

Our Ref: 321819  
 Enquire to: Brett Walsh  
 Telephone: (07) 4651 5600

20 August 2019

Fulton Hogan Industries Pty Ltd  
 c/- Duggan & Hede Pty Ltd  
 PO Box 496  
 CLAYFIELD QLD 4011

emailed to: [m.mcmahon@dhenv.com.au](mailto:m.mcmahon@dhenv.com.au)

**Re: Confirmation of Compliance with Condition 3.3 in Decision Notice DA321819**

Dear Michael,

Barcaldine Regional Council (**Council**) acknowledges receipt of your email on 13 August 2019 containing an amended 'Site Environmental Management Plan – Construction' (SEMP – Construction) relating to Decision Notice DA321819. It is understood this plan was provided to comply with Condition 3.3 of the Decision Notice.

Council confirms that the amended 'SEMP – Construction' satisfies Condition 3.3 contained in the Decision Notice for the development approval. Therefore, the amended 'SEMP – Construction' dated July 2019 replaces the 'SEMP – Construction' dated December 2018 referenced in Condition 3.1 of the Decision Notice, as set out below:

Plan/Document Name	Plan/Document Number	Revision	Date
Proposed Site Plan (Aerial)	F 2.8A	A	-
Proposed Site Plan	F 2.8B	A	-
Proposed Site Drainage	F 2.12R	A	-
Traffic	F 2.13	A	-
General Plant Details	1-4-226074	A	06-07-2017
<b>Site Environmental Management Plan – Construction</b>	-	-	<b>July 2019</b>

Please find enclosed a copy of the stamped approved 'SEMP – Construction' for your own records.

If you find an inaccuracy in any of the information provided above or have a query or seek clarification about any of these details, please contact Council on (07) 4651 5600 or via email [council@barc.qld.gov.au](mailto:council@barc.qld.gov.au).

Yours sincerely,



**Steven Boxall**  
 Chief Executive Officer

Encl.

Approved Plan – Site Environmental Management Plan – Construction

## Site Based Environmental Management Plan – Construction

### Proposed Asphalt Plant – Alpha

BARCALDINE REGIONAL COUNCIL

DIGITALLY STAMPED

**APPROVED PLAN**

**Development Application:** Development Permit for Material  
Change of Use for *Industry* (Asphalt Manufacturing Plant)  
**Lot:** Lot 3 on DM9

Referred to in Council's Decision Notice

**Approval Date:** 17 July 2019  
**Application Number:** DA321819

July 2019

 **DUGGAN & HEDE** Pty Ltd  
Professional Engineers, Planners, Environmental Consultants

PO Box 496, Clayfield Qld 4011  
Ph: 07 3357 3666 Fax: 07 3857 6233  
email: dh@dhenv.com.au



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## 1 INTRODUCTION

This Site Based Environmental Management Plan has been prepared for the construction activities associated with the proposed asphalt plant for Fulton Hogan Industries Pty Ltd, at the Chesalon Quarry, which is some 16 km south-west of Alpha off the Alpha Tambo Road, Drummondslope. **Figures 2.1** and **2.2** provide details of the site's location and an aerial photograph of the area respectively.

The real property description of the parent lot is Lot 3 on DM9, Parish of Alpha, County of Belyando (refer **Figure 2.3**). The total area of this parent lot is 3,925.046ha. This application is however over an area of some 16,000 m<sup>2</sup> only (excluding site access) on the western side of Alpha Tambo Road.

**Figures 2.1** and **2.2** provide details of the site's location and an aerial photograph of the area respectively. The site is owned by Richard Hans Hansen and May Sophia Hansen.

## 2 ENVIRONMENTAL MANAGEMENT

### 2.1 Roles and responsibilities

In addition to the responsibilities detailed below, responsibilities for implementation, verification and supervision are contained in each sub-plan or related work instruction/procedure.

The Qld Surfacing Organisational Chart available on [InfoLink](#) contains the current organisational structure detailing roles and positions held by personnel.

Personnel and sub-contractors are responsible for advising their respective manager or supervisor of any adverse environmental condition that may become apparent during the performance of their duties.

