the local area through employment of local people directly as part of the works and indirectly through the procurement of goods and services from the local area.

5.7.3 Land Use

Land use is dominated by dairy and pasture crops with some intermittent forestry and livestock shelter belts. [Ref: 36]

5.7.4 Third Party Asset Owners

In addition to crossing two Lochard Energy owned flow lines, the HUGS Pipeline has three transmission gas pipeline crossings and one buried HV cable crossing. APA's Paaratte to Allansford pipeline is crossed twice and the Halladale pipeline is crossed once. The pipeline alignment crosses two road corridors.

5.8 BUSH FIRE HISTORY

The region and local area around Port Campbell has experienced a number of bushfires, of those the most significant have been:

- March 2018 – On St Patrick's Day the communities of Timboon, Port Campbell, Simpson, Scotts Creek, Terang and surrounds were threatened or impacted by infrastructure loss by a number of out-of-control grass and bushfires.
- February 1983 – The Ash Wednesday bushfires impacted the communities of Timboon and surrounds with six people killed near Timboon and widespread loss of infrastructure.
- January 1942 – A scrub fire on the outskirts of Timboon threatened the community, but was controlled with resulting general infrastructure damage.

6. ENVIRONMENTAL AND SOCIAL RISK ASSESSMENT

6.1 RISK ASSESSMENT OVERVIEW

For the HUGS Pipeline, environmental and social risks and impacts were identified, and assessed as part of Lochard Energy's risk management processes.

A project specific environmental and social risk and impact register (Ref: 43 and Appendix E) has been established for the pipeline, to detail a systematic assessment of the risk associated with each aspect, including the likelihood and consequences of each potential major event and identifies the measures and controls that are necessary to reduce each of those risks to a level that is so far as is reasonably practicable (SFARP).

Lochard Energy's risk management objectives are to mitigate or reduce project risks to SFARP. The hierarchy of controls (Figure 5) principles are used to achieve this objective.

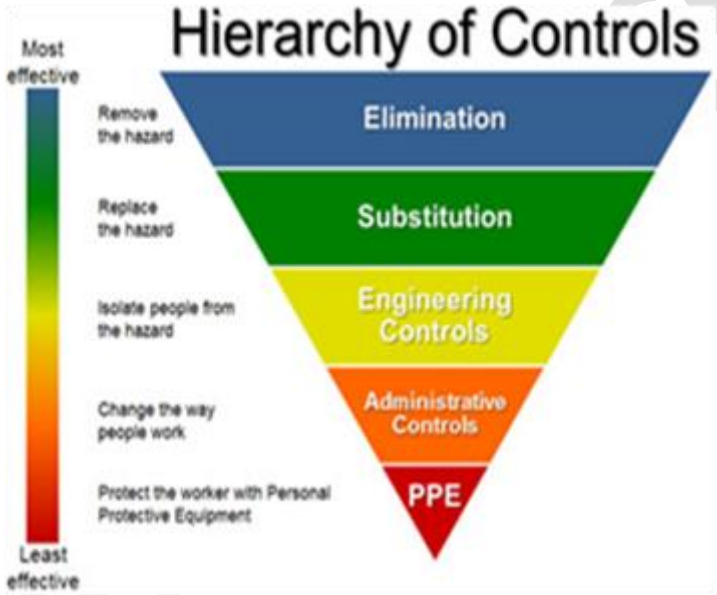

Figure 5: Hierarchy of Controls

The IGP Hazard & Risk Assessment procedure [Ref: 44] is the guiding procedure for evaluating risk associated with any task or process.

6.2 RISK ASSESSMENT PROCESS

The Construction Environmental and Social Risk and Impact Assessment (ESRIA) (Ref: 43 and Appendix E) was completed following a workshop on the 29th November 2023 and a second workshop on the 30th May 2024. The ESRIA identified all plausible scenarios that could lead to environmental or social damage or impact due to the construction and operation of the HUGS Pipeline.

Evaluation of environmental risk also extended to the aspects of nuisance, community impact, public safety and potential for environmental harm within and beyond the pipeline corridor. The assessment also considered conveyance of both natural gas and hydrogen when developing credible risk scenarios.

The following 'key' environmental aspects were identified by Lochard Energy for inclusion in the ESRIA:

- **Social Impacts**
- Energy Security and Reliability
- Local Business Opportunity
- Aboriginal Cultural Heritage
- Ground Disturbance
- Land Use Restriction
- Future Land Use

Environmental Impacts

- Biodiversity – Flora and Fauna
- Weed Presence and Biosecurity
- Surface Water and Watercourse Crossings
- Groundwater
- Noise Generating Activities
- Visual amenity
- Air Quality
- Greenhouse Gas Emissions
- Traffic and Transport
- Vibration

Inherent impact was evaluated before identifying control measures that would serve to remove or mitigate the impact to an acceptable level. Residual impact level was then evaluated assuming that all nominated controls were in place to provide a final impact rating.

It is proposed that a separate operational ESRIA will be completed prior to the commencement of HUGS pipeline operation and will form a key input into the Pipeline Operations Environment Management Plan.

The HUGS Pipeline ESRIA (Ref: 43 and Appendix E) identified and evaluated 16 environmental and social impact scenarios. Of the 16 scenarios evaluated there were no remaining environmental or social impacts with a residual risk rating higher than Medium.

6.3 INCORPORATION OF CONSOLIDATED RISK AND IMPACT ASSESSMENT FINDINGS INTO EMP

Mitigations identified during the environmental and social consolidated risk and impact assessment process have been assessed and expanded into measurable management actions within this EMP.

The control of activities within the pipeline corridor and prevention of environmental impact beyond the pipeline corridor relies upon primary control measures being fit for purpose, effectively implemented and rigorously enforced.

The EMP and its Appendices will act as the central administrative control documents to detail all required measurable control actions. Refer to Appendix G. These control actions have been crossed referenced as management actions in the consolidated environmental and social risk and impact assessment.

6.4 ENVIRONMENTAL PERFORMANCE OBJECTIVES AND PERFORMANCE STANDARDS

Identified impacts environmental performance objectives and standards are summarised in Table 8. Project implementation and compliance measurements are listed in appendix G.

Table 8: Identified Impacts Performance Objectives, Performance Standards and Measurement Methods

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
PO1	-Stability of gas supply for Victoria	Not Applicable – considered to be positive impacts		
PO2	-Extra revenue brought to local business			
PO3	Aboriginal and Victorian Cultural Heritage	No damage to known cultural heritage.	Compliance with approved Cultural Heritage Management Plan 18865 [Ref: 10]. Zero work activities outside of CHMP activity area. Compliance with assigned risk assessment controls. All personnel on site complete project induction and relevant training.	HSE site inspection records. Audit of compliance with CHMP. Training, project induction and daily pre-start records (cultural heritage awareness and requirements). Observation and incident reporting system. Project records of site works.
PO4	Activities result in ground disturbance that may lead to soil compaction.	Minimise impact to soil including uncontrolled soil movements to SFARP in accordance with IECA Best Practice Erosion and Sediment Control Appendix P: Land-Based Pipeline Construction.	Compliance with approved Principal Contractor scope of work. Zero erosion. Compliance with assigned risk assessment controls. All personnel on site complete project induction and relevant training.	Record of inspections of site and storage areas for visible runoff/ erosion/sediment.

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
			No complaints from landowner. Compliance with Corangamite Shire permit requirements if applicable.	Training, project induction and daily pre-start records. Mechanical completions certificate records that site installation works are as per engineering design. Observation and incident reporting system.
PO5	Land Use Restriction	Minimise impacts on landowner through restrictions on access and land use SFARP.	Compliance with approved scope of work. Compliance with Corangamite Shire planning permit requirements (where applicable). No complaints from landowner. Zero expansion of designated work area. Zero non-compliance with risk assessment controls. All personnel on site complete project induction and relevant training.	Stakeholder engagement records. Records of non-compliance with PMP/lease agreement Record of complaints from landowner/community – Complaints Register.
PO6	Future Land Use	Minimise impact on future land use	Compliance with approved scope of work. Compliance with Corangamite Shire planning permit requirements (where applicable).	Stakeholder engagement records. Records of non-compliance with PMP/lease agreement Record of pipeline patrol once operational

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
PO7	Biodiversity Impacts Flora and Fauna	No impacts to remnant native vegetation and native fauna.	Zero disturbance/damage to remnant native vegetation. Conformance with *Vegetation Management Procedure* [Ref: 47]. Zero death of/injury to native fauna. Zero work activities outside of designated areas. Compliance with assigned risk assessment controls. All personnel on site complete project induction and relevant training.	Project records of site works. Training, induction and daily pre-start records (flora/fauna protection requirements). HSE site inspection records (include records of excavation inspections for fauna). Records of fauna handler attendance. Observation and incident reporting system.
PO8	Biosecurity	Prevent the introduction of weeds, pests or pathogens.	No introduction of new weed species via plant and equipment. No introduction of new weed species via import of topsoil. No expansion or proliferation of weed species existing on site. No new pests introduced to site. Zero non-compliance with risk assessment controls. All personnel on site complete project induction and relevant training. Compliance with HSEMP [Ref: 27] equipment mobilisation requirements and Weed and	Records of inspections/monitoring of plant/equipment/ vehicles. If imported topsoil required, verification records from topsoil provider. Records of detection of weeds/ pests and any control measures implemented. Project induction and daily pre-start records (environmental awareness and requirements). Pre-inspection report of condition of site ahead of works which includes a weed assessment and

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
			Biosecurity Management Plan (Appendix J)Ref: 13 which include checks for weed and seed. Comply with landowner PMP regarding biosecurity.	post construction and rehabilitation inspection reports.
PO9	Surface Water and Watercourse	No impact to surface waters	Compliance with procedure. Compliance with Corangamite shire waterway permit	Observation and incident reporting system. Training and induction records Inspection and Audit records
P10	Ground Water Impacts	No impact to ground waters	Compliance with trenching and dewatering procedures	Observation and incident reporting system. Training and induction records Inspection and Audit records
P11	Noise generating activities	Eliminate excessive offsite noise.	Zero noise complaints received from landowner/community. Compliance with EPA Victoria general environmental duty requirements (sections 25-27 EP Act) [Ref: 18]. Compliance with Environment Protection Regulations 2021 [Ref: 45] Division 3 requirements. Compliance with EPA Victoria Noise Protocol [Ref: 46]. Compliance with Corangamite Shire permit conditions.	Complaints Register. Stakeholder and community engagement records. Results of noise monitoring during works. Work planning and scheduling processes recorded. Inspection / maintenance records. Project induction and daily pre-start records.

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
			Zero non-compliance with risk assessment controls. All personnel on site complete project induction and relevant training.	
P12	Visual amenity	Minimise impacts to public visual amenity. Eliminate excessive offsite light emissions.	Zero community complaints. Compliance with landowner agreements. Compliance with Stakeholder Engagement Plan [Ref: 47 HSE-ENV-PC006 Vegetation Management Ref: 48] requirements on consultation with and informing surrounding landowners. Zero non-compliance with risk assessment controls. All personnel on site complete project induction and relevant training. Compliance with relevant Corangamite Shire permit requirements (when issued).	Stakeholder and community engagement records. Record of complaints from landowner/community – complaints register. Observation and incident reporting system. HSE site Inspections records. Training and project induction records (environmental awareness and requirements).
P13	Air Quality	Minimise generation of dust.	Compliance with EPA Victoria general environmental duty requirements (sections 25-27 EP Act) [Ref: 18] and respond to	Record of complaints from landowner/community – Complaints Register.

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
			harm/notification duties (sections 31-33 EP Act) [Ref: 18]. Principal Contractor compliance with contract requisition requirements. Zero community complaints. Compliance with dust controls at all times. All personnel on site complete project induction and relevant training.	Stakeholder and community engagement records. Work planning and scheduling processes and completion recorded. Inspection records. Project induction and daily pre-start records (dust management). Observation and incident reporting system records.
P14	Greenhouse Gas Emissions	Minimise contribution to Greenhouse Gas emissions	Zero vehicles left idling. Lighting in office's turned of during evening	Observation and incident reporting system records.
P15	Traffic and Transport	Minimise risk to public health and safety and the environment from project traffic movements SFARP.	Compliance with Iona Traffic Management Plan [Ref: 37] and Principal Contractor Traffic Management Plan requirements. Compliance with assigned risk assessment controls. Compliance with Stakeholder Engagement Plan [Ref: 48] requirements. No community complaints. No reportable incidents.	Stakeholder engagement records. Training and induction records (traffic management requirements). Observation and incident reporting system. Record of complaints from landowner/community – Complaints Register.

Performance Objective Identifier	Impact/Risk	Performance Objective	Performance Standards	Measurement Methods
			All personnel on site complete project induction and relevant training.	
P16	Vibration	Minimise and contain vibration SFARP. No external social impact caused by vibration generated from construction activities.	Compliance with Chapter 4 (Noise and vibration) of EPA Publication 1834 Civil Construction, building and demolition guide	Complaints Register. Stakeholder and community engagement records. Results of monitoring during works. Inspection / maintenance records. Project induction and daily pre-start records.

7. IMPLEMENTATION STRATEGY

Lochard Energy is committed to responsible environmental management and has formalised this commitment in its Health, Safety, Sustainability and Environment (HSSE) Policy (refer to Appendix B). The HSSE Policy defines the company's commitment, guiding principles and overall objectives in managing the health, safety and environmental effects of its operations.

All personnel are required to work in line with the HSSE Policy (Appendix B), which will be displayed in communal space in site offices following award of contract and mobilisation to site.

This EMP describes the environmental management implementation strategy for the HUGS Pipeline project. This EMP sits within the Lochard Energy IMS framework [Ref: 50] which is designed to ensure that information on environmental requirements is provided to personnel in a relevant, accessible and understandable form.

All HUGS project activities must comply with HSSE Policy (Appendix B) and this EMP sets out the plans, roles, responsibilities, and specific commitments required to carry out the proposed activities in accordance with it. It is intended that a Principal Contractor will be engaged to construct the HUGS Pipeline and their processes and procedures must be consistent with or exceed the requirements of the HSSE Policy (Appendix B).

All personnel working at the Lochard Energy sites are made aware of the HSSE Policy (Appendix B) and its requirements during project induction processes and are required to comply with its requirements at all times.

All contractors will be required to work under and ensure their systems comply with the requirements detailed in this document and the broader IMS. A Lochard Energy 'owners team' will provide daily oversight for all works.

The following points should be noted:

- this EMP has been developed in accordance with Lochard Energy's IMS [Ref: 50] to meet regulatory requirements and Lochard Energy's policies and procedures.
- the scope of this EMP provides information on the emergency preparedness and response arrangements within the implementation strategy as required per regulation 48(6) of the Pipelines Regs [Ref: 2]. For noting, the Principal Contractor's Emergency Response Plan (ERP) and Lochard Energy's Bridging ERP [Ref: 51] will be the primary points of reference in the event of an emergency event occurring on-site.
- this EMP has been developed specifically for activities that will take place within the project area/site defined as the HUGS Pipeline Activity Area as presented in Figure 2

7.1 LEADERSHIP AND COMMITMENT

All employees are expected to demonstrate commitment to HSE in all facets of their work. An effective method of showing leadership and commitment is by example. An explicit part of this process is to comply with the Lochard Energy's IMS [Ref: 50] and develop and implement effective HSE plans. These plans are aimed at driving the process of continual improvement in HSE performance.

7.2 ORGANISATION AND RESPONSIBILITY

7.2.1 Management Of Work Sites

Lochard Energy has identified several interfacing work fronts that may occur during the early design phase of the project. These may be subject to change during the detailed design phase and will be updated in this document accordingly.

Site layout drawings will also be developed to demonstrate clearly to all parties the battery limits of control.

Table 9: Management of Work Sites for Pipeline Construction Activities

Work Site/Zone	Boundary	Controlling Party	Governing HSE Management System / PtW System
MFCT wellsite	MFCT wellsite as delineated by boundary fence	Drilling Contractor	Drilling Contractor PtW and HSEMS
Pipeline Sections	As defined by easement/RoW	Pipeline Principal Contractor	Pipeline Principal Contractor PtW and HSEMS
NP-4&5 wellsite	NP-4&5 wellsite as delineated by boundary fence	Iona Operations	Iona Operations PtW and Lochard Energy IMS
NPPS	NPPS compound as delineated by boundary fence	Iona Operations	Iona Operations PtW and Lochard Energy IMS

Note – the table above is subject to change upon firming of the program schedule.

7.2.2 Organisational Structure

The Lochard Energy Chief Executive Officer (CEO) has the ultimate responsibility for ensuring that Lochard Energy has the appropriate organisation in place to meet the commitments of the IMS.

The Head of Projects, who reports to the CEO, has overall accountability to ensure that appropriate and adequate resources are in place to comply with the IMS and the applicable Lochard Energy HSE Standards. The responsibility to achieve this for the HUGS Pipeline construction works has been delegated to the HUGS Project Manager who has day-to-day oversight over the HUGS Project.

The HUGS Project Manager will therefore ensure that adequate resources are available to meet HSE objectives of the HUGS Pipeline construction works including:

- personnel required to supervise and support project works in accordance with the requirements of the IMS both under normal operation and emergency situations and to provide for its continuous improvement;
- training requirements; and
- operational financial budget necessary to meet planned objectives.

The key responsibilities for environmental management are:

- the CEO and Head of Projects have the responsibility to ensure that the IMS continues to meet the evolving needs of the organisation;
- the HUGS Project Manager is responsible for the development and implementation of a consistent audit and review process for activities outlined in this EMP and for actively managing the design and implementation of the HUGS Pipeline construction works;
- the Project HSE Lead is responsible for conducting the audit and review processes for activities conducted by the Principal Contract and reporting non-conformances to the HUGS Project Manager; and
- all project personnel are responsible and accountable to undertake required training and adhere to the EMP in all tasks that they undertake.

Each employee of, and contractor to, Lochard Energy is responsible for the HSE implications of their own actions and each has a duty of care to carry out their work in a manner which does not present a risk to themselves, others or the environment.

Everybody, whatever their role, has the authority and full support of the Lochard Energy's management team to 'stop work' if they determine it to be unsafe or where there is an unacceptable level of risk/ exposure to the environment.

The Lochard Energy HUGS Project Team is a multi-discipline, cross-skilled group with the required competencies to perform the project work as required. Competencies not contained within the team will be provided by external resources.

The organisational structure for the HUGS Pipeline works consists of Lochard Energy and Principal Contractor and support contractor/service partner personnel. Day-to-day execution of the HUGS Pipeline works will be the responsibility of the Principal Contractor. The HUGS Project Manager maintains oversight of the Principal Contractor's performance of the HUGS Pipeline works program against the EMP and will ensure that reviews and audits are initiated in line with the Health, Safety and Environment Management Plan [Ref: 27].

Lochard Energy's head office is located at Southbank, Melbourne. The CEO and management team are located in Melbourne. In the event of an incident the Lochard Energy Emergency Response Team (ERT) will work together with HSE and technical advisors and government agencies to respond. Environmental management is the responsibility of all project personnel, however the Lochard Energy HUGS Project Team will be supported by a Lochard Energy Project HSE Lead on site during the program. An organisation chart of project personnel for the Drilling works program is shown in Figure 6 with details on responsibilities for each role provided in Section 7.3.