#### 2.1.1. State Manager – Industries

The State Manager – Industries has overall accountability and authority for ensuring that the EMP is established implemented and maintained for all construction activities on the Alpha site.

#### 2.1.2. Regional Manager – Industries Qld Country

The Regional Manager has the defined responsibility and authority for:

- Ensuring that the EMP is established implemented and maintained for production and surfacing works.
- Reporting to management on the environmental performance of the asphalt plant and related production and surfacing works.

#### 2.1.3. Divisional Manager – Central Qld

The Divisional Manager has the defined responsibility and authority for:

- Ensuring that the EMP is established implemented and maintained for production and surfacing works.
- Overseeing construction works on a regular basis.
- Issuing the EMP and any revisions and recording each recipient on a controlled document register.

- Reporting to management on the environmental performance of the asphalt plant and related production and surfacing works.

#### 2.1.4. Site Supervisor - Construction (SSC)

The Site Supervisor - Construction is responsible to the Divisional Manager for:

- Undertaking environmental monitoring and inspections in accordance with the requirements of the EMP.
- Initiating remedial works to ensure environmental protection measures are effectively maintained.
- Maintaining records of all monitoring and inspection activities.
- Ensuring that all workers and subcontractors under their control are properly inducted and instructed in the requirements of the EMP relevant to their work.
- Ensuring that all activities under their control are undertaken in accordance with the EMP, approval conditions and other statutory environmental requirements.
- Identifying, recommending and initiating solutions to any environmental issues in relation to the operation of the asphalt plant.
- Undertaking all actions identified within the EMP as their responsibility.

#### 2.1.5. Employees

All Fulton Hogan employees are responsible for undertaking their work in accordance with the EMP, Fulton Hogan Environmental Policy, applicable environmental legislation, and environmental requirements identified at the induction and as instructed by their supervisor.

#### 2.1.6. Subcontractors and suppliers

All subcontractors and suppliers shall be responsible for ensuring that their work or product complies with relevant environmental requirements and legislation.

#### 2.1.7. Independent consultants

An appropriately qualified consultant or specialist shall be engaged, where required, to inspect, test or verify specific environmental elements or monitoring either on site or via a NATA certified laboratory.

### 2.2. Objective, targets and performance indicators.

Yearly objectives and targets are established for each division, through the Business Planning process.

The relevant manager may set activity or site-specific objectives and targets, including environmental, from time to time.

Objectives and performance indicators have been set for all sub-plans within this EMP (refer **Section 4**).

### 2.3. Induction, training and awareness

Continuing training will be carried out as necessary to ensure staff adequately understand their role in ensuring environmental requirements under this EMP are met.

A record of all induction and training undertaken on site is maintained on a register by the Human Resources team.



### 2.3.1. Inductions

All persons working on site must attend a site induction prior to commencing work on site.

The nominated Workplace Health and Safety Officer (WHSO) or Site Supervisor conducts inductions. The visitor induction and delivery driver/contractor induction provides an overview of relevant environmental aspects.

The full induction process familiarises the staff and workforce with Fulton Hogan philosophies, the site itself and all specific requirements for the site activities, including safety and environmental controls.

All inductions include a reference to this EMP, including the expectations of staff and subcontractors to comply with the EMP and environmental legislation. The full induction provides an overview of the EMP and a summary of the contents and controls.

Regular visitors and client representatives required to spend time on site unaccompanied, shall also be inducted via a contractor induction prior to going onto the site.

Records are kept on site of all persons inducted.

### 2.3.2. Training

The relevant manager or supervisor monitors environmental training needs to determine if additional training is required to enable personnel to perform their environmental duties. Additional environmental training is arranged in accordance with [Training and Development](#).

At the commencement of each calendar year, after the Christmas shut down, all Qld Industries staff undertakes an annual 'Return to Work' training session. This training session includes a review of responsibilities, relevant procedures, spill response and provides other information as required regarding environmental risks and management measures.

Regular communications (e.g. visits, email, phone discussions) are also used to raise environmental awareness issues relating to the relevant site activities, including environmental approval conditions.

### 2.3.3. Awareness

General awareness is raised via a number of communication forums. These include:

- Prestart meetings (when undertaken)
- [Green alerts](#) (via Infolink)
- Toolbox talks
- Back to work days
- Debriefs (as required) following incidents, non-conformances, near misses, etc.

Environmental aspects and/or topics will be included where relevant during these forums.

In addition, all site personnel engaged in asphalt plant operations will be trained in procedures relating to the prevention of unlawful environmental harm during operations and emergencies and their responsibilities under this EMP.



## 2.4. Complaints, non conformances, improvements and incidents

Site personnel, administering authorities, sub-contractors, clients and the community may raise improvement opportunities or concerns regarding the environmental performance of the site.

The Site Supervisor - Construction, Foreman or WHSO shall notify the Divisional Manager of all site environmental incidents, issues, concerns and complaints.

All OFIs and Incidents shall be recorded in RMSS and reported in the monthly report by the relevant manager or their delegate.

### 2.4.1. Complaints

The staff member receiving the complaint shall record the details on a [Non-conformance Form](#). Information taken will include:

- name and contact details
- type of inquiry (phone, letter, etc)
- type of issue (noise, dust, odour, etc)
- location or source of the issue
- date and time of occurrence
- Other relevant information.

Complaints shall be directed to the relevant manager for investigation and action if deemed valid. Once the complaint has been validated, the method of response and reporting will be determined, i.e. nuisance, opportunity for improvement or a non-conformance.

A site contact number (business hours) and a 24 hour contact number is displayed on the front gate of the site for members of the public to obtain contact details.

The outcomes of any complaint investigation will be advised back to the complainant by the relevant manager or their delegate as soon as practicable. The OFI will not be closed out until this advice has occurred.

If the complaint is received through an Administering Authority, the relevant section of this EMP should be reviewed and any required actions, e.g. monitoring or training is undertaken.

### 2.4.2. Non-conformances

Non-conformances will be raised, actioned and recorded in accordance with [Non Conformance, Corrective and Preventive Action](#). The relevant manager shall nominate corrective action, if required, and submit to the Divisional Manager or Asset Fleet Manager for review and approval.

The designated staff member will complete the relevant [forms](#).

The relevant manager will provide a monthly summary of non-conformances.

### 2.4.3. Improvements

Fulton Hogan encourages all staff and subcontractors to identify areas where we can improve our performance. Opportunities for improvement can be recorded on a [Non-](#)



conformance or QuIP form, for consideration by relevant supervisory and management staff.

#### 2.4.4. Incidents

In the event of an incident, the Alpha Incident and Emergency Response Handbook should be reviewed to determine the appropriate actions.

Environmental incidents shall be reported immediately to the relevant Supervisor/Manager by the staff member involved. The relevant manager is then responsible for advising the Divisional Manager and WHSO if the incident is a Category 1 or 2 (medium or high risk). Reference should be made to the 'Incident Investigation, Reporting and Notification Flowchart'.

The Divisional Manager will be responsible for advising the Northern Region Environment Manager and, if required, administering authorities and/or parties. All internal Fulton Hogan approval processes will be undertaken to meet any legislative guidelines for reporting timeframes.

Responses to and/or rehabilitation requirements due to the incident will be developed by the relevant manager with assistance by the Northern Regional Environment Manager and WHSO as required.

All incidents will be reviewed against the EMP and approval conditions, to determine whether reporting to the administering authority is required.

Completion and distribution of incident reports shall occur in accordance with 'Incident Investigation, Reporting and Notification Procedure'.

##### 2.4.4.1. Administering Authority

The relevant administering authority shall be notified by the Divisional Manager of any incident when required by the *Environment Protection Act 1994* or approval conditions. Advice will be sought from the Northern Region Environmental Manager as required.

When a meeting is organised between Fulton Hogan and an administering authority relating to an environmental aspect, the relevant senior manager (Surfacing or Industries) and Northern Region Environment Manager will be advised of the proposed meeting.