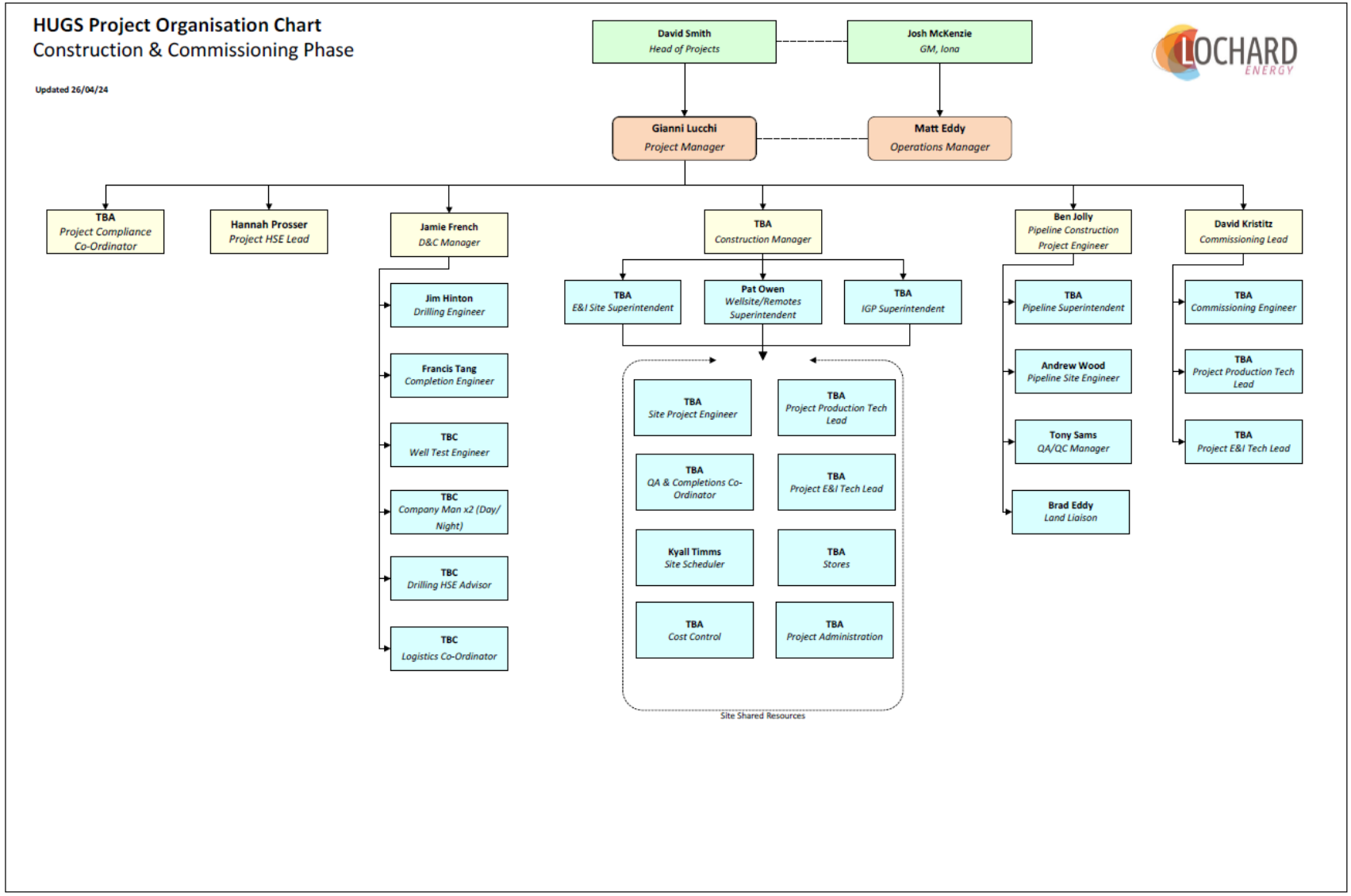

Figure 6: HUGS Project Organisation Chart

7.3 ROLES AND RESPONSIBILITIES

Key roles and responsibilities for the HUGS Pipeline works are detailed in Table 10. The organisational structure is summarised in Section 7.2.

Table 10: Role and Accountability, Responsibility and Authority

Role	Accountability, Responsibility and Authority
Chief Executive Officer (CEO)	Accountability Accountable to Lochard Energy Board of Directors. Responsibility Ultimately responsible for the HSE performance of all activities within Lochard Energy. Ensuring a system is in place for the ongoing identification and control of HSE risks. Setting corporate targets for HSE performance and reviewing performance against these targets. Reviewing the implementation of management systems to ensure that HSE performance evolves to meet the changing needs of Lochard Energy. Reporting to the Board regarding performance against the HSE targets. Authority Authority to assign the financial and personnel resources to complete the project.
Head of Projects	Accountability Accountable to the Lochard Energy Chief Executive Officer. Responsibility Ensure the project meets the commitments and requirements as specified in the Iona IMS and applicable Lochard Energy HSE Standards. Ensuring compliance with all environmental regulations and the environmental management plan. Ensuring implementation of and compliance with this operations plan. Authority Authority to assign the financial and personnel resources for completion of the HUGS Pipeline Works program.
HUGS Project Manager	Accountability Directly accountable to the Head of Projects. Responsibility Ensuring compliance with all environmental regulations and the environmental management plan. Ensuring an effective audit campaign is in place for compliance with this Operations Plan. Ensuring communication/consultative systems internal/external are in place and are effective. Management representative interface with IGF Operations Management. Ensuring sufficient resourcing for effective emergency response arrangements for all HUGS Pipeline works. Review this environmental management plan, rehabilitation plan, regulatory submissions and other HSE documents.

Role	Accountability, Responsibility and Authority
	Notifying Lochard Energy Management team and relevant authorities of all reportable incidents within the specified time frames. Perform periodic management visits. Authority Authority to assign the financial and personnel resources for completion of the HUGS Pipeline works. Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.
HUGS Pipeline Construction Engineer	Accountability Accountable to the Lochard Energy HUGS Project Manager. Responsibility Provide management oversight, support and input as required. Ensuring communication/consultative systems internal/external are in place and are effective. Ensuring incident investigations are completed per procedure and corrective actions tracked to implementation. Perform periodic management leadership visits. Ensure compliance with all environmental regulations. Authority Authority to cease operations in the event of an unsafe situation.
HUGS Wellsite/Remote Works Superintendent	Accountability Accountable to the HUGS Pipeline Construction Engineer Responsibility Day to day responsibility for management of site Pipeline works and subsequent rehabilitation works. Manage on-site HUGS Pipeline project team and contractors. Implementation of and compliance with this Operations and associated plans. Reporting any event or incident which may result in a release of contaminant and/or impact upon the environment in relation to the HUGS Pipeline project. Ensuring incident investigations are completed per procedure and corrective actions tracked to implementation. Ensuring all required plans, audits and reviews are undertaken in accordance with the regulatory requirements and as required by Lochard Energy management plans. Ensuring records are kept in accordance with Lochard Energy documentation and records management procedures. Ensure compliance with all environmental regulations. Provide and maintain effective emergency response arrangements for all operations where there is potential environmental risk. Ensure all personnel are inducted and are aware of their environmental responsibilities. Authority Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.

Role	Accountability, Responsibility and Authority
HUGS Project HSE Lead	Accountability Accountable to the HUGS Project Manager and indirectly to the HUGS Project Manager Responsibility Ensure all workers comply with HSE requirements. Monitoring, review and reporting on performance against HSE requirements. Undertake relevant inspections and audits to confirm compliance with management plans. Provide and maintain effective emergency response arrangements for all operations where there is potential environmental risk. Update and maintain environmental logs during HUGS Pipeline Works program activities. Report all environmental incidents to the HUGS Project Manager. Assist in undertaking HSE inspections and audits. Keep all environmental records. Ensure HUGS Pipeline works program activities adhere to management and mitigation measures. Lead incident investigations and prepare reports. Authority Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.
Stakeholder & Regulatory Approvals Manager	Accountability Accountable to the HUGS Project Manager. Responsibility Provide management oversight, support and input as required; Manage the personnel withing the Stakeholder and Approvals team; Ensuring communication/consultative systems internal/external are in place and are effective. Interface with key regulatory agencies and stakeholders and to ensure consultation and approvals are in accordance with project plans. Undertake relevant inspections and audits to confirm compliance with management plans. Authority Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.
Project Land Liaison Officer	Accountability Accountable to the Stakeholder & Regulatory Approvals Manager. Responsibility Responsible for all interfaces with landowner and near neighbours. Check compliance with PMP. Authority Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.

Role	Accountability, Responsibility and Authority
Principal Contractor Project Manager	Accountability Accountable to the Lochard Energy HUGS Project Manager Responsibility Ensuring compliance with all regulations and management plans prepared for the HUGS Pipeline project. Ensuring an effective inspection and audit program is in place. Ensure all incidents and high potential hazards are reported to the HUGS Project Manager and HUGS Project HSE Lead within the required timeframe; Ensure all contactor personnel have appropriate training and competency for their roles; and Ensure sufficient resourcing for effective emergency response arrangements for all HUGS Pipeline works. Authority Authority to assign the financial and personnel resources for completion of the HUGS Pipeline works. Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.
Principal Contractor Superintendents	Accountability Accountable to the Principal Contractor Project Manager Responsibility Ensure Principal Contractor project team members comply with HSE requirements 24/7; Ensure all necessary occupational health and safety (OHS) related systems are developed, implemented, and maintained. Ensure all contractor personnel are inducted and are aware of their responsibilities; and Ensure emergency response equipment is maintained and available for use. Authority Authority to cease operations in the event of an unsafe situation.
Principal Contractor HSE Manager	Accountability Accountable to the Principal Contractor Project Manager Responsibility Responsible for maintaining the CHSMP and ensuring compliance with the HSE management system requirements including leading risk assessment workshops, health and safety inspections and incident investigations; Provide the required HSE reports per the agreed delivery schedule; Assist the Principal Contractor Project Manager in recording and reporting incidents within the required timeframe; Lead and/or assist incident investigation as and when required; and Support the Project HSE Lead as required Authority Authority to cease operations in the event of an unsafe situation.
All Employees and Contractors	Accountability Accountable to the designated person in charge unless otherwise specified.

Role	Accountability, Responsibility and Authority
	Responsibility Undertake all relevant project inductions prior to works commencing. Carrying out work safely and without harm to themselves, others, equipment or the environment and in accordance with their training, operating procedures and work instructions. Seeking assistance from their supervisor to undertake a task that they believe they are not competent to perform. Stopping any activities that they believe to be unsafe. Reporting any hazards observed in the workplace or deficiencies observed in work practice or procedures to their supervisor. Participating in training and development activities and competency reviews as and when required. Authority Authority to cease operations in the event of an unsafe situation or with unacceptable environmental risk/exposure.

7.4 CONTRACTOR MANAGEMENT

The Principal Contractor is required to develop and implement environmental monitoring programs that demonstrate measurable compliance with the commitments detailed in this EMP.

The monitoring programs developed by the Principal Contractor will be reviewed and approved by Lochard Energy prior to the commencement of any site based works. They will also conduct verification inspections to assess compliance with this EMP and relevant statutory requirements.

At a minimum, weekly verification inspections of the construction works will include:

- site access compliance (e.g. works contained within construction area boundaries and compliance with any landowner agreements);
- adherence to licences, permits or approvals;
- adherence to Principal Contractor's EMP, inclusive of:
    - soil management and stockpiling;
    - sediment control;
    - dust and noise control;
    - waste management;
    - fauna and flora management;
    - biosecurity;
    - cultural heritage;
    - air, noise and vibration monitoring;
    - surface water; and
    - maintenance of controls (e.g. fencing, sediment and erosion controls etc.).

Contractor weekly inspection reports will be provided to Lochard Energy.

7.4.1 Internal Compliance (Principal Contractor)

The Principal Contractor will complete an internal assessment of their EMP implementation at least weekly following mobilisation to site. They will provide Lochard Energy with a monthly environmental performance report, within seven working days of the end of each calendar month, that includes the results of monitoring, verification inspections, non-conformances with this EMP, non-compliances with relevant statutory requirements, environmental incidents and corrective actions, including status of the implementation of each corrective action.

7.4.2 Environmental Registers And Record Keeping (Principal Contractor)

Additional environmental information that will be maintained specifically by the Principal Contractor includes:

- a register of SDSs;
- incident and Near Miss register including status of corrective actions;

- community and landowner complaints register;
- environmental recording equipment calibration and compliance certificates;
- emergency response plan;
- procedures, work instructions and standard operating procedures (or equivalent);
- vehicle, plant and equipment maintenance and hygiene records;
- induction and training records;
- completed JHA/JSAs;
- waste transport certificates/ records;
- imported fill certification/ validation demonstrating clean fill source; and
- all certification, permits, licences or agreements required to be obtained directly by the Principal Contractor from regulatory agencies.

The Principal Contractor will conduct environmentally focussed toolboxes and pre-start topics that will be recorded throughout construction to demonstrate consistency in messaging and reinforcement of key environmental considerations during daily works.

Incident identification, corrective actions and close out will be presented weekly by the contractor in a forum with Lochard Energy. Incident and non-conformance statistics will be presented in the overall project monthly report along with an overview of progress of close out.

7.5 TRAINING AND COMPETENCY

Lochard requires all workers to be trained and competent to perform their assigned duties.

Service providers must ensure that personnel are competent to perform the tasks they are assigned and if required, meet the required competency level identified under legislation and industry standards for their job position.

Every employee and service provider are responsible for only performing those tasks for which they are sufficiently skilled to undertake.

The Principal Contractor must maintain a skills and competency assessment register, training records, applicable certifications and training matrix for all personnel/positions held on the HUGS Project. These documents must be made available for Lochard Energy review upon request.

The Principal Contractor is responsible for the training and supervision and conducting skills assessment of their own personnel via their respective management systems. Contractors will maintain an up-to-date record of competency and training - for example, maintaining a register for the skills and training requirements for their personnel.

A copy of the Principal Contractors training register will be kept on-site and reviewed as required. This performance is monitored by the Lochard Energy Pipeline Construction Project Engineer and Project HSE Lead.

7.5.1 Personnel Competency

An employee's fitness for work, competence and behaviours are critical for the safe control of work and general company success.

Employees are selected based on role requirements and trained and supported as required.

Competency of personnel filling all team positions is assessed by the HUGS Project Manager in consultation with the relevant Lochard Energy HUGS Project team member/s. Key elements of competency assessment include:

- pre-employment review of resumes, educational and employment history;
- verification of skills, character and past performance through references from past employers;
    - an interview process focused on the specific job requirements;
    - confirmation that the candidate satisfies the training requirements for the position or that any gaps in training can be addressed;
    - periodic documented reviews of staff personnel performance in the role; and
    - assessment of training requirements and maintenance of training records.

The Principal Contractor is required to provide competent workers and regularly assess and monitor their fitness for work.

7.5.2 Project Inductions

To ensure awareness of the environmental (and other) requirements for the HUGS Project, all personnel (Lochard Energy and contractors) will be required to complete a HUGS Project Induction that will highlight key environmental requirements including the following components:

- general environmental duty
- biosecurity - noxious weeds or pathogens management;
- traffic and transport requirements;
- conduct of personnel and community management;
- Aboriginal and Victorian heritage and accidental discovery protocols (note: all personnel are subject to the requirements of induction within CHMP 18865 [Ref: 10]);
- planned activities that will generate noise and/ or vibration
- watercourse crossings and surface water management
- ground water contingencies
- management of fuels/chemicals, spill management and response;
- protecting any existing utilities and infrastructure;
- amenity of landowner/occupier (including dust, noise and light management);
- biodiversity - vegetation, flora and fauna management (interaction with fauna);
- soil compaction, sediment and erosion controls, drainage management;

- spill prevention and clean-up;
- equipment hygiene requirements;
- emergency management and response actions;
- security management requirements;
- waste management requirements; and
- incident management.

Appointed contractors and suppliers are required to ensure that all personnel have attended the HUGS Project Induction training before the commencement of works. The personnel shall also be familiar with the environmental controls required by this EMP relevant to their scope of work. A printed copy will be available on-site.

Environmental awareness topics will be included in daily pre-start and various other project meetings.

7.5.1 Training Matrices

Training matrices from the Principal Contractor will be provided to Lochard Energy and reviewed to ensure core competency requirements are identified and in place.

7.5.2 Awareness Tools And Reinforcement Programs

Environmental awareness topics will be included in daily pre-start and various other project meetings.

7.5.3 Visitor Induction

Personnel visiting the HUGS Project area for less than a day and who will have no direct involvement in the HUGS Project, will be required to receive a HUGS Visitor Induction.

All visitors to the HUGS Project area must complete the online HUGS Project visitor induction. A link to the visitor induction will be sent to personnel, to be completed prior to their arrival at the project site.

Visitors will always be accompanied and supervised by a designated Lochard Energy or Principal Contractor representative. All required PPE must be worn.

7.6 HUGS PIPELINE COMMUNICATION AND CONSULTATION

Lochard Energy engages with and alerts personnel on HSE matters through various communication and consultation forums. Reference should be made to the HUGS Pipeline Bridging ERP [Ref: 51] for detail on the communication processes during an emergency.

All HUGS Pipeline concerns are reported and discussed at management meetings. On-site HSE forums and communication methods used to inform and consult with personnel on HSE issues may include the following:

- site inductions;
- JHA/JSA preparation and review meetings;
- safety meetings;

- SIMOPs interface meetings (only if required);
- HSE Bulletins and notice boards;
- crew change/shift handover;
- HSE Alerts; and
- incident reports.

The following meetings are planned during the HUGS Project (times to be confirmed):

- **Daily Construction Meeting:** during the HUGS Pipeline construction phase, a daily construction meeting will be chaired by Lochard Energy Pipeline Construction Project Engineer which will be attended by the Principal Contractor Project Manager, Lochard Energy HUGS Project Manager and HSE Project Lead and relevant engineers as required. The meeting will include review of the previous days HSE and construction performance and discuss plans for forward activities.
- **Daily Prestart Meeting:** everyone on the HUGS Project site will be required to attend a daily prestart meeting where the previous days HSE hazards / incidents are reviewed, that day's planned activities will be discussed, along with key hazards (including local weather conditions) and controls that require implementation. This is also an opportunity for work party members to raise any concerns and/or provide other relevant information.

Toolbox meetings will be conducted immediately prior to any non-routine activity to discuss specific HSE issues associated with the day's proposed activities. Wherever necessary, the Toolbox meeting will be conducted by the Principal Contractor supervisor in charge of the specific sub-activity (or delegated to a topic-specialist).

Information including legislation, standards, procedures, and other guidance material will be made available to the HUGS Project team.

Lochard maintains the Meridian document control system for storage of controlled documents and records and enables:

- most current versions of documents are available;
- controlled documents required for the verification of effective HSE processes; and
- conformance with Lochard Energy's internal procedures and external legislation and standards.

Information generated on the project is either incorporated into reports or specific documents and records and maintained on the project file located on the Lochard Energy network.

7.7 STAKEHOLDER COMMUNICATIONS AND ENGAGEMENT

Prior to providing this EMP for acceptance, Lochard Energy undertakes to consult with the following agencies in relation in the course of developing the next version of this document:

- Department of Energy, Environment and Climate Action
- Energy Safe Victoria
- EPA Victoria
- Corangamite Catchment Management Authority
- Corangamite Shire Council

- First Peoples State Relations
- Eastern Maar Aboriginal Corporation
- Country Fire Authority
- Directly affected landholders
- Asset owners

7.7.1 Hugs Pipeline Consultation Plan

A HUGS Pipeline Consultation Plan (PCP) has been prepared which describes how Lochard has and will engage with project stakeholders.

Lochard Energy has established several channels for feedback to be received from landowners and occupiers, stakeholders and the broader public. These channels are included on the Project Fact Sheet

https://www.lochardenergy.com.au/wp-content/uploads/2024/03/UGS-ZP-0177_HUGS_Pipeline-Consultation-Plan_Rev0_final.pdf

As part of obtaining approvals under the Petroleum Act [Ref: 1], a Notice of Operation Plan [Ref: 52] has been prepared for the HUGS Project and includes details of the HUGS Pipeline to be constructed along with drilling and other associated works.

All enquiries made through these channels will be recorded in the consultation management software. These channels include:

Email: info@lochardenergy.com.au

Project hotline: 1800 848 879

Website: https://www.lochardenergy.com.au/our-projects/

Postal address: HUGS Pipeline Project, Iona Gas Plant

285 Waarre Road, Port Campbell, Vic, 3269

Upon receipt of an enquiry or complaint from a landowner, occupier, stakeholder or member of the broader public, Lochard Energy will:

- where needed, seek to clarify and understand the request or comment;
- acknowledge the communication and provide an estimated timeframe for a response or immediate feedback where possible;
- record the communication in the consultation manager software (and subsequently update the register with the resolution); and
- review the request or comment (including investigation if relevant) and provide feedback to the stakeholder within the committed timeframe.

Depending on the particulars of the request or comment, feedback to that person(s) will include:

- provision of requested information where appropriate, or advice if information is not yet available, or is unable to be shared (i.e. unrelated/commercially sensitive queries);
- advice regarding consideration of the suggestion/comment and how/if it has been incorporated into the design or execution of the proposed HUGS Pipeline. This may include discussion of alternate solutions to address that person(s) concerns;

- the outcome of complaints, associated investigations and any follow-up actions; and
- agreement/confirmation with the person(s) as to whether further action is required, and any future commitments (such as deferring a particular action to a later stage in pipeline development/execution, where appropriate).

Lochard Energy has developed the following set of timing commitments to respond to correspondence with an impacted landowner, occupier, stakeholder or member of the broader public:

- an initial acknowledgement of that person(s) initial communication will be provided within one business day;
- a detailed response will be provided to that person(s) within five business days of the initial communication.

That person(s) would be notified at the time of the request if feedback is not possible within the committed timeframe and an updated timing would be provided.

Should a question about the proposed HUGS Pipeline be received from an impacted landowner or occupier it is expected that the dedicated Lochard Energy Project Land Liaison Officer will be able to manage that question. However, should a complaint or complex question or suggestion be received, that correspondence will be escalated to Lochard Energy's leadership team.

7.8 MONITORING, AUDIT AND REVIEW

A program of Lochard HSE Audits will be implemented for the project, see appendix H. These will be used to track conformance and performance and will site above the HSE inspection and audit program required to be implemented by the Principal Contractor.

The audit program outlined in appendix H covers both field-based inspections and management system audits. Results will be tabled at the weekly construction meeting, unless immediate attention is required.

Non-conformances/corrective actions will be managed via a corrective action register complying with the requirements detailed in Lochard Energy procedure for Registering and Close Out of Corrective Action [Ref: 55].

7.8.1 Project HSE Audits

Lochard Energy has a developed the HSE Audit procedure [Ref: 53] that outlines the requirements for internal and external audits. Various HSE audits and review programs will be implemented for the duration of the project. This will include for example:

- premobilisation audits and assurance activity to ensure all HSE elements are in place and complying with the requirements detailed in this document;
- continual and regular review of risk register, and risk register actions;
- review of the compliance register;
- review and update of key documentation as required, including this document;
- audit of key HSE processes;

- HSE field audits and inspections;
- management site visits; and
- pre hand over and post mobilization inspection and assurance reviews.

Corrective actions and non-conformances will be managed via a corrective action register maintained by the Principal Contractor.

7.8.2 Management Review And Improvement

Lochard Energy has review processes in place as part of the IMS. The Principal Contractor will be required to demonstrate that they have a similar process in place for the review of key project outputs this includes items such as:

- site / field visit schedule for senior management;
- senior management review of HSE KPI's;
- dedicated management review meetings; and
- lessons learnt workshop with senior management representation.

Appendix G contains the environmental checks available that could be utilised during a Management review in addition to Lochard Energy's project team reviews.

7.9 REPORTING

Lochard has a number of processes which inform reporting of project operational performance against required activities and objectives. These include:

- completion of audits of contractors and suppliers (Tier 4 rated contractors) conducted in accordance with the Contractor Management HSE Evaluation procedure [Ref: 54]. Audits of management system elements are conducted in accordance with the HSE Auditing procedure [Ref: 53] and HUGS Project HSE Management Plan [Ref: 27];
- each service provider is required to conduct their own inspections including assessment of equipment and work areas;
- monitoring against the environmental performance standards set in Section 6.4 using the specified measurement methods;
- project management site visits to provide leadership visibility and oversight over the activity; and
- HUGS Project HSE meetings conducted periodically through the project to provide a forum to review health, safety and environment performance information.

Reporting categories and approaches are outlined further in the following sections, it is noted that in many cases there will be dual reporting requirements.

7.9.1 Incident Reporting And Investigation

Observations and incident management is reported and investigated through the Maximo HSE module of Lochard Energy's maintenance management system (Maximo). The initial report may be through an observation card or similar for entry into the Maximo HSE module.

The HSE Advisor records the hazard or incident report, investigation details and agreed actions into the HSE database where they are tracked until closed out.

Where appropriate, supervisors table the observations and/or incidents at daily meetings for general discussion and information. Incidents involving serious injury, significant environmental damage or asset/business loss will be immediately reported to the relevant regulatory authorities in accordance with the Safety Observations and Incident Management procedure [Ref: 56].

The Principal Contractor will be required to demonstrate the implementation of a system that meets the criteria of the Safety Observations and Incident Management procedure [Ref: 56]. Prior to mobilisation a matrix of reporting based on incident severity will be established between Lochard Energy and the Principal Contractor.

A summary of all environmental incidents will be included in the weekly Construction Status report and provided to DEECA.

7.9.2 Reportable Environmental Incident Criteria And Protocol

In accordance with Regulation 20 of the Pipelines Regs and Lochard Energy's Safety Observations and Incident Management procedure [Ref: 56], Lochard Energy will notify the Minister for Energy (or his/her delegate) of all reportable environmental incidents arising out of a pipeline operation. Reportable environmental incidents are those that:

- cause substantial damage to the environment; or
- have significant potential impact on the environment.

Environmental incidents include, but are not limited to:

- spills to a watercourse, including drains as defined under the Water Act 1989;
- loss of hydrocarbons or chemicals greater than 20 litres in volume to land;
- spills or releases, which have moved offsite and has a negative impact;
- unauthorised removal or destruction of native vegetation;
- unauthorised ground disturbance outside of the Project's Activity Area;
- death or injury of state and/or nationally listed threatened flora or fauna caused by the construction activities (excluding off-site incidents);
- unauthorised impact to cultural heritage, refer to CHMP 18865 [Ref: 10];
- fires causing damage to property outside the construction area;
- release of drilling fluids at surface of greater than 200 litres;
- loss of any radioactive equipment, source or material.

Notification will be undertaken as soon as practicable but no later than two hours after the incident occurs or two hours after Lochard Energy becomes aware of the incident.

Notification will made to the DEECA's Pipeline Regulation Unit via:

- Phone: 0439 799 598
- Email: pipeline.regulation@deeca.vic.gov.au

Where the incident is an actual or potential threat to the safety of pipeline personnel and/or the safety of the general public, notification will also be made in writing to esvreports@energysafe.vic.gov.au and by telephone to:

- ESV Duty Controller 1800 671 337

A notification template for reportable incidents is included in Appendix C. Where verbal notification is provided, the level of information will be consistent with the reporting template. A written report on the incident will be provided to the Minister for Energy and Energy Safe Victoria (where applicable) within seven days of the date of occurrence of the incident.

7.9.3 Pollution Events Or Notifiable Contamination

Section 32 of the EP Act [Ref: 18] requires a person to notify EPA Victoria where a pollution event has occurred and causes or threatens to cause 'material harm' to human health or the environment, this is also parallel to any reporting requirements detailed in 7.9.2 and 7.9.4.

Material harm, in relation to human health or the environment, is defined by the EP Act [Ref: 18] as 'harm that is caused by pollution or waste that:

- involves an actual adverse effect on human health or the environment that is not negligible; or
- involves an actual adverse effect on an area of high conservation value or of special significance; or
- results in, or is likely to result in, costs in excess of the threshold amount being incurred in order to take appropriate action to prevent or minimise the harm or to rehabilitate or restore the environment to the state it was in before the harm.' The EP Regulations [Ref: 45] defines this threshold amount as $10,000 or more.

Pollution incidents will be reported to EPA Victoria by calling 1300 EPA VIC (1300 372 842). The form for written notification of the incident is provided by EPA Victoria via email upon completion of the initial phone call.

In addition, Section 40 of the EP Act [Ref: 18] requires "notifiable contamination" to be reported to EPA Victoria as soon as practicable. Notifiable contamination is defined in part 2.1 of the EP Regulations [Ref: 45] as including:

- contamination of soil (including friable asbestos) that exposes a person to that contamination;
- contamination of soil that is moving, has moved or is likely to move onto adjacent land;
- contamination of any surface water and groundwater that is being used, or may be used;
- contamination of soil or groundwater that causes vapour intrusion;
- any presence of non-aqueous phase liquid (NAPL) in soil or groundwater; and
- contaminated soil sourced from that land that can be lawfully retained on site.

Guidance for notifying to the EPA of contaminated land are found at: https://www.epa.vic.gov.au/about-epa/publications/2008-1.

Section 31 of the EP Act [Ref: 18] requires the restoration harm caused by an incident. The area must be restored to its original state so far as is reasonably practicable. Guidance on this requirement can be found in EPA Publication 1991 [Ref: 57].

7.9.4 Other Reportable Incident

Incidents will also be reported to other statutory authorities as required by legislation and conditions of statutory approvals. This includes, as minimum:

- Notifications to the Registered Aboriginal Party and First Peoples State Relations if a potential Aboriginal site or artefact is identified in accordance with protocols within CHMP 18865 [Ref: 10].
- Notification to Heritage Victoria and DEECA if a heritage artefact is discovered.
- Notification to Corangamite CMA if a condition of the Works on Waterways permit has been breached.
- Any reporting detailed in 7.9.2 and 7.9.3.

7.9.5 Regulatory Reporting To DEECA

In order to inform DEECA as the regulatory authority for environmental compliance under the Pipelines Act [Ref: 1], Lochard Energy will report to DEECA in line with the reporting schedule identified in Table 11.

Table 11: HUGS Pipeline Regulatory Reporting Overview

Stage	Report	Timing
Pre-mobilisation requirements	Provide information to DEECA as required by this EMP and conditions of approvals.	As per the specific information requirement.
Weekly construction status	Email report of the status of construction, including (but not limited to) the following: 1. Summary of key activities undertaken in the reporting period (including photos as relevant) and planned activities in the following reporting period. 2. Work status against planned schedule. 3. Summary of environmental incidents, complaints and non-conformances identified in the performance monitoring. 4. Results of any audits and status of implementation of corrective actions identified in any corrective action plan.	Weekly (Sunday to Sunday) and to be provided within 1 day of the end of the reporting period.
Construction audit reports	audit reports	To be publicly available 30 days after completion of the audit
Annual performance report	Provide an annual report to the Minister for Energy and Energy Safe Victoria on the performance in protecting the environment from the pipeline construction and operations.	Within 3 months of 30 June for each year.
Completion of Reinstatement	Email confirmation of the date which reinstatement activities are concluded and the period from which the rehabilitation monitoring period applies with an associated report of activities completed.	Upon completion of reinstatement.
End of rehabilitation monitoring period	Email confirmation of the end of the 24-month rehabilitation monitoring period (see Section 4.3). Lochard Energy will prepare a reinstatement close out report which will be submitted to the Minister for Energy within one month of the end of the monitoring period. The close out report will include evidence that reinstatement objectives and targets have been met, including: • Site-specific reinstatement assessments and photos • Landowner acceptance letters Environmental matters to be carried over to the Lochard Energy Operations Environmental Management Plan	Email upon completion of rehabilitation monitoring period. Close out report within 1 month of the end of the rehabilitation monitoring period. The Close out report will identify remaining matters that will be addressed through the OEMP.

7.9.6 Stakeholder Reporting

Lochard will notify and report matters relating to project activities with all relevant stakeholders as per Table 12. This covers legislatively required reporting through to reporting to community stakeholders on work completed and planned. Stakeholders include:

- Community Liaison Committee (CLC) members;
- WorkSafe Victoria;
- EPA Victoria;
- Department of Energy, Environment and Climate Action (DEECA) & Earth Resources Regulation (ERR);
- Corangamite Shire Council;
- Local landowner and near neighbours;
- Other Operators (Epic Energy, Beach Energy, APA)
- Country Fire Authority (CFA)/Fire Rescue Victoria (FRV)
- Victoria Police; and
- VicRoads.

Table 12: Stakeholder Reporting

Stakeholder	Relevance / Interaction Trigger	Engagement Method	Timing
DEECA and ERR	Activity / Approvals / Plan reviews / significant changes to approved operations and assessed risks.	Email, Telephone. Written Submission.	As required by Statute. Any time non-routine works are planned.
	Reportable Incident Report.	Email, Telephone. Written Submission.	Initial notification verbally as soon as practicable after the Incident occurs (within 2 hours). Written report to be submitted as soon as practicable after the incident (within 7 days).
EPA Victoria	Reportable Incident Reports.	Email, Telephone. Written Submission.	As soon as practicable after the reportable incident or complaint occurs or the operator becomes aware that it occurred.
	National Greenhouse and Energy Reporting (NGERS).	Written Submission.	Yearly
Energy Safe Victoria	Consent to Construct Consent to Operate	Email, Telephone. Written Submission.	As required by Statute.

Stakeholder	Relevance / Interaction Trigger	Engagement Method	Timing
	Reportable Incident Report.	Email, Telephone. Written Submission.	Initial notification verbally as soon as practicable after the Incident occurs (within 2 hours). Written report to be submitted as soon as practicable after the incident (within 7 days).
WorkSafe Victoria	Reportable Incident Report.	Email, Telephone. Written Submission.	Immediate notification. Within 48hrs after notification, provide written report.
CLC	Community Liaison.	Email, Telephone, Committee meetings, Face to Face meetings.	Tri-annually
Corangamite Shire Council	Activity Mobilisation / Demobilisation Advice.	Email, Telephone, Face to Face meetings.	Any time non-routine works are planned.
Corangamite Catchment Management Authority	Notification in advance of relevant works. Reportable Incident.	Email, Telephone, Face to Face meetings.	Advance of works on waterways. As soon as practicable after occurrence of a reportable incident.
CFA and/or Police	Any activities on Total Fire Ban days which may require a permit / dangerous goods incident.		Pre-Approval.
	Activity Mobilisation / Demobilisation Advice.	Email, Telephone, Face to Face meetings.	Any time non-routine works are planned.
VicRoads	Activity Mobilisation / Demobilisation.	Email, Telephone, Face to Face meetings.	Pre-mobilisation.
Local Landowner/ near neighbours	Mobilisation.	Email, Telephone, Community meetings, Face to Face meetings.	Any time non-routine works are planned.
Other Operators	Mobilisation.	Email, Telephone.	Mobilisation. As soon as practicable in event of incident or risk that could affect other operator assets.
Directly Impacted Landowner/ near neighbours	Proactive.	Face to Face meetings.	In advance of activities commencing.

7.10 RECORDS

Records of monitoring results, inspections and audits are to be kept on the project file and provided to the Lochard Energy HUGS Project HSE Lead where needed as part of regular performance monitoring and additional reporting requirements.

An electronic Document Management System (Meridian) provides access to the current controlled version of issued documents and procedures. This system includes controlled document numbers and an audit trail of document reviews.

Other data and files are stored on a centralised server that is backed up regularly while uninterruptable power supply facilities are used to power both the server and essential document access points so that access to such documents is not interrupted by normal power outages. These files are stored for the full lifecycle of each project, from site preparation, design and construction through to decommissioning and rehabilitation, and cover all operations performed

7.10.1 Environmental Records

Lochard Energy will retain records related to the HSE inspections as outlined in Appendix H, copies of the records below will be provided where applicable by the principal contractor and will also be retained by Lochard Energy.

- a register of SDSs;
- incident and Near Miss register including status of corrective actions;
- community and landowner complaints register;
- environmental recording equipment calibration and compliance certificates;
- emergency response plan;
- procedures, work instructions and standard operating procedures (or equivalent);
- vehicle, plant and equipment maintenance and hygiene records;
- induction and training records;
- completed JHA/JSAs;
- waste transport certificates/ records;
- imported fill certification/ validation demonstrating clean fill source; and
- all certification, permits, licences or agreements required to be obtained directly by the Principal Contractor from regulatory agencies.

Lochard Energy also retains copies of regulatory approvals and relevant supporting documentation.

8. EMERGENCY PREPAREDNESS AND RESPONSE

Regulation 48(5) of the Pipelines Regs requires the implementation strategy to provide for the establishment and maintenance of an emergency response plan. This section outlines the emergency preparedness and response arrangements that will be in place for HUGS Pipeline construction.

Incident and emergency management will be managed by the Principal Contractor for all locations where they have jurisdiction over the physical work location. Incident and emergency management is aligned to the PtW System used for the area of work control, see Table 13 below.

Where work is completed on an Iona controlled asset the Iona Emergency Response Plan [Ref: 58] will be the governing document.

Table 13: Incident and Emergency Response Management

Work Site/Zone	Controlling Party	Governing HSE Management System / PtW System	Incident and Emergency Response Plan
MFCT wellsite	Drilling Contractor	Drilling Contractor	Drilling Contractor Primary to LE Bridging ERP
Pipeline Easement	Pipeline Principal Contractor	Pipeline Principal Contractor	Pipeline Principal Contractor to LE Bridging ERP
NP-4&5 wellsite	Iona Operations	Iona Operations	Iona Gas Facility ERP
NPPS	Iona Operations	Iona Operations	Iona Gas Facility ERP

Note – the table above is subject to change upon firming of the program schedule.

8.1 LOCHARD ENERGY EMERGENCY MANAGEMENT

Lochard Energy will be responsible for the development of the project bridging ERP for the HUGS Pipeline project. The HUGS Bridging ERP [Ref: 51] will detail the emergency response jurisdictions for respective parties involved in the project, actions required and the escalation pathways.

Lochard Energy operates a two-tier notification system for emergencies. Incidents that have the potential to escalate to an emergency if unable to be contained at the worksite.

Steps for raising an emergency alarm and initiating a response will be detailed in the HUGS Bridging ERP [Ref: 51]. In summary, the Lochard Energy HUGS Project team will follow the Lochard Energy Status 1 and Status 2 model for classifying and escalating an emergency scenario, as shown in Figure 7.

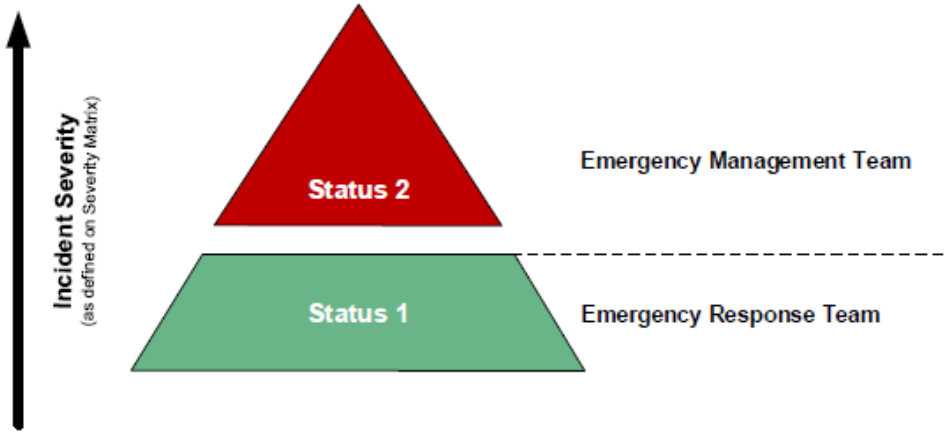

Figure 7: Lochard Energy Two Stage Emergency Classification

Status #1 emergencies are those that:

- can be controlled by site personnel and resources;
- require no external assistance; and
- have little or no potential to escalate into a Status #2 emergency.

Status #2 emergencies are those that:

- cannot be controlled by personnel or resources normally available at site; or
- require mobilisation of external emergency services and the Lochard Energy EMT; or
- have the potential to adversely impact Lochard Energy on a corporate level.

On site response will be managed by the HUGS Project Emergency Response Team (ERT) for both Status #1 and #2 emergencies, where Lochard Energy has control of the workplace. The Lochard Energy On-Scene Commander (ERT role) will determine whether an emergency is Status #1 or #2.