The relevant manager from site will ensure meeting details, discussions and outcomes will be recorded, distributed and filed

The relevant manager from site will ensure meeting details, discussions and outcomes will be recorded, distributed and filed.

#### 2.4.5. Communication

Internal and external communication methods are detailed throughout this EMP.

Internal and external communication methods will be undertaken in accordance with the 'Communication Manual'.

### 2.5. Environmental monitoring, inspections and audits

Regular inspections, monitoring and audits are conducted to ensure compliance with the EMP. Monitoring and inspections are carried out in accordance with sub-plan requirements.



### 2.5.1. Monitoring

Environmental monitoring, including monitoring of subcontractors' activities, is conducted as an on-going activity during the normal supervision of the site's operations. Records of such surveillance shall only be kept if any environmental issues are observed. These would be documented as an environmental incident, non-conformance, improvement or a diary note in the plant diary as appropriate.

Formal monitoring and documentation for water quality, noise, air quality and other environmental aspects is detailed under the relevant sub-plans.

### 2.5.2. Monitoring results

Monitoring results shall be reviewed by the relevant manager, or their delegate, to determine compliance with the EMP.

The monitoring results and their compliance review will be maintained in the relevant site records and shall include the following information:

- Locations of the measurement positions
- Date, time and duration of each measurement period
- Results of monitoring and comparison to appropriate guidelines or criteria
- Appropriate analysis of measurements and non-conformances to determine any associated non-conforming trends
- Description of any incident or non-compliance with the criteria
- Results of investigation and corrective action undertaken including modifications to management measures
- Any other data or observations considered appropriate including photographs and field notes.

The monitoring results will be available to the administering authority during any inspection and/or following any formal request.

#### 2.5.2.1. Control of monitoring and measuring equipment

Instruments used for monitoring activities are controlled in accordance with **Section 5.9.1.5. Control of Inspection, Measuring and Test Equipment** in procedure [Control and Supervision of the Works](#).

### 2.5.3. Inspections

Alpha construction activities are regularly inspected and plant checks are recorded in the relevant inspection checklists which include environmental requirements.

In addition, inspections of the site shall be conducted by the relevant supervisor as soon as practicable following storm events or incidents which could cause environmental harm.

Monitoring programs will be undertaken according to procedures identified in procedural manuals. The proposed minimum monitoring program to be undertaken at the site is summarised below:





ELEMENT	STANDARD	MONITORING FREQUENCY	COMMENTS
Noise	Qld Environmental Protection (Noise) Policy	<ul style="list-style-type: none"> <li>After the receipt of two or more substantiated complaints with respect to a particular noise source during any given week.</li> </ul>	<ul style="list-style-type: none"> <li>Generally noise monitoring should be undertaken within 20 metres of the closest residence to the plant.</li> <li>Use methods described in the "Noise Measurement Manual" (EPA, 1995).</li> </ul>
Fugitive Emissions (dust)	Qld Environmental Protection (Air) Policy	<ul style="list-style-type: none"> <li>After the receipt of two or more substantiated complaints with respect to dust during any given week.</li> </ul>	<ul style="list-style-type: none"> <li>Generally sampling and testing on the site's boundary to be undertaken in accordance with AS 2922 and AS 3580.10.1.</li> </ul>

Additional monitoring may also be required as a result of excessive complaints or when ongoing incidents have been identified during daily inspections.

#### 2.5.4. Audits

Audits shall be conducted in accordance with procedure [Management Review Audit & Customer Complaints](#).

##### 2.5.4.1. Internal audits

Audits will be undertaken by suitably experienced Fulton Hogan personnel not directly associated with the activity being audited. Audits shall be undertaken regularly, with the aim of assuring compliance with all EMP requirements over a 12 month period. The audits will also assess against continuous improvement actions and opportunities.

Any deficiencies identified in the audit will be recorded under the OFI system as either a non conformance or an opportunity for improvement.

A copy of the audit report will be made available to the relevant manager.

##### 2.5.4.2. External audits

Audits of environmental compliance to AS/NZS ISO 14001:2004 on this project may be undertaken as part of surveillance by Fulton Hogan certifying body, NCSI.