For Status #2 emergencies the Lochard Energy Emergency Management Team (EMT) is to be notified and the Lochard Energy Pipeline Construction Project Engineer will take on the role of EMT Liaison.

EMT objectives are to provide strategic planning support and requested assistance to the Project ERT, while liaising with external groups such as media, community, relatives and regulatory bodies and managing the wider implications of the emergency.

Stand down and recovery processes for both levels will be detailed in the HUGS Bridging ERP [Ref: 51].

Personnel must be competent to respond to emergency situations. Training will include:

- responding to alarms;
- assembling at the Muster Points; and
- using emergency equipment.

Emergency response requirements, procedures and equipment, including spill response, will be outlined in the Project induction. Any person entering the project area will be required to attend the relevant project induction training, which includes information regarding the various

alarms, actions to be taken in the event of an emergency or evacuation and the location of Muster Points.

The HUGS Project Manager (or their delegate) will ensure that an emergency response exercise(s) is conducted within 7 days of mobilisation to:

- assess the preparedness of personnel;
- provide an opportunity for personnel to practice emergency response actions; and
- verify the Bridging ERP suitability and improve overall emergency preparedness.

Emergency response exercises will also involve the Principal Pipeline Contractor, they will also be required to implement a program of drills and exercises for their scope of work.

Following completion of any drill or exercise, any identified improvements and corrective actions will be implemented when appropriate. Corrective actions may involve revision to plans, implementation of further training or improvement of safety equipment or facilities.

8.2 PRINCIPAL CONTRACTOR EMERGENCY RESPONSE

The Principal Contractor for the pipeline will be responsible for the development of an emergency response plan covering the areas of the project where they have jurisdiction. The emergency response plan must be fit for purpose and cover the possible emergency scenarios identified in the first aid and emergency management risk assessment and must interface with the HUGS Bridging ERP [Ref: 51].

The emergency response plans will be developed based on the outputs of the safety study's, hazard analysis and risk assessments completed by the project teams.

Emergency response plans will be reviewed when:

- there is a significant operational change;
- after an incident;
- when improvements are identified from drills or exercises;
- learnings from safety alerts or bulletins; and
- changes to policy or standards.

8.3 FIRE PREPAREDNESS

The HUGS Project falls into the Victorian, Southwest Fire District. Construction of the HUGS Pipeline will involve hot works including welding, cutting and grinding. These activities may be undertaken anywhere within the activity area.

In the event of 'extreme' fire danger ratings or the issue of a Total Fire Ban, the HUGS Pipeline project may choose to avoid hot works or otherwise will seek to obtain the necessary permit to conduct hot works on a day of Total Fire Ban. This would only be done in circumstances where essential hot works require to be undertaken and will be reviewed actively by the construction team. Any planned hot works will be thoroughly risk assessed with fire preparedness a central consideration prior to the commencement of these activities.

The HUGS Pipeline project will actively engage with the local Country Fire Authority (CFA) and adhere to all emergency warnings issued by the CFA. They will utilise the Vic Emergency App to ensure that key management maintain awareness of any fire threat and act accordingly.

All heavy earth moving equipment is required to be fitted with an appropriate fire extinguisher and further fire suppression equipment will be located at the office compound on-site.

9. REFERENCES

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Ref: 51 UGS-HP-0054 HUGS Pipeline Bridging Emergency Response Plan

Ref: 52 UGS-ZE-0202 HUGS Drilling Notice of Operation

Ref: 53 HSE-QA-PRC-0001 HSE Audits

Ref: 54 HSE-GEN-PC044 Contractor Management and HSE Evaluation

Ref: 55 HSE-GEN-PC020 Registering and Close Out of Corrective Actions

Ref: 56 HSE-GEN-PC002 Safety Observations and Incident Management

Ref: 57 EPA Publication 1991: Responding to harm caused by pollution, Environment Protection Authority Victoria (June 2021)

Ref: 58 HSE-GEN-PLA-0001 Iona Emergency Response Plan

APPENDIX A: CONCORDANCE TABLE

Table 14: Regulatory Requirements

Reference	Description of requirement	Relevant section of the EMP
Pipelines Act 2005 [Ref: 1]		
Section 133	An EMP must be prepared, that identifies the risks to the environment arising from the pipeline operation; specifies what the licensee will do to eliminate or minimise those risks, including rehabilitation of land; and sets out any matter prescribed by the regulations	This document
Section 139	Five-yearly review of approved EMP	5 yearly document aligns with Lochard Energy document review cycle. Note review date front page.
Pipelines Regulations 2017 [Ref: 2]		
Regulation 11(b)	The licensee must provide an annual performance report to the Minister and Energy Safe Victoria	Section 7.9.5 captures this requirement
Regulation 20(2)	The licensee must notify the Minister and Energy Safe Victoria of any reportable environmental incidents	Section 7.9.2 captures this requirement
Regulation 20(4)	The licensee must provide a written report to the Minister and Energy Safe Victoria of any reportable environmental incident	Section 7.9.2 captures this requirement
Regulation 22(1)	A Pipeline must be constructed in accordance with the prescribed standard AS2885.3	Section 4.2 captures Lochard Energy's commitment to do this
Regulation 44	The Environment Management Plan must— (a) describe the pipeline operation, including details and timing of activities involved in the construction and ongoing operation of the pipeline; and (b) describe the existing environment that may be affected by the pipeline operation; and (c) identify the particular relevant values and sensitivities (if any) of that environment.	(a) Section 4 (b) & (c) Section 5
Regulation 45	The Environment Management Plan must— (a) identify the risks to the environment arising directly or indirectly from the pipeline operation; and (b) assess the environmental risks identified under paragraph (a).	Section 6
Regulation 46	The Environment Management Plan must contain— (a) environmental performance objectives and standards, against which the performance by the licensee to eliminate or minimise the risks identified in accordance with regulation 45 so far as reasonably practicable are to be measured, that address— (i) the environmental legislative requirements that apply to carrying out the pipeline operation; and (ii) any other environmental requirements that the licensee intends to comply with in carrying out the pipeline operation; and	(a) Section 6.4 (i) and (ii) Section 3 (b) Section 6.4 (c) Section 7 & Appendix B

Reference	Description of requirement	Relevant section of the EMP
	(b) a list of the environmental legislative requirements and any other non-legislative requirements referred to in paragraph (a); and (c) a statement of the licensee's environmental policy.	
Regulation 47	The Environment Management Plan must contain a report on all consultation carried out between the licensee and all relevant entities in the course of developing the Environment Management Plan.	Section 7.7
Regulation 48(1)	The Environment Management Plan must contain an implementation strategy for the pipeline operation.	Section 7
Regulation 48(2)	The implementation strategy must specify the systems, practices and procedures to be used to ensure that— (a) any environmental risks identified in accordance with regulation 45(a) are eliminated or minimised so far as reasonably practicable; and (b) the environmental performance objectives and standards specified in accordance with regulation 46(a) are met.	Section 7
Regulation 48(3)	The implementation strategy must include measures to enable assessment of the effectiveness of the systems, practices and procedures	Section 7.8
Regulation 48(4)	The implementation strategy must provide for the monitoring, auditing and management of compliance; assessment of performance; and keeping of quantitative emissions and discharges records	Section 7.8 Appendix G
Regulation 48(5)	The implementation strategy must provide for the establishment and maintenance of an emergency response plan that identifies all potential emergency situations; assesses the environmental risks; and includes response arrangements	Section 8
Regulation 48(6)	The implementation strategy must include procedures to ensure that the response arrangements in the emergency response plan are tested	Section 8
Regulation 48(7)	The implementation strategy must include arrangements for ongoing consultation by the licensee during the life of the pipeline operation	Section 7.7
Regulation 48(8)	The implementation strategy must provide a chain of command, and roles and responsibilities of personnel in relation to the implementation of the EMP	Sections 7.2 and 7.3
Regulation 49	The EMP must contain details of arrangements to record and keep information about systems, practices and procedures; performance; environmental incidents; emergency response testing; and effectiveness of emergency response plan	Section 7.10
Regulation 50	The EMP must contain details of arrangements for reporting on the licensee's performance in protecting the environment from the pipeline operation	Section 7.9

APPENDIX B: LOCHARD ENERGY HEALTH, SAFETY, SUSTAINABILITY AND ENVIRONMENT POLICY

Health, Safety, Sustainability and Environment Policy

Lochard Energy recognises the responsibility and accountability for health, safety, sustainability, and environment lies with every Executive, Manager, Employee and Contractor, and this responsibility forms an integral part of our leadership and management of all tasks at every level of the organisation.

Lochard Energy is committed to providing a safe working environment for all personnel at our workplace and to the principles of sustainable development and environmental stewardship. Through proactive and systematic management of risk, and sustained commitment to health and safety, we will endeavour to eliminate workplace injuries and illnesses.

Good corporate governance is central to our approach to enhance the sustainability of our business and underpins all that we do. We are committed to upholding strong corporate governance principles and practices in the way we govern our operations.

This will be underpinned by the following Policy Commitments, in which Lochard will:

- Work to continue to develop and foster a strong culture of safety, environmental sustainability and social responsibility.
- Implement and maintain Management System Standards that incorporate health, safety and environmental plans and procedures to provide a safe place of work and minimise the impact on people and the environment.
- Operate our sites and business responsibly, whilst respecting and engaging our neighbours, local communities, customers, suppliers and the regulatory environment we operate in. We are committed to appropriate engagement with our stakeholders on a regular and proactive basis, to ensure we understand, address and minimise issues should they arise
- Ensure a systematic approach to proactively identify hazards and manage the risks so far as reasonably practicable to ensure sustainable business and social outcomes.
- Provide our employees with, and ensure our contractors have, the training and resources necessary to meet our commitments and continuously enhance knowledge, awareness, behaviours and competency in safety, health, sustainability and environmental management.
- Sharing and exchanging knowledge, and experience with suppliers, contractors, business partners and the local community, with the aim of mutually enhancing health, safety, social responsibility and environmental performance.
- Actively pursue continuous improvement on all aspects of health, safety and environmental management.
- Target defined safety and environment initiatives by establishing challenging measurable objectives and targets and regularly reviewing performance.
- Comply with and where appropriate, exceed all health, safety and environmental laws and any other requirements committed to by Lochard Energy.
- Continue to focus on prevention of pollution by managing impacts associated with: noise, loss of containment, waste management, lighting and emissions.
- Endeavour to understand the potential impact of climate change on our business and develop effective mitigants and responses to minimise any impact.
- Be ethical and transparent in our interactions
- Source products and services from local suppliers where appropriate
- Ensure business decisions will be made with consideration of environmental and social issues to ensure long-term sustainable operations.

Tim Jessen, Chief Executive Officer
May 2024

APPENDIX C: REPORTABLE INCIDENT NOTIFICATION TEMPLATE

Table 15: Reportable Incident Template

Reportable Environmental Incident: HUGS Pipeline Project	
Date of incident:	
Time of incident:	
Incident location (address or location within construction area boundary):	
Reporting person (name, position, company)	
Site supervisor (name, position, company)	
Brief description of incident:	
Externally reportable criteria:	
External party involvement and/or notification:	
Immediate actions taken (including notification of police/ emergency services):	
Known/ suspected cause (immediate contributing factors):	
Proposed next steps	

APPENDIX D: COMPLAINT MANAGEMENT PROCESS WORKFLOW

APPENDIX E: CONSOLIDATED ENVIRONMENTAL AND SOCIAL RISK AND IMPACT ASSESSMENT

RA-892 - provide as a separate document.

APPENDIX F: HUGS PIPELINE CONSTRUCTION ENVIRONMENTAL AND SOCIAL LINE LIST

Table 16: HUGS Pipeline Construction Environmental Line List

ELL Ref #	Approx KP Start	Approx KP End (if applicable)	Constraint/ Value Type	Proximity to the Pipeline Activity Area (m)	Description	Comment
E&SLL001	0.6		Sensitive Receptor	399	Residence SW of Gas Works Road	
E&SLL002	0.697	0.777	Vegetation	0	Timboon - Peterborough Road Reserve	
E&SLL003	0.7		Sensitive Receptor	408	Residence NE of intersection with Timboon - Peterborough Road Reserve	
E&SLL004	0.78		Sensitive Receptor	393	Residence NE of intersection with Timboon - Peterborough Road Reserve	
E&SLL005	0.78		Sensitive Receptor	223	Residence SW of intersection with Timboon - Peterborough Road Reserve	
E&SLL006	1.15	83	Registered Cultural Heritage Site	83	VAHR 7420-0031-1 Artefact Scatter in proximity of pipeline activity area	
E&SLL007	1.39		Sensitive Receptor	839	Residence SW of Pipeline activity area	
E&SLL008	2.34	2.38	Vegetation	5	Mapped EVC 83 Swampy Riparian Woodland	

E&SLL009	2.872		Skull creek crossing	0	Open cut creek crossing	
E&SLL010	2.84		Registered Cultural Heritage Site	28	VAHR 7420-0063 in close proximity to pipeline activity area	
E&SLL011	2.85	2.875	Leech creek crossing	0	Open cut creek crossing	
E&SLL012	3.253	3.373	Minor waterway crossing	0	Open cut waterway crossing	
E&SLL013	3.3	3.35	EVC 53 - Swamp Scrub	0	Mapped Swamp Scrub vegetation	
E&SLL014	3.43		Sensitive Receptor	584	Sensitive receptor nth of intersection with Boundary road	
E&SLL015	3.44		EVC 165 - Damp Heath Scrub	0	Mapped Damp Heath Scrub vegetation	
E&SLL016	3.48		Sensitive Receptor	488	Sensitive receptor nth of intersection with Boundary road	
E&SLL017	3.71		Sensitive Receptor	688	Sensitive receptor south of pipeline activity area	
E&SLL018	3.827		Minor waterway crossing	0	Open cut waterway crossing	
E&SLL019	5		Sensitive Receptor	840	Residence east of the pipeline activity aera	

E&SLL020	5.2		Sensitive Receptor	724	Residence to the east of the pipeline tie-in point to the MFCT wellsite	
E&SLL021	4.05		Vegetation	3	Mapped EVC 16 Lowland Forest Vegetation	

APPENDIX G: ENVIRONMENTAL MANAGEMENT COMMITMENTS

Table 17: Management Commitments for HUGS Pipeline project Environmental Aspects and High Risk Activities

ENVIRONMENTAL ASPECTS	HIGH RISK ACTIVITIES
Aboriginal Cultural And Historic Heritage Biodiversity & Biosecurity Land Use Erosion And Sediment Control Waste Management Visual Amenity Noise And Vibration Air Quality Greenhouse Gas Traffic And Transport Dangerous Goods And Hazardous Substances Emergency Preparedness And Response Spill Response Accidental Discovery Reinstatement And Rehabilitation	Horizontal Directional Drilling Hot Works And Fire Awareness Trench Dewatering Hydrostatic Testing Emergency Response Watercourse Crossings

9.1 Aboriginal Heritage

9.1.1 CHMP Management Conditions and Management Actions

General condition 1.1.7 and 1.1.9 of CHMP 18865 relate specifically to the provisions for the avoidance and contingency measures for VAHR 7420-0063. This will involve installation of a standard fence at least 15m from the defined edge of the registered site and installation of an orange barrier mesh fence inside the standard fence with appropriate 'No-go Zone' signage.

The CHMP is a legal compliance document that will be adhered to throughout the construction and operation of the HUGS Pipeline. Section 1.2.4 of CHMP 18865 has a compliance checklist to assist with the implementation of the management controls within the plan, including provisions for accidental discovery of aboriginal

cultural heritage and aboriginal remains. The compliance checklist will be used by Lochard Energy to implement each control measure sequentially from pre-construction to ongoing operation of the HUGS Pipeline.

Table 18: CHMP Management Conditions and Management Actions

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
CH1	Undertake all notification, bookings and direct contact with the Eastern Maar Aboriginal Corporation (EMAC) required by the compliance conditions of CHMP 18865.	Accountable: Lochard Energy Responsible: Locahrd Energy	Record of bookings
CH2	Inform Lochard Energy of intended commencement of works with at least four weeks lead time to enable EMAC Representatives to be booked for attendance where it is required within CHMP 18865 (including inspections and inductions).	Accountable: Contractor Responsible: Contractor	Record of email requests
CH3	All construction personnel shall undertake a Cultural Heritage induction prior to commencement on site.	Accountable: Lochard Energy Responsible: Contractor	Record of inductions
CH4	Implement and comply with CHMP 18865 management conditions and discovery contingencies. Management conditions overview includes: • Cultural heritage inductions to be provided to all project personnel working on site; • Notification process to EMAC ahead of commencement of works; • A printed copy of the approved CHMP will be available on-site; • Compliance inspections by EMAC during the course of the works; • Additional controls in relation to the area of cultural heritage sensitivity near Leech Creek such as reduced workspace and additional signage; • Protocols and processes or actions in the event of potential Aboriginal Cultural Heritage being identified; and • Two (2) areas from KP2.8-2.9 and the access north of KP5.26 that are subject to inspection by EMAC during topsoil stripping and trenching activities (where applicable).	\ Accountable: Lochard Energy Responsible: Contractor	Record of induction Record of notification Printed copy on site Record of inspection Record of inspection Incident report and record of notification Record of inspection

CH5	Incorporation of compliance checklist within s1.2.4 of CHMP 18865 into compliance and reporting program.	Accountable: Lochard Energy Responsible: Contractor	Contractor compliance program includes full extract from the compliance checklist
CH6	Prior to commencement of clear and grade, a specific toolbox talk shall be held with all machinery operators involved in clear and grade activities focused on reiterating likely aboriginal and historic heritage items that could occur within the region and accidental discovery protocol.	Accountable: Lochard Energy Responsible: Contractor	Record of toolbox
CH7	Prior to commencement of ground disturbing activities, representatives from Lochard Energy and the contractor's site supervisor and clear and grade operators will conduct a 'walk through' of site to validate that all compliance requirements are understood and that the surveyed area of disturbance is clearly marked. Machinery operators shall demonstrate understanding of compliance expectation.	Accountable: Lochard Energy Responsible: Contractor	Record of walk through

9.2 Biodiversity and Biosecurity

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
BB1	Site survey should clearly delineate the extent of proposed vegetation clearing. Survey peg size, colour and frequency should be sufficient to enable machinery operators to clearly observe clearing extent. Areas such as additional work space or vehicle turn arounds should be demarcated in a way that clearly guides the clear and grade operators along the extent of clearing.	Accountable: Lochard Energy Responsible: Contractor	Visual Inspection Maintain inspection record
BB2	Trees should be trimmed by qualified arborists using best practice (e.g. three cut method) to cleanly remove limbs.	C Accountable: Lochard Energy Responsible: Contractor	Visual Inspection Maintain inspection record
BB3	Measures to minimise risk of harm to native fauna must be developed and incorporated into a Fauna Management Plan.	C Accountable: Lochard Energy	Approved Fauna Management Plan