Clients may undertake audits of the EMP and its implementation, and all requests should be referred to the relevant manager for consideration and approval.

Administering authorities may undertake audits to ensure compliance with approval conditions, e.g. ERA 6, ERA 8, Dangerous Goods Location.

## 2.6. Emergency preparedness

At the annual Return to Work Environmental Awareness training session, emergency procedures, spill response training and other training as required is re-presented to all personnel.

Emergency response is tested yearly through either desktop or planned exercises for both safety and environmental aspects. These exercises are held in accordance with procedure [Emergency Response](#).

A site specific [Incident and Emergency Response Handbook](#) is in place for Alpha construction.

This handbook includes information for emergency preparedness and response for the following:

Making Emergency Calls	Storms, Flooding and Dust
Critical Incident Response	Fires and Bushfires
Emergency Evacuation Procedure	Encountering Cultural Heritage and Remains
Serious Injury	Encountering Wildlife
Vehicle Accidents and Plant rollovers	Service Strikes and Leaks
Fall Arrest	Chemical, Oil and Fuel Spills
Contaminated Soil and Asbestos	Vandalism, Threats and Acts of Violence
Bitumen Burns, Spills, Fires	Trench Collapse
Emergency Contacts and Site Specific Procedures	

## 2.7. Environmental documents and records

Procedures, work instructions and forms referred to in this EMP are hyperlinked to controlled documents within Infolink. Document control is performed in accordance with procedure Document control – Document, Data & Records Environmental records shall be managed in accordance with the same procedure.

A copy of any Development Approval will be kept in the relevant office and readily accessible to personnel carrying out the activity.

All records and documents required to be kept by an approval condition must be kept on site for at least 12 months and must be made available for examination by an Authorised Person immediately upon request.

## 3 CONSTRUCTION PHASE

### 3.1. Description of Site Activities and Main Impacts

The existing topography of the site will require some bulk earthworks to allow for the construction of the asphalt plant. The asphalt plant will be transported in modules to the site for erection.

As such, the principal site activities involved in the construction phase would be:

- bulk excavation and ground preparation,
- foundations and miscellaneous structures;
- pavement construction;
- drainage works and associated pollution control devices;
- erection of proposed asphalt plant;



- connection of services.

The main environmental impacts identified during field inspections and development of this management plan are:

- noise from construction works;
- dust from construction works;
- sediment movement off site;

The elements addressed in this Site Based Environmental Management Plan for construction are:

- Sediment and Erosion Control;
- Dust;
- Noise;
- Solid Waste Minimisation;
- Access;
- Fuel and Hazardous Substances.

### 3.2. Daily Inspections

The Site Supervisor - Construction is responsible for undertaking regular monitoring of the environmental performance of construction activities. The following aspects (which are cross referenced to relevant elements) are to be checked on a **daily** basis and action taken to rectify any non-compliances.

ASPECT TO BE CHECKED	RELEVANT ELEMENT
<ul style="list-style-type: none"> <li>▪ Record and respond to any complaints from the general public;</li> </ul>	All
<ul style="list-style-type: none"> <li>▪ Check that use of machinery has not been occurring outside the hours of 6.00am and 6.00pm Monday to Saturday;</li> </ul>	Noise
<ul style="list-style-type: none"> <li>▪ check for signs of dust build-up on vegetation and surrounding properties;</li> </ul>	Dust
<ul style="list-style-type: none"> <li>▪ check for signs of sediment leaving the site;</li> </ul>	Sediment & Erosion Control
<ul style="list-style-type: none"> <li>▪ check installation and condition of sediment fences;</li> </ul>	Sediment & Erosion Control
<ul style="list-style-type: none"> <li>▪ check that location of stockpiles is suitable to prevent movement of sediment off site;</li> </ul>	Sediment & Erosion Control
<ul style="list-style-type: none"> <li>▪ check for any signs of fuel or oil spills;</li> </ul>	Hazardous Substances



ASPECT TO BE CHECKED	RELEVANT ELEMENT
<ul style="list-style-type: none"> <li>▪ check that wastes are being removed off site;</li> </ul>	Solid Waste Minimisation

### 3.3. Sediment and Erosion Control

#### Policy

To minimise the impact on stormwater quality due to construction activities, particularly in relation to:

- the quantity of soil lost to downstream waterways;
- the generation of contaminated stormwater;
- the build-up and transfer of sediment to public access roads.