	The Fauna Management Plan must include: - Commitment by management to effectively resource fauna management during the construction of the HUGS Pipeline. - Evidence of personnel who are appropriately qualified and licenced to handle and release threatened fauna (Wildlife authorisation under the Wildlife Act 1975). - Provision to induct and reiterate the importance of fauna protection during construction of the HUGS Pipeline to all site based personnel. - Provision for inspection prior to commencement of tree removal and during 'high risk' activities such as clear and grade. - Frequency of inspection of pipeline trench and bell holes once excavated (should be reflective of ambient conditions and incorporate provision for wet weather inspections and inspections during any long weekends or rostered breaks). Inspections should be undertaken prior to commencement of active pipeline trench work each day as a minimum. - Methods of minimising harm to fauna that may become trapped in the trench including methods of affording shade and exit. - Commitment to release all fauna found within the activity area to the nearest point of suitable habitat. - Method of recording all fauna interactions in a format that would enable records to be accepted by the custodians of the Victorian Biodiversity Atlas. - Internal project reporting and how fauna interactions will be communicated to Lochard Energy (including reporting death(s) of listed species – reportable incident). - Provisions to prevent livestock from entering on to the cleared construction right of way.	Responsible: Contractor	
BB4	Prior to commencement of clear and grade, a specific toolbox talk shall be held with all machinery operators involved in clear and grade activities to reiterate familiarity with pipeline construction corridor, explaining the protocol for sighting survey markers and clearing in proximity of the corridor extent. Exclusion areas should be reiterated and methods of limiting works to the activity area. Any areas of concern or confusion should be inspected on foot prior to commencement of ground disturbing activities with representatives from Lochard Energy and the Contractor to clarify or resolve any items that are unclear.	Accountable: Lochard Energy Responsible: Contractor	Record of Toolbox
BB5	All construction activities including vegetation clearing and soil movement and storage to be confined to the defined activity area.	Accountable: Lochard Energy Responsible: Contractor	Visual observation. Maintain inspection records

BB6	Preparation of a site specific biosecurity work procedure that is consistent with and reflective of the management objectives, commitments and management measures contained within the Lochard Energy Weed and Biosecurity Management Plan (Appendix J) The work procedure must include: - management measures to control high risk activities to spread weeds and pathogens such as initial on-ground activities and ground disturbance activities. - detail on where plant, equipment and machinery will be mobilised from. - proposed system of hygiene, inspection and record keeping - frequency should reflect the risk of weed transfer. - weed hygiene methodology in wet conditions and dry conditions. a contingency for wet weather conditions and include identified plan to manage the increased risk of weed & pathogen transfer. - The procedure for vehicle, machinery and equipment cleaning prior to leaving site must be explicitly detailed. Any on site washdown locations for vehicles or plant must be identified and a detailed description of washdown design should be presented. Lochard Energy must approve the Work procedure prior to the commencement of site based works.	Accountable: Lochard Energy Responsible: Contractor	Approved biosecurity work procedure
BB7	Vehicles, Plant, Equipment and machinery shall arrive on site in a clean condition and have been individually inspected by the Contractor's Plant Manager or delegate. Equipment Acceptance Checklist [Ref: UGS-ZL-0245] shall be completed for all vehicles and plant prior to arrival on site. It includes all safety checks, all weed hygiene checks and requirements for wash down if needed. An electronic copy of the completed form will be held on file to serve as a record of inspection. The physical copy of each form will be held on each vehicle and updated with each subsequent clean down or wash down whilst the vehicle is being used in conjunction with the HUGS Pipeline Project.	Accountable: Lochard Energy Responsible: Contractor	Vehicle & Plant Weed Hygiene Inspection Form Incorporate sample inspection of vehicles and plant into regular inspection program.
BB8	Prior to commencement of clear and grade, the pipeline activity area should be inspected by an environmental advisor with the ability to identify and remove any listed or noxious weed species. Any patches of listed or noxious weeds that cannot be removed should be treated prior to commencement of clear and grade activity with approval from the landowner and be visibly dead before cleared or graded.	Accountable: Lochard Energy Responsible: Contractor	Record of inspection Record of weed location and date of treatment or removal

BB9	Frequency of vehicle and plant hygiene should be reflective of weather conditions and type of activities being undertaken on site. For example, frequency of cleaning should increase in wet conditions and change from air based method to water based method for those vehicles and plant that are using public roads on a regular basis. Wet weather vehicle hygiene should be raised in daily pre-starts where conditions are wet and/ or muddy. High risk activities such as clear and grade where machinery will contact the top 200mm of topsoil (active seed bank), should incorporate observation and hygiene practices into the site SWMS	Accountable: Lochard Energy Responsible: Contractor	Vehicle & Plant Weed Hygiene Inspection Form showing regular vehicle inspection and hygiene. Record of pre-start SWMS
BB10	Any pesticide, herbicide or disinfectant intended to be used on site must be validated by Lochard Energy prior to its use on site. SDS and Product Data Sheet should be provided to Lochard Energy with a request for acceptance prior to its storage and use on site.	Accountable: Lochard Energy Responsible: Contractor	SDS Manifest
BB11	Any presence of nuisance weeds during construction, reinstatement and rehabilitation within the pipeline activity area must be controlled or removed as quickly as is reasonably practical. Weed density and spread should be consistent with surrounding land practice. Where weed presence is more pronounced within the pipeline corridor, it must be effectively controlled.	Accountable: Lochard Energy Responsible: Contractor	Record of inspection Record of weed treatment or removal
BB12	The Contractor will develop an injured wildlife protocol and ensure that wildlife licences extend to enable euthanasia where animals are terminally injured.	Accountable: Lochard Energy Responsible: Contractor	Wildlife permit
BB13	Pathogen Control (Phytophthora) - If phytophthora is identified in proximity to the work area and conditions are dry, use dry cleaning methods (e.g. air blower & brushes) to remove soil from tools, plant equipment and clothing, including boots. - Where equipment has been used within or in proximity to a phytophthora infested area, apply a disinfectant following removal of soil. Disinfectants include:	Accountable: Lochard Energy Responsible: Contractor	Visual inspection where native vegetation is present (road reserves adjacent to site). Maintain inspection records

	○ Methylated spirits: 70% spirits: 30% water; ○ Sodium hypochlorite (pool chlorine): 6ml of sodium hypochlorite: 10L of water; ○ Household bleach: 1 part bleach: 4 parts water. ○ Commercial products such as Phytoclean.		
BB14	Pathogen Control (Foot and Mouth Disease) - Ensure that anyone who has travelled to a high risk area does not come on site for at least 7 days. - Monitor official information about the extent of disease infection and quarantine, including: ○ Foot-and-mouth disease - DAFF (agriculture.gov.au) https://www.agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal/fmd ○ Outbreak | National pest & disease outbreaks https://www.outbreak.gov.au/ ○ Agriculture Victoria - Foot-and-mouth disease (prevention actions) https://agriculture.vic.gov.au/biosecurity/animal-diseases/foot-and-mouth-disease	Accountable: Lochard Energy Responsible: Contractor	Include outbreak check/update in monthly reporting to Lochard Energy

9.2.1 Land Use

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
LU1	Contractor shall ensure that all Property Management Plan (PMP) requirements and commitments are reflected in environmental work procedures, management plans and construction execution plan.	Accountable: Lochard Energy Responsible: Contractor	Review of Contractor documentation against PMP requirements and commitments
LU2	Prior to clear and grade commencement, the contractor shall ensure that adequate allowance has been made when creating the activity area for: - pipe truck swept path at access/egress points - vehicle parking - plant and vehicle turn arounds - material stockpiles - HDD rig set up and mud return line - Installation of pre-emptive containment controls at HDD locations	Accountable: Lochard Energy Responsible: Contractor	Adequacy statement provided from the Contractor to Lochard Energy
LU3	The Project activity area will be fenced with dedicated access track(s) to delineate project activity as agreed with landholder in each PMP.	Accountable: Lochard Energy Responsible: Contractor	Daily records Visual inspection Maintain record of inspection

9.2.2 Erosion and Sedimentation

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance

ES1	The contractor must prepare a CPESC endorsed Erosion and Sediment Control Management Plan that:
	- Is consistent with:
	  o EPA Publication 1834: Civil construction, building and demolition guidance,
	  o Publication 1894: Manage soil disturbance,
	  o Publication 1895: Manage stockpiles;
	  o Publication 1896: Manage how you work within or adjacent to waterways; and
	  o International Erosion Control Association Best Practice Erosion and Sediment Control, Appendix P – Land Based Pipeline Construction (IECA, 2008)
	- Is informed by site soil testing from at least three interspersed locations.
	- Contains an evaluation of site specific erosion and sediment controls required during site establishment and construction of the pipeline. Criteria for diversion and control device selection and application must be clearly defined and suitability for use shall be validated.
	- Includes a methodology for the correct location, installation and maintenance of control devices.
	- Details how installation of erosion and sediment controls will be supervised.
	- Makes provision for regular inspection for effectiveness of control measures.
	- Includes mapping detailing proposed erosion and sediment control device locations.
	- Includes a timeframe for removal of erosion and sediment controls from site.
	- Makes provision for installation of ESC controls during reinstatement to assist site rehabilitation (refer to the requirements of the reinstatement and rehabilitation plan).
		Accountable: Lochard Energy
		Responsible: Contractor
			Approved ESCMP

ES2	Pipeline contactor to develop a dewatering procedure (this can be incorporated into the Erosion and Sediment Control Management Plan). This will include: - a methodology for release of trench water including provisions for testing, determining release parameters, notification ahead of release, record keeping and how the release will avoid disturbance to the receiving environment. - A contingency for dewatering where release parameters are not met or where conditions for release cannot be met.	Accountable: Lochard Energy Responsible: Contractor	Approved dewatering procedure

	- a procedure for testing, notification to Lochard Energy and maintenance of trench dewatering records. Disposal of groundwater should be undertaken in accordance with the Environment Reference Standard, EPA Publication 1834 Civil construction building and demolition guide and other EPA Guidelines and all relevant approvals processes with relevant authorities.		
ES3	Dewatering to land (use of grass filter) must be approved by the landowner and occupier (if applicable) and should not occur within 100m of a watercourse.	Accountable: Lochard Energy Responsible: Contractor	Landholder written consent (or email) Record of notification
ES4	Where surface water run-off and rainfall collect in trenches and is to be dewatered, test turbidity, salinity and pH prior to discharge to land. Lochard Energy must be notified within 4 hours of each instance of trench dewatering. Notification must include location of dewatering, confirmation that water was within acceptable release parameters and include assessment of release location to ensure that no erosion is generated by the release.	Accountable: Lochard Energy Responsible: Contractor	Record of notification
ES5	Where drainage lines intersect the construction area, place flow diversion measures upstream of soil stockpiles.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
ES6	Ensure that erosion diversion controls such as check banks, berms or cut drains remain within the approved activity area.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records

9.2.3 Waste Management

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
WM1	Waste management must comply with Part 6.4 of the EP Act, the EP Regulations and the EPA waste hierarchy - waste avoidance, waste re-use, waste recycling, and waste disposal.	Accountable: Lochard Energy	Visual inspection Maintain inspection records

		Responsible: Contractor	
WM2	Prior to commencement of construction, undertake an assessment of potential wastes to be generated for the construction phase of the project that identifies waste elimination, reduction measures and opportunities for the re-use and recycle of construction waste. This should be presented to Lochard Energy as a Waste Minimisation Assessment for approval.	Accountable: Lochard Energy Responsible: Contractor	Approved Waste Minimisation assessment
WM3	General waste shall be removed from the construction area by crews. Surplus or waste materials to be stockpiled at laydown areas for regular collection.	Accountable: Lochard Energy Responsible: Contractor	Register of waste receptacle locations Record of waste collection
WM4	Housekeeping shall be maintained to a high standard with adequate supply and change out of skips for large waste and covered bins or enclosed receptacles for small waste and litter.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
WM5	Toilets must be self-bunded portable blocks. Clearing of portable toilet facilities, including waste collection and disposal, must be undertaken by a licensed waste contractor.	Accountable: Lochard Energy Responsible: Contractor	Record of waste collection
WM6	Cigarette butts must not be thrown on private property. Appropriate receptacles must be provided and used for cigarette butt disposal.	Accountable: Lochard Energy Responsible: Contractor	Pre-start records Visual inspection Maintain inspection records
WM7	Mats/ plastic ground covers will be used to capture coating overspray	Accountable: Lochard Energy Responsible: Contractor	Coating crew pre-start records & SWMS. Visual inspection Maintain inspection records
WM8	Clearly labelled general and regulated waste bins must be made available for construction waste. A suitable spill kit must be located adjacent to each regulated waste storage area. An EPA licensed contractor must collect regulated waste for recycling or licensed disposal.	Accountable: Lochard Energy	Visual inspection Maintain inspection records Record of waste collection

		Responsible: Contractor	
WM9	On site waste collection point(s) will be located away from natural drainage systems and flood plains.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
WM10	Priority waste (such as waste oils, oily water mixtures, oily rags and oil filters, etc) must be segregated, labelled and securely stored and transported to a facility authorised to receive these wastes (Lawful Place).	Accountable: Lochard Energy Responsible: Contractor	Record of waste collection Visual inspection Maintain inspection records
WM11	Disposing of any hazardous materials, including asbestos, should be undertaken in accordance with Industrial Waste Management Policies, regulations and relevant guidelines. Hazardous waste (incl. residual Part A Part B field joint coating cartridges) should be segregated into regulated waste.	Accountable: Lochard Energy Responsible: Contractor	Record of waste collection Visual inspection Maintain inspection records
WM12	Waste contaminated soil must be disposed of in compliance with EPA Publications IWRG 821: Waste Transport Certificates and IWRG 822: Waste Codes and requires the use of EPA-registered trucks for transport to appropriately licensed landfill facilities. Contaminated soil must be remediated or disposed of at an appropriately licenced facility in accordance with EPA waste disposal guidelines.	Accountable: Lochard Energy Responsible: Contractor	Record of waste collection and transportation
WM13	Records of all waste collection (and tracking where appropriate) must be maintained and provided to Lochard Energy upon request.	Accountable: Lochard Energy Responsible: Contractor	Record of waste collection and transportation

9.2.4 Visual Amenity

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance

VA1	Manage light generated during night construction activities such as HDD, in accordance with the requirements in Australian Standard AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Enquiries, Feedback and Complaints register Maintain inspection records
VA2	Remove machinery, materials and temporary infrastructure from construction area as soon as it is no longer required.	Accountable: Lochard Energy Responsible: Contractor	Daily pre-start Plant movement records

9.2.5 Noise and Vibration

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
NV1	Manage construction noise and vibration in accordance with Chapter 4 (Noise and vibration) of EPA Publication 1834 Civil Construction, building and demolition guide. Prepare and implement a Construction Noise and Vibration Management Work Procedure (CNVWP) that includes the following measures: • Nominate Project specific elements that will be included in Project induction package. • Identify any excessive noise generating activities and describe a methodology that will enable completion of construction whilst adequately controlling or limiting noise in a way that is consistent with EPA publication 1834. • For 'managed impact works' (activities that will occur outside of normal working hours), the pipeline contractor will prepare an assessment to effectively reduce and control noise emission to demonstrate conformance with the GED. • Communication protocol to Lochard Energy for any excessive noise activity or noise exceeding normal working hours that must be provided at least 72 hours prior to commencement to enable communication to receptors. • Define designated vehicle routes, parking locations, delivery location and hours to minimise risks of harm from noise on sensitive receptors.	Accountable: Lochard Energy Responsible: Contractor	Approved CNVWP

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Describe how noise generating communications, including the use of amplified systems such as radios and loud shouting will be communicated within the construction team to respectfully minimise impact to sensitive receptors.
Demonstrate how noise generating activities will be measured and monitored.
Describe how exceedances of noise criteria will be recorded, reported to Lochard Energy and rectified.

Noise generation associated with HDD activities should be analysed in the HDD Management Plan. Attenuation actions nominated should demonstrate control that is consistent with the GED.
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<tr>
<td>NV2</td>
<td>
Limit works to the ‘normal working hours’ (as defined in EPA Publication 1834) as far as is reasonably practicable.
<table>
<tr><th>Sensitive receptor</th><th>Period</th><th>Noise criteria, LAeq</th></tr>
<tr><td rowspan="3">Residential</td><td>EPA normal working hours
hours:
Mon-Fri: 7am - 6pm
Sat: 7am - 1pm</td><td>75</td></tr>
<tr><td>Evening and weekend
Mon-Fri: 6pm - 10pm
Sat: 1pm - 10pm
Sundays and public holidays 7 am to 10 pm</td><td>Noise level at any residential premises not to exceed background (LA90, dB) noise by:
10 dBA or more for up to 18 months</td></tr>
<tr><td>Night-time
Mon-Sun and public holidays: 10pm - 7am</td><td>Noise inaudible within a habitable room of any residential premises.
Background +0 dB(A) (external)</td></tr>
</table>
The following Noise criteria will be observed in proximity to residential receptors.
</td>
<td>Accountable: Lochard Energy
Responsible: Contractor</td>
<td>Complaints register and response
Record of noise monitoring
Site inspection
Maintain inspection records</td>
</tr>
<tr>
<td>NV3</td>
<td>
Noise and Vibration: Plant, machinery and equipment

Use broadband reversing alarms on construction vehicles and machinery in preference to 'beeper' reversing alarms.
Operate plant, machinery and equipment in accordance with manufacturer’s requirements.
Ensure good working condition of mufflers and regular servicing and maintenance of machinery and equipment.

</td>
<td>Accountable: Lochard Energy
Responsible: Contractor</td>
<td>Daily plant and equipment pre-starts
Service records</td>
</tr>
</table>

9.2.6 Air Quality

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
AQ1	• Prior to commencement of works, the contractor shall ensure that: - site supervisors are aware of sensitive receptor proximity to the pipeline right of way. - site supervisors are monitoring weather forecasts and logging expected conditions. - plant and resources availability to effectively manage dust generation on site should be reflective of expected weather conditions.	Accountable: Lochard Energy Responsible: Contractor	Induction record Daily pre-start records
AQ2	From the commencement of clear and grade work on each property, prestart meetings should consider proposed activities planned for the day and their potential to impact sensitive receptor locations based on proximity and prevailing conditions. Controls must be implemented if dust is observed to be causing a hazard (such as obscuring visibility or impacting daily activities of adjacent receptors).	Accountable: Lochard Energy Responsible: Contractor	Pre-start meeting records Visual inspection Maintain inspection records
AQ3	Temporary stockpiles (excluding windrowed topsoil) shall be proactively managed to establish cover with use of tarpaulin, seed bank, sterile cover crop, soil binder or hydromulch to retain the soil and protect against wind and water sourced erosion.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
AQ4	Windrowed topsoil should be monitored as part of overall site condition with suitable controls (i.e. water spray units) being deployed where soil can visibly be seen blowing off the RoW in the wind. Controls should be monitored and supplemented, if required, to maintain effectiveness.	Accountable: Lochard Energy Responsible: Contractor	Pre-start meeting records Visual inspection Maintain inspection records
AQ5	Vehicle speed within the construction area must be restricted to 20 km/hr.	Accountable: Lochard Energy Responsible: Contractor	Pre-start meeting records Visual inspection Maintain inspection records
AQ6	Water spray units to be used on unsealed work areas as required. This should involve a recorded decision pathway to determine when water carts should be deployed.	Accountable: Lochard Energy Responsible: Contractor	Pre-start meeting records Visual inspection Maintain inspection records

AQ7	Water spray units to be used, where required, on soil stockpiles and during the loading and unloading of dust generating materials, i.e. Soil/sand/fill and aggregates.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
AQ8	Crushed rock to be placed on existing permanent unsealed access tracks where agreed with relevant landholder(s) and occupiers.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
AQ9	Vehicle loads to be covered when carrying dust (or litter) generating material.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
AQ10	If all available methods of dust stabilisation fail to suppress dust and dust emissions are evident beyond the construction area boundary at identified sensitive receptor locations (or where public complaint has been made and is not resolved) the contractor must temporarily modify or suspend dust generating activities until conditions subside or a more effective mitigating solution is identified to the satisfaction of the HUGS Project Manager.	Accountable: Lochard Energy Responsible: Contractor	Enquiries, Feedback and Complaints register Correspondence to/from HUGS Project Manager.
AQ11	Plant, machinery and equipment will be serviced and maintained throughout construction and rehabilitation of the pipeline. Any vehicle exhibiting visibly excessive exhaust smoke shall be assessed by the plant manager and only placed back into service when the excessive smoke has been resolved.	Accountable: Lochard Energy Responsible: Contractor	Plant service records Visual inspection Maintain inspection records
AQ12	Contractor shall demonstrate how they intend to respond to enquiries, feedback and complaints in a comprehensive manner where response to active issues such as excessive dust leaving the RoW can be resolved quickly to the satisfaction of the HUGS Project Manager.	Accountable: Lochard Energy Responsible: Contractor	Enquiries, Feedback and Complaints register Record of corrective action close out.