#### Performance Criteria and Objectives

- Visible signs of sediment movement downstream would indicate unacceptable sediment and erosion control.
- Excessive build-up of dirt on public roads would indicate unacceptable levels of sediment movement off-site.

#### Implementation Strategy

- Specific site inductions for all employees and contractors as per **Section 2.3** of this plan.
- Catch drains along the northern, eastern and western boundaries to divert runoff around and away from the proposed asphalt plant area, and a swale and pond along the southern boundary are to be constructed early in the construction stage (refer Drawing No **FH1812-SW-04** and **05**).
- Construct rock check dams adjacent to the bunds in the swales (refer Drawing No **FH1812-SW-04** and **05**).
- Construct rock protection in weir to runoff control pond (refer Drawing No **FH1812-SW-04** and **05**).
- Areas of bare soil should be minimised.
- Stockpiles of soil are to be located on available flat areas at a minimum buffer distance of 50m from waterways.

#### Monitoring

- Daily inspections as described in **Section 3.2** of this Plan shall be undertaken by the Site Supervisor - Construction.

### Reporting and Auditing

- Any environmental incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised, as per **Section 2.4**.
- Any public complaint will be recorded on a complaints register form and actioned in accordance with the complaints procedure, as per **Section 2.4**.
- Audits of environmental compliance will be undertaken in accordance with **Section 3.5** of this Plan.

### Corrective Action

- Counsel/discipline employees or contractors responsible for excessive dust generation.
- Erect sediment fences and/or other controls, with view to increasing the extent or relocating same.

## 3.4. Dust

### Policy

To minimise the impacts of dust on the surrounding environment, particularly in relation to:

- nuisance for adjoining premises and users of the area;
- excessive build-up of dust on surfaces.

### Performance Criteria and Objectives

- A visible build-up of dust on surrounding ground, roads, vegetation and building surfaces would indicate unacceptable dust emissions.
- More than two dust complaints in any one-week period could indicate unacceptable disturbance. If more than two complaints are received in this period, corrective action should be taken.

### Implementation Strategy

- Specific site inductions for all employees and contractors as per **Section 2.3** of this plan.
- Minimise the amount of overburden and soil stockpiled on site.
- Cover the loads of all vehicles leaving the site with overburden or soil, if required.
- In dry and windy conditions, trafficked and exposed areas and stockpiles of soil are to be kept damp by watering.

### Monitoring

- Daily inspections as described in **Section 3.2** of this Plan shall be undertaken by the Site Supervisor - Construction.



- Monitoring as described in **Section 3.2** of this Plan shall be undertaken.

#### **Reporting and Auditing**

- Any environmental incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised, as per **Section 2.4**.
- Any public complaint will be recorded on a complaints register form and actioned in accordance with the complaints procedure, as per **Section 2.4**.
- Audits of environmental compliance will be undertaken in accordance with **Section 3.2** of this Plan.

#### **Corrective Action**

- Counsel/discipline employees or contractors responsible for excessive dust generation.
- Increase frequency of watering.
- Cover loads of vehicles leaving and/or entering the site.

### **3.5. Noise**

#### **Policy**

To minimise the impact of noise from construction on nearby premises.

#### **Performance Criteria and Objectives**

- More than two noise complaints in any one-week period could indicate unacceptable disturbance. If more than two complaints are received in this period, corrective action should be taken.

#### **Implementation Strategy**

- Specific site inductions for all employees and contractors as per **Section 2.3** of this plan.
- Ensure that all affected persons have been informed about the project and are aware of the potential impacts.
- Construction staff should not be at the site outside the hours of 6.00am to 6.00pm Monday to Saturday. No activity should occur on Sundays.
- Machinery and equipment generating excessive noise (eg due to poor maintenance) will not be used.