9.2.7 Greenhouse Gas

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance

GG1	**Emissions during Pipeline Construction** Reduce greenhouse gas emissions during construction so far as reasonably practicable by: a Using low embodied energy materials where they are of comparable quality, utility, availability and cost; b Using fuel efficient plant and equipment where practicable during construction; c Using locally sourced materials, including those provided by suppliers, where they are of comparable quality, utility, availability and cost; d Mulching trees/ vegetation for recycling or respread over the pipeline activity area. Where practical, reserve tree limbs for use in reinstatement in proximity to watercourse crossings.	Accountable: Lochard Energy Responsible: Contractor	Plant and vehicle manifest
GG2	Fuel usage shall be reported monthly by the Contractor to Lochard Energy.	Accountable: Lochard Energy Responsible: Contractor	Monthly report

9.2.8 Traffic and Transport

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
TT1	The Principal Contractor shall prepare a Project Traffic Management Plan (TMP) for approval by Lochard Energy prior to commencement of site works. The TMP will: - be prepared in accordance with EPA Publication 1897: manage truck and other vehicle movement; - describe requirement for work in road reserve permit(s), provide key Council contact information, requirement for traffic control and timing of permit application(s). - define intended road use, access points and Project speed limits (including speed restriction on East West road as per Lochard Energy traffic study). - provide estimate of traffic volumes and access points the construction period. - provide scheduling of activities and describe frequency and duration of HGV or heavy plant movement in and out of site. - describe provision for maintenance and cleaning of access points during wet weather conditions. - Where construction works will affect public roads, the contractor shall also nominate notification timing to enable Lochard Energy to adequately notify other road users.	Contractor	Approved TMP

	- Reference the Emergency Response Plan to identify access/ exit locations, key contacts and emergency services for the pipeline works. - Emergency service access must be nominated and consider the crossing of open trench to enable access to both sides of the pipeline centreline. - Consideration of fauna collision and minimising as far as reasonably practicable.		
TT2	Light vehicles should avoid driving and parking in long grass. Light vehicles should park on cleared ground and switch off ignition when not attended or in use.	Accountable: Lochard Energy Responsible: Contractor	Pre-Start Meeting Records Visual inspection Maintain inspection records

9.3 Dangerous Goods and Hazardous Substances

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
DG1	All substances classified as Hazardous Materials or Dangerous Goods shall be subject to a risk assessment approved by Lochard Energy prior to being accepted on site.	Accountable: Lochard Energy Responsible: Contractor	Risk assessment
DG2	Comply with the Victorian WorkCover Authority and Australian Standard AS1940 Storage Handling of Flammable and Combustible Liquids and EPA Victoria publications 1834 Civil construction, building and demolition guide and Publication 1698: Liquid storage and handling guidelines – EPA Victoria.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection against standard and code requirements Maintain inspection records
DG3	Chemicals to be used are to be identified in the work program and contractors must seek approval from the Lochard HSE Leadprior to these being brought to site.	Accountable: Lochard Energy Responsible: Contractor	HSE Lead written acceptance
DG4	An accurate, current inventory and register of all dangerous substances and hazardous materials held on site will be maintained by the contractor.	Accountable: Lochard Energy Responsible: Contractor	Current Dangerous substance and hazardous materials Inventory

DG5	A hard copy will of each SDS must be held on site where each hazardous product is stored/used.	Accountable: Lochard Energy Responsible: Contractor	SDS
DG6	A SDS inventory shall be held by the contractor at the site office (electronic or hard copy).	Accountable: Lochard Energy Responsible: Contractor	SDS inventory
DG7	Prior to using any chemical, the SDS should be referenced to ascertain precautions necessary for protection of personnel and the environment.	Accountable: Lochard Energy Responsible: Contractor	Pre-start Meeting records Visual inspection Maintain inspection records
DG8	Lochard Energy will maintain a register of approved contractors and service providers responsible for controlling the storage and handling of dangerous goods and hazardous substances.	Accountable: Lochard Energy Responsible: Lochard Energy	Register of approved contractors and service providers
DG9	All personnel are to comply with the relevant SDS for the chemical or material being handled. All SDS's are to be made available to personnel on location. All hazardous substances are: • **Stored** – in original containers, segregated and bunded where required. • **Handled** – as per the SDS. • **Controlled** – spills are reported as incidents and controlled as per the SDS. • **Disposed of** – as per the SDS through a licensed contractor.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection of SDS availability, storage conditions Disposal records/ waste tracking (if applicable) Maintain inspection records
DG10	The Contractor is responsible for retaining evidence of licenced waste disposal to an approved disposal area for all Dangerous Goods and Hazardous Substances.	Accountable: Lochard Energy Responsible: Contractor	Disposal records/ waste tracking
DG11	In the event that a chemical is discovered on site that has not undergone a risk assessment or does not have an accompanying SDS, it is to be quarantined until such time as a risk assessment is completed, the risks are adequately controlled and a SDS is sourced.	Accountable: Lochard Energy Responsible: Contractor	Incident register Maintain inspection records

DG12	Where flammable or combustible chemicals are required to be stored on-site, fire-fighting equipment proportionate to the risk of the materials stored must be available for the duration of the material storage.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
DG13	Contractor companies that require the use of radioactive materials are to be licensed and accredited in accordance with regulatory requirements.	Accountable: Lochard Energy Responsible: Contractor	Copy of licence and accreditation
DG14	The contractor will be required to prepare a Radiation Management Plan that will be approved by Lochard Energy prior to mobilisation of radioactive materials to site.	Accountable: Lochard Energy Responsible: Contractor	Approved Radiation Management Plan
DG15	A sealed source security plan, either standalone or incorporated into the radiation management plan, will also be prepared and approved by Lochard Energy prior to commencement on site.	Accountable: Lochard Energy Responsible: Contractor	Approved sealed source security plan
DG16	Radioactive materials are to be stored in dedicated and secured containers. Specialist contractor (third party) personnel are trained and licensed to handle these materials and will control their storage and handling in conjunction with the PTW system and the Control of Dangerous Goods and Hazardous Substances procedure	Accountable: Lochard Energy Responsible: Contractor	Copy of training and licencing Visual inspection Maintain inspection records

9.3.1 Emergency Preparedness and Response

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
ER1	- The Contractor must prepare an Emergency Response Plan based on the outcome of a risk assessment of credible site emergencies and their impacts. The contractor's plan will be reviewed and is subject to Lochard Energy approval. The plan must include:	Accountable: Lochard Energy Responsible: Contractor	Approved Emergency Response Plan

	○ Clearly defined roles and responsibilities associated with emergency response. There must be no overlap or subjectivity in relation to these. ○ Description of credible site emergencies, their potential level and extent of impact and detailed mitigating contingency measures that can be implemented to eliminate or reduce the risk of occurrence and level of impact. ○ Site Specific Emergency response protocol describing ○ Contingency and emergency response to handle fuel and chemical spills, including provision for hydrocarbon spill kits at active work sites and where high risk activities are being undertaken (e.g. HDD, refuelling).		
ER2	- Key contractor personnel will be trained to understand roles and responsibilities and the protocols for use of emergency response resources.	Accountable: Lochard Energy Responsible: Contractor	Emergency response training records
ER3	- Emergency response exercises/ drills will be conducted in accordance with the Pipelines Regulations 2017 including: ○ When the response arrangements are introduced; ○ When the response arrangements are significantly amended; and ○ Not later than 12months after the most recent exercise or drill. Records should be maintained of each exercise/ drill.	Accountable: Lochard Energy Responsible: Contractor	Manifest of training exercises/ drill records

9.3.2 Spill Prevention and Response

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
SP1	Develop and implement contingency and emergency response procedures to handle fuel and chemical spills, including availability of on-site hydrocarbon spill kits. This will be captured in the Emergency Response Plan.	Accountable: Lochard Energy Responsible: Contractor	Approved Emergency Response Plan
SP2	The Contractor shall make spill kits available at all locations where machinery/plant are operating, refuelling points and fuel and chemical storage locations.	Accountable: Lochard Energy Responsible: Contractor	Spill kit location register Visual inspection Maintain inspection records

SP3	Prestart vehicle and equipment inspections must be undertaken to check for oil, lubricant or fuel leaks and general wear and tear of hoses. Vehicles and equipment will be maintained and serviced in accordance with the service schedule.	Accountable: Lochard Energy Responsible: Contractor	Plant and vehicle pre-start checklists.
SP4	Additional spill kit items should be held on site to ensure that materials can be replaced quickly when used.	Accountable: Lochard Energy Responsible: Contractor r	Order records Visual inspection Maintain inspection records
SP5	Notification of any spills shall be provided to Lochard Energy in accordance with incident reporting requirements.	Accountable: Lochard Energy Responsible: Contractor	Incident report/ register
SP6	Pre-start meetings and toolbox talks should include cyclical focus on spill prevention.	Accountable: Lochard Energy Responsible: Contractor	Pre-start Meeting records Toolbox talks records Any materials produced to communicate spill prevention practice and response protocol.

9.3.3 Reinstatement and Rehabilitation

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
RR1	Lochard Energy will engage an agronomist to evaluate pipeline activity area and proposed construction schedule and prepare a Property reinstatement and rehabilitation report that will contain analysis, advice and recommendations on ground preparation, amelioration, fertiliser application frequency and rate, seed mix, sowing density, timing and rehabilitation regime to reflect best practice methods of re-establishment of land use. The report will also reflect any property specific requirements that relate to protecting and establishing reinstated areas from the ongoing use and operation of the property during the rehabilitation period.	Accountable: Lochard Energy Responsible: Lochard Energy	Agronomist Property Reinstatement and Rehabilitation Report

RR2	Contractor shall prepare a Reinstatement and Rehabilitation plan for Lochard Energy for approval. The Plan shall include: - A reflection of the Lochard Energy supplied Agronomist's advice and recommendations in the reinstatement program execution. - Acknowledgement and inclusion of landholder and occupier requests from each PMP. - Site specific reinstatement and rehabilitation plan for each open cut watercourse crossing (this can form part of the minor waterway crossing procedure in lieu of this plan). This must include provision for establishment and maintena - nce of bed and bank stabilisation and be consistent with works on waterway permit conditions. - A description of intended reinstatement and rehabilitation techniques to ensure best practice and provide for the greatest opportunity for successful reinstatement. - A comprehensive reinstatement schedule, incorporating property specific requirements and full range of activities from ground preparation to completion. - An estimate of labour, plant and equipment that will be provisioned to deliver reinstatement within the nominated schedule. - Detail of erosion and sediment control devices that will be utilised, their location and proposed management approach (leave in situ or remove after a certain period of time). - Detail of fencing arrangements during the rehabilitation period. - Provision for ground preparation of the activity area (i.e. decompaction of Right of way, stone removal, weed removal or control, amelioration, etc) prior to reinstatement of topsoil. - Rehabilitation inspection regime, including provision for inspection of site following rainfall events >10mm prior to achieving establishment of 80% ground cover. - Procedure for reporting of any defects during the rehabilitation period and nomination of response time to inspect and rectify (must be active for 24months following issue of practical completion).	Accountable: Lochard Energy Responsible: Contractor	Approved Reinstatement and Rehabilitation plan
RR3	Compaction of the pipeline trench must meet design standards. Soil inversion must be avoided during the respreading of topsoil.	Accountable: Lochard Energy Responsible: Contractor	Quality Assurance records Visual inspection Maintain inspection records
RR4	Following completion of reinstatement, Lochard Energy have up to 24 months to obtain landowner (incl. occupiers and public land managers where applicable) satisfaction. This should be captured by a signed acknowledgement that explains Lochard Energy's ongoing responsibility for management of the pipeline corridor for the duration of the Pipeline's operation.	Accountable: Lochard Energy Responsible: Contractor	Signed landholder acknowledgement (incl. occupier or Public land Manager)

9.4 High Risk Activities

9.4.1 Horizontal Directional Drilling

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
HD1	A Horizontal Directional Drilling Management Plan shall be prepared including: - the drill profile design, - drill pad site layout - the work method statement, - the proposed volumetric drilling fluid tracking program - drilling fluid composition and SDS of all components - risk assessment with Lochard Energy focussed on environmental impact and nominated design-based or physical controls that will be implemented to effectively manage those risks to an acceptable level. - commitments to avoid and minimise drilling fluid release based on outcome of the risk assessment - Identifying noise generating activities and control measures that will reduce those activities to an acceptable level. - Detailed schedule of activities including intended duration and completion for each drill.	Accountable: Lochard Energy Responsible: Contractor	Approved Horizontal Directional Drilling Management Plan
HD2	Implement measures for management of drilling to minimise the risk of contamination including: – Making spill kits or similar available to contain spills on land. – When HDD activities are in the vicinity of flowing (or where rainfall is forecast within the catchment) watercourses, ensure appropriate equipment (e.g. sediment curtains) is available to contain drilling fluids and prevent their migration downstream. – Disposing drilling fluids in accordance with EP regulations and Publications 1827 and 1968. – Selecting appropriate inert and non-toxic drilling fluids.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
HD3	Drilling fluids should be disposed in consideration of EPA Publication 1827 and 1968	Accountable: Lochard Energy Responsible: Contractor	Waste removal records

HD4	Lighting should be positioned away from any sensitive receptors (e.g. roosting areas or residences) in general accordance with the requirements in Australian Standard AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Enquiries, Feedback and Complaints register Maintain inspection records
HD5	When HDD activities are in the vicinity of watercourses, ensure appropriate equipment (e.g. sediment curtains, coir logs, sand bags, silt fencing) is available to contain drilling fluids and prevent their migration downstream.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records

9.4.2 Hot Works and Fire Awareness

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
HW1	Hot works should be thoroughly risk assessed prior to commencement each work day and shall be undertaken in cleared areas. Management measures and contingencies should be considered based on prevailing weather conditions and proximity to fuel load. Combustible materials that cannot be cleared from the area shall be covered, screened or otherwise made safe.	Accountable: Lochard Energy Responsible: Contractor	SWMS Daily pre-start records
HW2	Prior to commencement of hot works activities on site, a toolbox talk will be held with all active crew members and plant operators to reiterate emergency response in the event of a fire generated by hot works on site.	Accountable: Lochard Energy Responsible: Contractor	Toolbox talk record
HW3	- Comply with Country Fire Authority (CFA) restrictions during the CFA declared Fire Danger Period when carrying out hot works: - a fire-resistant shield or guard is in place to stop sparks, hot metal or slag: - an area at least 1.5 metres from the operation is clear of flammable material or wetted down sufficiently to prevent the spread of fire:	Accountable: Lochard Energy Responsible: Contractor r	

	- a hose connected to a reticulated water supply or water spray knapsack containing at least 9 litres of water: - all cut-offs and hot materials from the operation are placed in fire-proof containers: - a person is in attendance at all times while the fire is alight (hot work in progress) and has the capacity and means to extinguish the fire; - the fire is completely extinguished before the person leaves.		
HW4	Obtain and comply with FRV/CFA Section 40 permit on Total Fire Ban Days if carrying out hot works.	Accountable: Lochard Energy Responsible: Contractor	Currently section 40 permit
HW5	Fire extinguishers will be kept on all mobile plant on site.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
HW6	Pipeline contractor to increase the frequency of weather forecast monitoring and act accordingly – Vic Emergency App should be utilised to enable notifications of fire activity in the area.	Accountable: Lochard Energy Responsible: Contractor	Vic Emergency App installed and referenced
HW7	Contractor should engage with the local CFA and ensure that they are aware of intended hot works, site access, mapping and site contact information.	Accountable: Lochard Energy Responsible: Contractor	Record of correspondence and/or site meeting with CFA
HW8	Contractor will incorporate bushfire scenario into the Emergency Response Plan and ensure that firefighting equipment and water capacity is sufficient.	Accountable: Lochard Energy Responsible: Contractor	Approved Emergency Response Plan
HW9	Any mowing during site establishment should assess risk of fire generated by rock strike and ensure appropriate control measures are in place prior to commencement of activity.	Accountable: Lochard Energy Responsible: Contractor	Pre-start record SWMS Visual inspection

			Maintain inspection records

9.4.3 Trench Dewatering

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
TD1	Manage non- contaminated groundwater and surface water run-off that enters the open trenches and bell holes in accordance with EPA Publication 1834 Civil Construction, building and demolition guide (November 2020).	Accountable: Lochard Energy Responsible: Contractor	Water parameter test records
TD2	Where surface water run-off and rainfall collect in trenches and is to be dewatered, test turbidity, salinity and pH prior to discharge to land. If parameters exceed the objectives in the Environment Reference Standard, water requires to be treated before release or otherwise disposed of at an approved waste disposal facility. Treatment options include, but are not limited to filtration, and the addition of flocculants or pH buffers as appropriate. Discharge to land (i.e. grass filtration) must not occur within 100 metres of watercourses. Where the water cannot be treated to the required standard it is to be removed from construction area for disposal in accordance with EPA Publication 1828.2.	Accountable: Lochard Energy Responsible: Contractor	Water parameter test records Waste removal records Visual inspection Maintain inspection records
TD3	If trench water is potentially contaminated, it is to be assessed and managed in accordance with NEPM ASC, NEMP v2.0, EPA Publication 1828.2 and other EPA guidance as appropriate.	Accountable: Lochard Energy Responsible: Contractor	Waste removal records

9.4.4 Hydrostatic Testing

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
HT1	All hydrotesting operations must conform to *AS2885.5: Gas and liquid petroleum - Field pressure testing*.	Accountable: Lochard Energy	Approved hydrostatic test plan Visual inspection

<table>
<tr><td></td><td></td><td>Responsible: Contractor</td><td>Maintain inspection records</td></tr>
<tr><td>HT2</td><td>A Hydrostatic test plan must be prepared detailing:
- Team responsibilities (task specific)
- Compliance with AS2885.5 and the Environmental Reference Standard - Part 5 Environmental values of waters
- Land and Environmental Considerations and Controls
- Health and Safety considerations and controls (incl. public safety and task orientated emergency response)
- Notification protocols
- Water sourcing and testing to ensure quality
- Water quality monitoring regime
- Testing, Records and reporting requirements
- Hydrotest methodology
- Dewatering and release methodology.
- Proposed release location(s)
- Contingencies for failure during test or release activities
Water requirement must be calculated and sourced/ delivered to site in a way that is efficient and disposed via a suitable dispersion method and in a location that is endorsed by Lochard Energy.</td><td>Accountable: Lochard Energy
Responsible: Contractor</td><td>Approved hydrostatic test plan</td></tr>
<tr><td>HT3</td><td>Prior to hydrostatic testing, the pipeline must be pre-cleaned to remove weld debris, dust and surface scale. Produced waste water must be captured in a temporary pit or bunded area and removed by an EPA licenced waste contractor.</td><td>Accountable: Lochard Energy
Responsible: Contractor</td><td>Waste removal record</td></tr>
<tr><td>HT4</td><td>Hydrostatic test water discharge must only be undertaken where water designated for release into the environment is of a quality that is within the following allowable range:
<table><tr><th>Parameter</th><th>Allowable Range</th></tr><tr><td>Total Dissolved Solids (mg/l)</td><td><3100mg/L</td></tr><tr><td>Salinity (ds/m)</td><td><1.0 ds/m</td></tr><tr><td>pH</td><td>6-8.5</td></tr><tr><td>Turbidity (NTU)</td><td>N/A</td></tr></table></td><td>Accountable: Lochard Energy
Responsible: Contractor</td><td>Record of release parameter testing</td></tr>
</table>

	Waste: Any visual waste Contamination: Any visible or olfactory trace		
HT5	Where hydrostatic testing is not consistent with any of Environmental Controls HT2 to HT4, hydrostatic test water must be removed by an EPA licenced waste contractor.	Accountable: Lochard Energy Responsible: Contractor	Record of release parameter testing
HT6	Any discharge of hydrostatic test water must not result in soil erosion or sedimentation of land or water. Sediment control devices to remove suspended solids such as geotextile fabric filters must be used.	Accountable: Lochard Energy Responsible: Contractor r	Visual inspection Maintain inspection records
HT7	Contractor should ensure that the local CFA are notified in advance and upon completion of pressurised hydrotest activities.	Accountable: Lochard Energy Responsible: Contractor	Record of notifications

9.4.5 Watercourse Crossings

Reference	Management Action	Accountability / Responsibility	Evidence of Compliance
WC1	Works on watercourses that are subject to a 'Works on Waterways' permit shall be completed in accordance with all permit conditions.	Accountable: Lochard Energy Responsible: Contractor	Works on Waterways permit Approved Minor Watercourse Crossing Procedure
WC2	Minor watercourse crossing design should be to a minimum depth: 2m below bed invert level (or as otherwise agreed to with Corangamite CMA for designated waterways).	Accountable: Lochard Energy Responsible: Lochard Energy	Drawing package

WC3	Provision for trench breakers will be included into pipeline design in proximity to watercourses and steep slopes to minimise trench inflow and subsurface movement of water along the backfilled trench. Specification for trench breakers will form part of the standard drawing package issued to the Contractor.	Accountable: Lochard Energy Responsible: Lochard Energy	Drawing package
WC4	Contractor must prepare a Minor Watercourse Crossing Procedure prior to commencement of construction within 100m of a minor watercourse for Lochard Energy approval. The crossing procedure should include a crossing methodology for a dry crossing and 'flowing' crossing and should be prepared in accordance with EPA Publication 1896: Manage how you work within or adjacent to waterways. The plan should also include: - a site specific schedule detailing the sequencing of activities for each watercourse crossing demonstrating minimisation of overall installation, backfill and reinstatement duration as far as is reasonably practical. - Commitment to monitor weather forecast to determine the most appropriate window to commence construction through minor watercourses to minimise likelihood of water flow during active works within the riparian zone. - Integration of works on waterway permit conditions into design, construction methodology and reinstatement method. - Contingency works: make provisions for diverting unexpected flow. Have available backfill and stockpile of rock beaching to protect exposed trench in lieu of a late change or unexpected forecast weather event. - Site specific reinstatement and rehabilitation management plan for each crossing that should be designed to avoid future erosion over the pipeline alignment and to provide bank stability at the crossing location as the same or better than prior to construction. - 'Staged' reinstatement methodology involving crossings where access requires to be maintained beyond backfill and compaction of the pipeline.	Accountable: Lochard Energy Responsible: Contractor	Approved Minor Watercourse Crossing Procedure
WC5	Limit the type and volume of liquid material (fuel, oil, lubricant) stored on-site for construction activities to only that which is required. Liquid material must not be stored within 50 metres of waterways.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records
WC6	If water flow is encountered: - Enact contingencies and transfer to 'flowing' crossing methodology.	Accountable: Lochard Energy	Visual inspection Maintain inspection records

	- Undertake visual monitoring downstream of the trench during flow events if the trench has not been reinstated. - Provide temporary flow diversions if there is permanent flow in the waterway. Flow diversion measures may include pumps to ensure that water can be moved from one side of trench to the other, screened inlets (or other appropriate equipment) to minimise the entrapment of aquatic fauna and outlet structures that are designed to avoid scouring of the channel. Active flow construction methodology will be included in the Minor Waterway crossing procedure.	Responsible: Contractor r	
WC7	Remove all obstructions to flow after the pipe has been laid and backfilled. Reinstatement of open cut watercourse crossings shall be as soon as practicable following completion of backfill and compaction. If a crossing requires to be maintained for access, the crossing shall be partially reinstated back to the width of the access track until access is no longer required.	Accountable: Lochard Energy Responsible: Contractor	Visual inspection Maintain inspection records

APPENDIX H: HSE AUDIT SCHEDULE

#	Audit /Inspection	Scope	Responsible	Due	Comment
1	Contractor HSE Prequal Audit	Principal Pipeline HSEMS	Pipeline Engineer/HSE Manager	On Engagement	Evidenced in MYOSH
2	Project Bridging Document Audit	Confirm the Project and Pipeline activities are in line with the bridging document requirements	Project HSE Manager	Before Mobilization	Evidenced in MAXIMO
3	Emergency Response Audit	Muster Drill	Project HSE Manager	Within 7 Days of Mobilisation	Evidenced in MAXIMO
		Emergency Response Exercise – must include bridging ERP	Project HSE Manager	Every 4 weeks	
4	Environmental Inspection	Environmental inspection checklist	Project HSE Manager	1 per week	Evidenced in MAXIMO
5	PTW Audit	PTW Compliance in field	Project HSE Manager	1 per week	Evidenced in MAXIMO
6	Task Observation (HSE)	Rotating through the task observation in field check lists (HSE-QA-WIN-0002)	Project HSE Manager	1 per week	Evidenced in MAXIMO
7	Training & Competency Assessment	Principal contractor personnel to be assessed against their training matrix	Project HSE Manager	Prior mobilisation and again every 4 weeks	Evidenced in MAXIMO
8	Contractor EMP implementation	Assess and inspection of EMP implementation (Table 8 and Appendix G)	Principal Contractor	1 per week	Evidenced in Weekly Meeting with Principal Contractor
9	Management audit	Items contained in appendix G	Project Manager / HSE Manager	Weekly	To confirm that audits are completed as per schedule and actions are being tracked to close out – to be detailed in Weekly Meeting with Principal Contractor
10	Environmental Performance standard and management action review	Environmental Performance standard and management action review as documented in EMP (Table 8 and Appendix G)	Project Compliance / Project HSE Lead	Monthly	Evidenced in MAXIMO
11	Excavation Inspection	Excavation inspection for fauna and subsidence	Principal Contractor	As required	To be detailed in Weekly Meeting with Principal Contractor
12	CHMP Compliance Inspection	Inspection of work sites / project activities / notification requirements as required by CHMP (including soil clearance/testing requirements)	Project Compliance / Project HSE Lead	Weekly / as required in CHMP	Evidenced in MAXIMO

APPENDIX I: PIPELINE CORRIDOR

LOCHARD ENERGY

Disclaimer:
Lochard Energy makes no warranty in relation to the accuracy, reliability, completeness or suitability of the data and does not accept liability for any loss, damage or costs, including consequential damage, in relation to any use of the data in this map.

0 100 200 300 400 500 m

LEGEND
- Proposed pipeline route
- Pipeline corridor
- Proposed MFCT well site
- Existing well
- Well plugged/abandoned/suspended/shut in
- Existing pipeline

PROJECT: Heytesbury Underground Gas Storage (HUGS)

TITLE: PROJECT OVERVIEW

DATE	STATUS	PRODUCED
29/07/2024	ISSUED FOR INFORMATION	AC
SCALE: 1:14,000 at A3	DATUM: GDA2020 MGA Zone 54	CHECKED: IS
FILE: HUGS-0009-C PROJECT OVERVIEW		REV: C

APPENDIX J: HUGS Weed and Biosecurity Management Plan

HEYTESBURY UNDERGROUND GAS STORAGE PROJECT

WEED AND BIOSECURITY MANAGEMENT PLAN

UGS-HP-0044

Rev 0

UNCONTROLLED WHEN PRINTED

Revision History					
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10. DEFINITIONS AND ABBREVIATIONS

Table 19: Definitions

Term	Description
Agricultural Weed	A weed that causes deterioration of crops, pasture or livestock health. Many of these plants are noxious weeds
Declared Noxious Weed	Plants that have been proclaimed under the Catchment and Land Protection Act 1994. These plants can cause environmental or economic harm or have the potential to cause harm. The Act defines four categories of noxious weeds: - State Prohibited Weeds - Regionally Prohibited Weeds - Regionally Controlled Weeds - Restricted weeds
Dieback	Dieback is a soil borne plant pathogen (*Phytophthora cinnamomic*) commonly referred to as cinnamon fungus. The disease affects the roots of native Australian plants, impacting health and viability of host trees.
Environmental Weed	A plant that invades areas of native vegetation, usually adversely affecting the regeneration and survival of native flora or fauna.
Pathogen	A micro-organism such as a bacteria or fungus that is capable of causing disease or illness in plants, animals and/or humans.
Problem weed	A plant that requires some form of action to reduce its negative effects on the economy, the environment as well as human health and amenity.
Pest	Animal species that has the potential to cause deterioration of crops, pasture or livestock health.

Table 20: Abbreviations

Abbreviation	Description
CaLP	Catchment and Land Protection Act, 1994
EPA	Environment Protection Authority
EPBC	Environment Protection and Biodiversity Conservation Act, 1999
GED	General Environmental Duty
HUGS	Heytesbury Underground Gas Storage
IGP	Iona Gas Plant
IGSF	Iona Gas Storage Facility
JHA	Job hazard analysis
Lochard	Lochard Energy
MFCT	Mylor, Fenton Creek and Tregony
PPE	Personal Protective Equipment
SDS	Safety Data Sheet
WoNS	Weed of National Significance

11. INTRODUCTION

11.1 About Lochard Energy

Lochard Energy (Lochard) are trusted energy infrastructure specialists who are the Owner and Operator of the Iona Gas Storage Facility (IGSF) near Port Campbell, Victoria and have headquarters in Southbank (Melbourne), Victoria. Lochard plays a vital role in Australia's east-coast gas market (and indirectly the electricity market) with provides reliable and cost-effective gas to the energy markets by supplying gas-fired power generation on the east coast of Australia. During peak periods, the IGSF supplies 40~45% of Victoria's winter peak gas demand.

Lochard Energy supports Australia's net zero emissions targets and are committed to supporting the transition towards a more sustainable energy future.

11.2 About the Iona Gas Storage Facility

The Iona Gas Field was first discovered in 1988 and subsequently drilled for natural gas before being converted into a gas storage facility in 1998. The Iona Gas Storage Facility (IGSF) was officially commissioned and began operations in July 1999.

The IGSF is the largest independent provider of gas storage services to the east-coast gas market and is a gas processing and compression facility connected to a series of underground storage reservoirs (depleted gas fields). Iona comprises the following infrastructure as shown in Figure 11-1:

- The Iona Facility and associated wells;
- Wellsites at North Paaratte and Wallaby Creek and a Gathering Line hub at North Paaratte Production Station (NPPS);
- A Gathering Line network comprising:
    - DN300 NPPS – Iona Gathering Line;
    - DN300 Wallaby Creek to NPPS Gathering Line;
    - DN150 North Paaratte wellsite to NPPS Gathering Line.

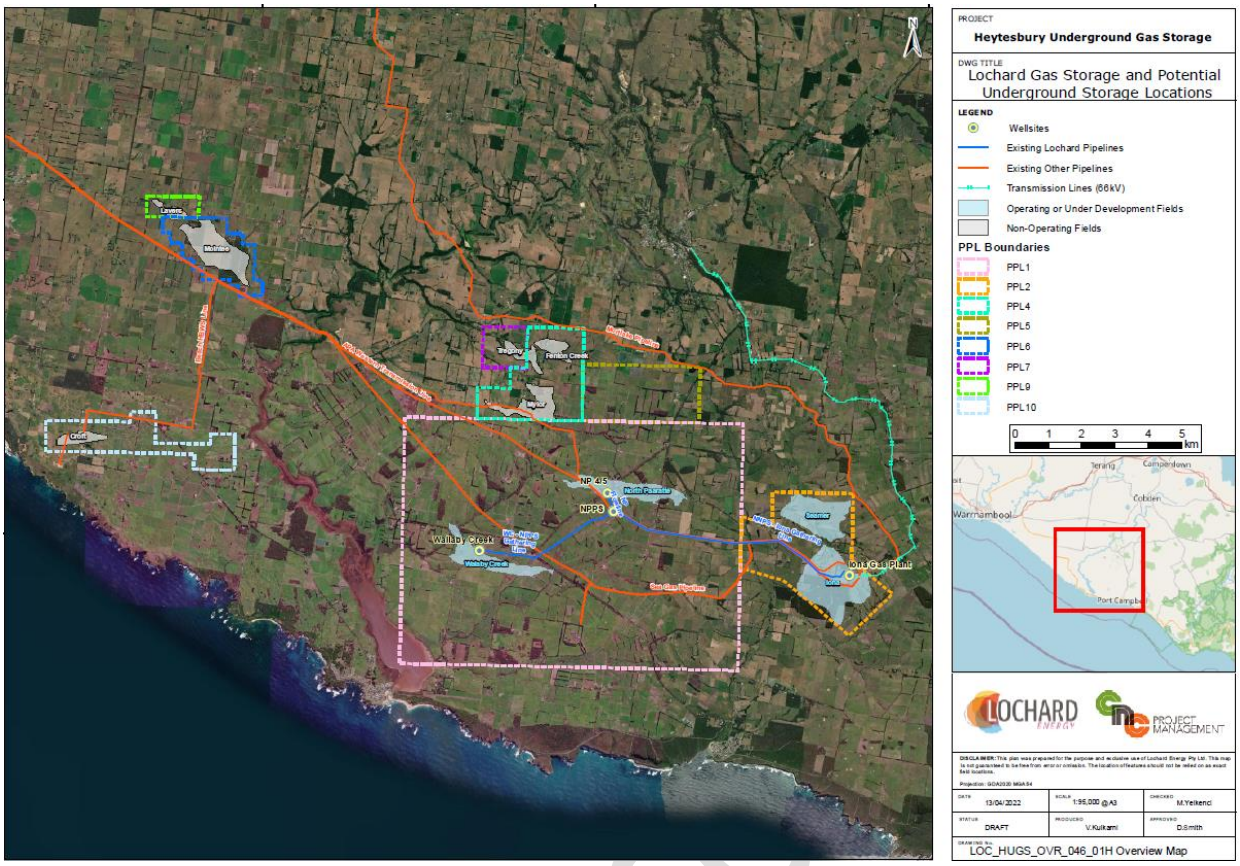


Figure 11-1: Overview of the IGSF network and gas storage fields

11.3 HUGS Project Overview

The HUGS Project is the expansion of Iona's underground storage capacity to help ensure there is adequate winter gas for generation, provide additional security of supply and reliability to the market, and support Victoria's transition away from coal.

The HUGS Project will develop a new wellsite which it is possible to access three depleted gas fields being Mylor, Fenton Creek, and Tregony. This site is referred to as the MFCT wellsite and the current plan is just to develop the Mylor field with 1-2 new gas storage well(s). The project also includes:

- A new licensed pipeline ("HUGS pipeline") from NPPS to MFCT which will connect the wellsite to Lochard's existing gas infrastructure.
- Upgrades to the Iona Gas Plant inlet system and High Pressure (HP) export to header, and Upgrades to the North Paaratte Wellsite and North Paaratte Production Station (NPPS) for connection to the HUGS Pipeline. The Iona Gas Plant PPL-2 Facilities Description Safety case document will be revised to reflect implemented changes.

The proposed new wellsite and pipeline is shown in Figure 11-2.

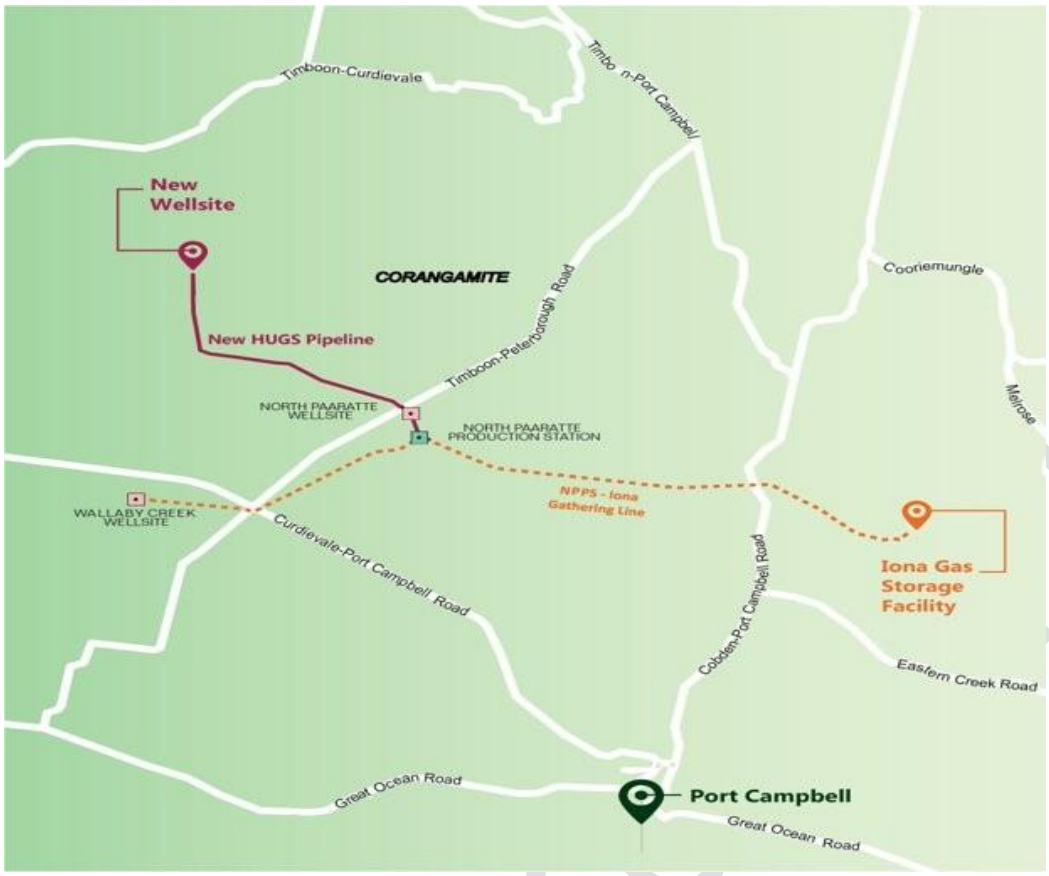


Figure 11-2: HUGS Project Site and Pipeline Route

11.4 Regulatory Framework

Lochard Energy operations are undertaken within a range of environments and land uses. Stakeholders include landowners, occupiers, public land managers and third-party asset owners.

Lochard Energy has a general environmental duty under the Environment Protection Act 2017 to ensure that its operations do not contribute to environmental degradation or pose a threat to the environment or human health. An important part of this duty is to have a well-defined weed and biosecurity management plan for all activities.

Biosecurity is defined as the protection of the environment, economy and public health from negative impacts associated with pest species and pathogens.

Unmitigated operational activities could lead to the introduction, proliferation or spread of pest, plant or pathogen species to the detriment of the environment or livelihood of landowners.

12. PURPOSE, SCOPE & OBJECTIVES

12.1 Purpose

The purpose of this Weed and Biosecurity Management Plan is to detail of the objectives and commitments that Lochard Energy make to effectively identify and manage threats presented by pests, weeds and pathogens during the execution of the HUGS Project. This plan will be revised as required during the course of the project and will initially be used to support work on the development of the MFCT wellsite as detailed in the Preparatory Works Operations Plan [Ref: 63]. This plan will be revised ahead of the construction of the HUGS Pipeline

This plan has been prepared to provide practical guidance and tools to assist Lochard energy employees, contractors and consultants to ingrain biosecurity into project activities.

12.2 Scope

This plan is focussed on defining and implementing effective biosecurity measures to prevent the spread or proliferation of weeds, pests and pathogens and to nominate appropriate control measures where they are identified. This will be implemented using reference to best practice guidance and will be consistent with Lochard Energy's existing vegetation management procedure [Ref: 62].

This Weed and Biosecurity Management Plan forms part of the management systems being used as part of the HUGS project and is the primary guidance and management document in relation to weed control and biosecurity management.

12.3 Objectives

Table 21: Objectives

Aspect	Objectives
Weed, Pest and Pathogen Spread	➢ No proliferation or spread of existing pests, diseases, declared or listed noxious weed species or Weeds of National Significance (WoNS). ➢ No introduction of WoNS, noxious weeds, pest species or pathogens. ➢ Meet the expectation of landowners and governmental stakeholders regarding biosecurity when accessing assets on third party land.
Weed, Pest and Pathogen Control	➢ Effectively control and manage identified WoNS, Noxious weeds or problem weed species. ➢ Professional treatment methods and humane pest eradication where required by experienced, qualified personnel. ➢ Meet stakeholder expectation in relation to timing, methodology and notification in relation to the ongoing treatment and management of weeds, pests and pathogens.

13. ROLES AND RESPONSIBILITIES

Table 22: Roles and Responsibilities

Role	Responsibilities
Project Manager	The Project Manager is responsible for: ➢ Ensuring that biosecurity is incorporated into contractual/commercial documentation for site activities. ➢ Ensuring site activities are undertaken in accordance with the approved Operations Plan [Ref: 63], the vegetation management plan [Ref: 62] and this Plan. ➢ Consider the current level of Biosecurity risk and contributing factors when scheduling work programs. ➢ Ensuring that employees, sub-contractors and consultants have the required resources available to enable them to implement effective biosecurity systems and control of identified problem weed species as outlined in this plan.
HSE Manager	The HSE Manager is responsible for: ➢ Providing environmental advice, assistance and direction to the Project Manager to ensure planning and compliant delivery of work programs. ➢ Planning and scheduling of weed and pest inspections. ➢ Coordination of training and induction. ➢ Ensuring that all biosecurity commitments are recorded and incorporated into a suitable compliance system. ➢ Supporting the initiation and implementation of biosecurity commitments on each site. ➢ Making provision for appropriate vehicle, plant and machinery hygiene as required by each operational activity. ➢ Identification of solutions to any weed management or biosecurity issues raised. ➢ Communication and reinforcement of best practice principles of prevention and control of weeds. ➢ Assist in the effective data storage of weed management and biosecurity records to ensure an auditable compliance trail. ➢ Ensure a current inventory of Safety Data Sheets are held in hard copy with the products in storage and copies on file.
Construction Manager and/or Site Superintendent(s)	Construction Manager and Site Supervisors are responsible for: ➢ Exercising day to day decision making authority relating to environmental performance during operational site activities. ➢ Ensuring implementation of vehicle, plant and equipment hygiene is maintained and records kept. ➢ Facilitating the resolution of daily weed management issues on site and validating implementation of controls. ➢ Ensure that when conditions change, hygiene protocols are adjusted accordingly.

Role	Responsibilities
	➢ Communication and reinforcement of best practice principles of prevention and control of weeds.
Approvals and Stakeholder Manager	➢ Ensuring that suitable project plans are developed to manage project compliance with the relevant statutory environmental requirements. ➢ Engage with third party asset owners and Crown land managers to understand and document the level of biosecurity requirements of each land parcel on which the project works will occur
Lands Access Officer	The Land Access Officer is responsible for: ➢ Engage with landowners and occupiers, to understand and document the level of biosecurity requirements of each land parcel on which project work will occur. ➢ Ensure that all landowner biosecurity requirements are captured within Property Management Plans. ➢ Coordination of landowner/occupier and or land manager of notification in advance of weed treatment programs.
Licenced pesticide/ herbicide applicators	The Licenced Applicator is responsible for: ➢ Ensure that individuals have developed and reviewed job hazard analysis (JHA) that are appropriate to the nature and scale of the activity. ➢ Ensure that products are stored and handled in accordance with the Safety Data Sheet (SDS). ➢ Validate that all notifications of proposed treatment areas have been provided prior to commencement of treatment works. ➢ Ensure thorough hygiene of clothing and equipment following completion of treatments.
All Employees, Contractors and Consultants	All Employees, Contractors and Consultants responsible for: ➢ General Environmental Duty to prevent environmental harm or risk to human health. ➢ Ensure that training and inductions involving weed hygiene protocols and effective biosecurity controls are understood and enacted during the operational work as far as is reasonably practicable. ➢ Fulfil requirements to regularly inspect vehicles, plant, equipment and machinery for weed, plant or soil material. ➢ Maintenance of clean vehicle (inside and out) during operational activities. ➢ Minimise vehicle movements on third party properties as far as is possible.

14. APPLICABLE LEGISLATION, BEST PRACTICE GUIDELINES AND RELATED DOCUMENTS

Table 23: Legislation, Best Practice Guidance and Related Internal documents

Legislation/Best Practice	Relevance	Application to HUGS Project
Environment Protection and Biodiversity Conservation (EPBC) Act, 1999	Defines Weeds of National Significance (WoNS)	If WoNS are identified within Lochard's area of operation, they must be actively controlled. The Environmental due diligence for HUGS [Ref: 6 Australian Government (2023). Native Title Act 1993 (No. 110,1993). Retrieved via www.legislation.gov.au Ref: 7 Victorian State Government (2012). Land Titles Validation Act 1994 (Act Number 114/1994). Retrieved via www.legislation.vic.gov.au Ref: 8] found that blackberries which are a WONS were present in the study area.
Australian Weeds Strategy 2017-2027	Provides a framework and principles of effective weed management.	Align this Weed Management Plan with the principles of effective weed management.
Environment Protection Act 2017 Environment Protection Regulations 2022	The Act and Regulations introduce the General Environmental Duty (GED) which is focused on the protection of the environment and human health and the prevention and effective control of pollution and waste.	Lochard will manage their construction activities to avoid the risk of environmental damage.
Catchment and Land Protection Act, 1994 Catchment and Land Protection Regulations 2022	Defines roles and responsibilities for the regulation and management of noxious weeds and pest animals in Victoria.	The CaLP act enshrines a legal obligation of all landowners to manage declared noxious weeds and pest animals on their land. Landowners must take all reasonable steps to:

Legislation/Best Practice	Relevance	Application to HUGS Project
		1. Eradicate regionally prohibited weeds. 2. Prevent the growth and spread of regionally controlled weeds. 3. Prevent the spread of -and as far as possible eradicate- established pest animals on their land. The CaLP regulations provide further detail on acceptable control methods. The Environmental due diligence for HUGS [Ref: 6 Australian Government (2023). Native Title Act 1993 (No. 110,1993). Retrieved via www.legislation.gov.au Ref: 7 Victorian State Government (2012). Land Titles Validation Act 1994 (Act Number 114/1994). Retrieved via www.legislation.vic.gov.au Ref: 8] found that noxious weeds as defined by the CaLP are present in the study area.
A guide for Machinery Hygiene for Civil Construction (Civil Contractor's Federation) 2011	Provides direction on acceptable methods of treatment for noxious weed and pest animal species.	Ensure that weed hygiene methods are consistent with the guide.
Best Practice Serrated Tussock Weed Hygiene Guide 2020	Industry best practice on weed hygiene to prevent the spread of serrated tussock and other weed species.	Align field based operational activities with best practice guidance.
APGA Code of Environmental Practice Onshore Pipelines Revision 5 2022	Industry best practice environmental management reference document.	Ensure that activities are consistent with Section 8 – Pipeline Lifecycle Phase – Operation

Table 24: Relevant Lochard Energy Plans

Relevant Lochard Plans	Relevance
Iona Gas Plant Vegetation Management Plan [Ref: 62]	IGSF specific document detailing vegetation management protocols (including weed management) Alignment with the vegetation management plan risks and control measures.
MFCT Wellsite Property Management Plan [Ref: 65]	Outlines requirements for working on the MFCT wellsite location from a weed and biosecurity perspective
HUGS Preparatory Works Operations Plan [Ref: 63]	Head document which outlines the scope, risks, impacts and controls for the preparatory works at the MFCT wellsite.

15. BIOSECURITY RISK

There are several site activities that have the potential to resort in the introduction or dispersal of weeds, seeds and pathogens resulting in degradation of the environment, native fauna, productive land or livestock.

This section identifies plausible risk pathways and seeks to identify control measures that are both reasonable and practical in terms of their implementation and effective in their outcome.

15.1 Identification Of Credible Proliferation Pathways

Credible pathways of introduction or spreading of weeds, pests and pathogens

1. Plant, Equipment or Machinery arrives on site without having been adequately inspected or cleaned.
2. Importation of unclean fill material containing weed seed or cuttings.
3. Disturbance of topsoil creating proliferation of pioneer weed species within the seed bank.
4. Driving or operation of light vehicles across property boundaries and road reserves without regular hygiene practice.
5. Pedestrian spread via boots, trousers and via vehicle footwells.

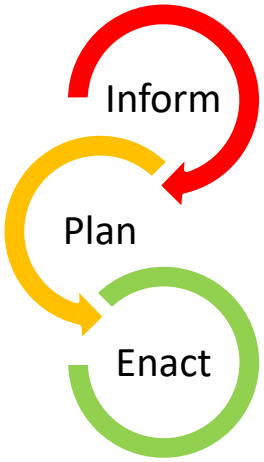
15.2 Credible Contributing Factors

Credible contributing factors that would lead to increased likelihood of the introduction or spread of weeds, pests and pathogens

1. Poor machinery or vehicle hygiene, particularly when interacting with topsoil (seed bank).
2. Ineffective training or site supervision of plant operators.
3. Wet weather contributing to muddier vehicles, plant, clothing and equipment.
4. Failure to identify listed weed species or pathogens in proximity to work areas.
5. Failure to make provision for or adequately resource site based vehicle and machinery hygiene locations.
6. Failure to adjust control and management measures according to changing location or conditions during operational work programs.
7. Failure to regularly reinforce the importance of effective weed management and proactive biosecurity measures.
8. Confusion relating to the expected standard of vehicle, plant and equipment hygiene practices.

15.3 Controls

Lochard Energy will implement Biosecurity Management under a framework of three key steps:



15.3.1 Inform

1. A range of weeds occur, or are likely to occur, in the vicinity of site. Of particular concern are those weeds which have been proclaimed as Regionally Prohibited Weeds. These are listed below:

   - Ragwort *Senecio jacobaea*
   - St John's wort *Hypericum perforatum var. angustifolium*
   - Paterson's curse *Echium plantagineum*
   - Blackberry *Rubus fruticosus*
   - Serrated tussock *Nassella trichotoma*

   Other problem weeds common to the district and likely to occur on site are:

   - Capeweed *Arctotheca calendula*
   - Wild turnip *Brassica tournefortii*
   - Dock *Rumex sp*
   - Black nightshade *Rubus fruticosus*
   - Spear thistle *Cirsium vulgare*
   - Bristly ox-tongue *Picris echioides*.
   - Ribwort *Plantago lanceolata*
   - Wild oat *Avena fatua*

2. The Project Manager Land Access Officer will ensure that an active Property Management Plan will include any specific biosecurity precautions that require to be acknowledged or implemented on properties where Lochard Energy have custodianship of land.

3. Lochard Energy acknowledges that different weed species emerge in different seasonal conditions and that identification and control measures must be reflective of the most appropriate time of year in which to identify and control WoNS, noxious weeds or other problem weeds.

4. Ensure that any credible risk relating to weed, pest or pathogen introduction is communicated to potentially affected landowners as soon as is reasonably practicable.
5. Agriculture Victoria provides information and advice regarding the identification and management of invasive plants and animals when enquiries are received and can be contacted on 136 186.
6. The HSE Manager will monitor official information about the extent of disease infection and quarantine including:
   - Foot and mouth disease – DAFF (agriculture.gov.au)
   - Outbreak: National pest and disease outbreaks: www.outbreak.gov.au
   - Agriculture Victoria – Foot and Mouth disease: Foot-and-mouth disease | Animal diseases | Biosecurity | Agriculture Victoria
7. The nearest car wash location for light vehicles to for the HUGS Project is located at:

   Wash Dock
   65 Bailey Street
   Timboon

15.3.2 Plan

1. Ensure the level of risk associated with biosecurity is thoroughly defined and assessed so as to ensure a level of preventative control that is appropriate to the nature and scale of the intended activity.
2. Prior to commencement of construction activities for HUGS, a baseline weed survey shall be conducted across the workspace area being utilised.
3. Inspection will be scheduled on a 3-monthly basis following the commencement of work to assess weed and pest presence (Inspection records should be retained on file for auditing purposes).
4. Ensure that any pesticides or herbicides used to control pest animal or plant species are communicated to the landowner and all occupiers in advance of using them. Be cognisant of any livestock or non-target species in the vicinity and ensure that product selection and timing of application (both seasonal and in discussion with landowners) is appropriate.
5. Provision should be made for promotion of good hygiene practices for vehicles, plant, equipment and clothing during toolboxes and pre-start meetings via preparation of information packs or reference material.

15.3.3 Enact

1. Ensure that all site personnel have undergone the relevant Project induction(s) and training and have available resources to effectively implement biosecurity measures.
2. Vehicle & Plant Weed Hygiene Inspections (Appendix A) must be completed for all vehicles and plant on arrival with a record of the inspection to remain in the vehicle and be regularly updated following subsequent inspections and vehicle cleans during it's time on site.

3. On properties with livestock. Restrict unnecessary access, particularly in proximity to livestock holding areas.
4. Any vehicles, plant, clothing or equipment arriving from interstate or a known high risk area should be inspected and disinfected should it be deemed necessary.
5. Exhibit good housekeeping, changing muddy clothes regularly.
6. Frequency of vehicle and plant hygiene should be reflective of risk and weather conditions. For example, frequency of cleaning should increase in wet conditions for those vehicles and plant that are moving between properties on a regular basis.
7. Site crews should demonstrate regular inspection of key areas of vehicles, plant and equipment that regularly move off site or between properties via the Vehicle & Plant Weed Hygiene Inspection Form in each vehicle or machine.
8. Ensure that excavated material is used in reinstatement on the same property as it was removed from.
9. Machinery hygiene should be undertaken prior to movement of plant, machinery, and equipment off site.
10. WoNS and Regionally Prohibited Weeds shall be treated or removed as soon as practicable. Individual plants are to be removed immediately by hand (including roots), placed in sealed bags and disposed of with the domestic rubbish to the local licensed landfill. Larger patches or infestations will be treated by a specialist contractor.
11. Problem weeds should be inspected on a case by case basis with treatment methods being discussed and agreed with the landowner/occupier or land manager.
12. Control measures will be:
    a. undertaken by appropriately licenced, qualified and experienced personnel;
    b. stored and handled appropriately in accordance with product Safety Data Sheets (SDS);
    c. subject to prior notification of affected landowners, occupiers or third party asset owners (where appropriate);
    d. consistent with the CaLP Regulations 2022:
        i. Application of herbicide
        ii. Cultivation of the soil
        iii. Physical removal
        iv. Mulching
13. Use of chemicals must be carried out in consultation with the landowner or land manager by individuals who are licenced, experienced and who use appropriate PPE. Application of pesticides or herbicides must be undertaken in accordance with the process provided in Appendix B.
14. Newly reinstated locations should be given priority during quarterly inspections to enable early identification of any WoNS, noxious weeds or other problem weeds.

15. Following quarterly inspection, any new locations or expanded extents of WoNS, Noxious weeds or problem weeds will be recorded, and treatment actions identified and scheduled.
16. Continually review risk and update biosecurity measures as part of the activity JHA to meet any credible increase in risk of introduction or spread of weeds, pests or pathogens.
17. Empower all personnel on site to raise awareness of the importance of biosecurity and 'call out' instances where hygiene may not be to an acceptable standard.
18. Ensure that biosecurity forms part of regular inspection and review of operational work.

16. REFERENCES

Ref: 59 Declared Noxious Weeds, Ian Faithfull, February 2006, retrieved via

Declared noxious weeds (Vic) (vgls.vic.gov.au)

Ref: 60 Australian Weeds Strategy 2017-2027, Invasive Plants and Animals Committee, 2017. Retrieved via Australian Weeds Strategy 2017-2027 (agriculture.gov.au)

Ref: 61 Best Practice Serrated Tussock Weed Hygiene, Victorian Serrated Tussock Working Party, August 2020, Retrieved via WeedHygiene-2020-09-22-web.pdf (serratedtussock.com)

Ref: 62 HSE-ENV-PC006 Vegetation Management, Lochard Energy, August 2020, rev 14

Ref: 63 HUGS Preparatory Works Operations Plan, Lochard Energy, rev 0, October 2023

Ref: 64 Biodiversity Assessment: Heytesbury Underground Gas Storage (HUGS) Gas Pipeline, Victoria, Ecology and Heritage Partners, October 2023

Ref: 65 UGS-ZP-0132 MFCT Wellsite Property Management Plan, April 2023.

APPENDIX A – Vehicle & Plant Weed Hygiene Inspection Form

This Hygiene Inspection Form shall stay with the Vehicle or Plant item whilst being used for Lochard Energy HUGS Project Activities.

Vehicle or Equipment Description:	
Make/ Model:	
Registration / ID:	
Inspection Location:	

Vehicle/ Machine Area	**Clean/ Soil free?**		
	Yes	No	N/A
Arms and Booms: Hydraulic rods, pivot points, Paintwork			
Blades: Cutting edge (both sides), hydraulics, cutting edge fix point, wear plates, pivot point.			
Buckets & Attachments, Slashers: Teeth, bucket (both sides), wear plates, hydraulics, pivot points. Slashers – top, underside, crevices, recesses.			
Cabin/ Interior: foot wells, mats, pedals, seats, recesses, controls, air conditioner filter, external paintwork			
Engine: air filter, battery box, chain cases, cooling cores, engine mounts, floor of the engine bay, radiator fins and grille, recesses in the engine/ manifold.			
Lights and Accessories: Lights, paintwork, support frames, toolboxes, tynes/rippers, hoses, window wipers.			
Tracks: Inside tracks, idler wheels, links, lubrication points, shoe, track adjuster guards.			
Underside of Vehicle: axle housing, belly plates, chassis rails and brackets, counter weight, crevices/ ledges/ recesses, fuel tank, guards, spare tyres, swing drive area.			
Wheels and Steering: treads, outside and inside rims, wheel arches, mud guards, recesses, brackets and brake, steering parts			
Other Comments:			
Is the vehicle or plant item clean for use?			
Exclusions or Conditions?			

Name of Individual undertaking inspection:	
Company:	
Signature:	**Date:**

Ongoing vehicle Inspection/ hygiene record – please initial, date and state 'I' Inspection or 'c' Clean

Turn page over if more space is required. This Inspection form has been prepared with reference to Best Practice Serrated Tussock Weed Hygiene Guide 2020; Civil Contractors Federation 2011 A Guide for machinery Hygiene for Civil Construction.

APPENDIX B Pesticide/ Herbicide Application Process

Prior to commencement of activity

1. Prepare a JHA for review by Lochard Energy that is specific to the proposed control program and present to the HSEQ Manager for acceptance.
2. Ensure that seasonality has been considered in nominated treatment dates.
3. Assess weather forecast to ensure conditions will be favourable for application on nominated treatment dates.
4. Provide a list of all product SDSs to the HSEQ Manager and date(s)/ time(s) of intended work to enable notification to landowners and occupiers.
5. Ensure all equipment and PPE is in good condition and appropriate for herbicide application.
6. Ensure locations of all treatment areas are known with reference mapping provided by the HSEQ manager where possible.
7. Ensure that vehicle is clean and has been subjected to a weed and seed hygiene assessment.

During activity

8. Update the JHA with any additional site-based risks apparent upon arrival.
9. Assess area for livestock presence should products being used require an isolation period following application.
10. Avoid potential to spread weeds or soil via vehicle movement as far as is practicable.
11. Inspect ground conditions to ensure that they are suitable for treatment.
12. Ensure herbicide is mixed with clean water to the correct ratio.
13. Ensure that all target species are sprayed in accordance with the prescribed application rate.
14. Work in a pattern that enables the applicator to understand coverage progress.
15. Work in a way that separates spray from clothing or footwear as far as is practical.
16. Record date, time and application details.

Following completion of the activity

17. Ensure that equipment, empty containers and PPE is appropriately cleaned or disposed of in accordance with the SDS.
18. Ensure the vehicle is inspected or cleaned as appropriate prior to movement on to the next location.
19. Provide all hygiene records and records of application to the HUGS Project HSE Manager.