#### **Monitoring**

- Daily inspections as described in **Section 3.2** of this Plan shall be undertaken by the Site Supervisor - Construction.
- Monitoring as described in **Section 3.2** of this Plan shall be undertaken.

### Reporting and Auditing

- Any environmental incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised, as per **Section 2.4**.
- Any public complaint will be recorded on a complaints register form and actioned in accordance with the complaints procedure, as per **Section 2.4**.
- Audits of environmental compliance will be undertaken in accordance with **Section 3.2** of this Plan.

### Corrective Action

- Counsel/discipline employees or contractors responsible for excessive noise generation.
- Remove machinery and equipment generating excessive noise.
- Modify start and finish times, and the intensity of operations.

## 3.6. Solid Waste Minimisation

### Policy

To minimise the generation of wastes on site, and ensure solid wastes are contained and disposed of correctly.

### Performance Criteria and Objectives

- Excessive quantities of domestic and construction wastes are not to be accumulated on the site.

### Implementation Strategy

- Specific site inductions for all employees and contractors as per **Section 2.3** of this plan.
- Domestic refuse to be collected in a suitable container and removed from the site weekly.
- Soil wastes created during construction are not to be stored on site.

### Monitoring

- Daily inspections as described in **Section 3.2** of this Plan shall be undertaken by the Site Supervisor - Construction.

### Reporting and Auditing

- Any environmental incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised, as per **Section 2.4**.



- Any public complaint will be recorded on a complaints register form and actioned in accordance with the complaints procedure, as per **Section 2.4**.
- Audits of environmental compliance will be undertaken in accordance with **Section 3.2** of this Plan.

#### **Corrective Action**

- Counsel/discipline employees or contractors responsible for non compliance with this strategy.
- Increase frequency of waste collections from site.

### **3.7. Access**

#### **Policy**

To minimise the disruption and damage caused by the movement of vehicles and construction machinery to and from the site.

#### **Performance Criteria and Objectives**

- More than two complaints about vehicle movements in any one week period could indicate unacceptable disturbance. If more than two complaints are received in this period, corrective action should be taken.

#### **Implementation Strategy**

- Specific site inductions for all employees and contractors as per **Section 2.3** of this plan.
- Ensure designated access route is communicated to all delivery drivers;
- Use only one access route to and from the Alpha Tambo Road.

#### **Monitoring**

- Daily inspections as described in **Section 3.2** of this Plan shall be undertaken by the Site Supervisor - Construction.

#### **Reporting and Auditing**

- Any environmental incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised, as per **Section 2.4**.
- Any public complaint will be recorded on a complaints register form and actioned in accordance with the complaints procedure, as per **Section 2.4**.
- Audits of environmental compliance will be undertaken in accordance with **Section 3.2** of this Plan.

### Corrective Action

- Counsel/discipline employees or contractors responsible for non compliance with this strategy.
- Modify use of vehicle movement's route and intensity of operations (eg number of daily trips in and out of the site) so that impact is reduced.

## 3.8. Fuel and Hazardous Substances

### Policy

To minimise the risk of contamination from fuel and hazardous substance spills on the site.

### Performance Criteria and Objectives

- No visible evidence of fuel or oil spills on the ground.

### Implementation Strategy

- Specific site inductions for all employees and contractors as per **Section 2.3** of this plan.
- Refuelling is to be supervised by a designated member of staff to reduce the risk of spills.
- Any fuel or oil spills are to be cleaned up immediately and contaminated soils to be removed off site for disposal at an appropriately licensed landfill.
- Suitable materials for the clean up of fuel spills are to be available at the site (eg fuel spill kit containing absorbent materials).
- Staff are to be informed of the procedure for clean up of spills.

### Monitoring

- Daily inspections as described in **Section 3.2** of this Plan shall be undertaken by the Site Supervisor - Construction.

### Reporting and Auditing

- Any environmental incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised, as per **Section 2.4**.
- Any public complaint will be recorded on a complaints register form and actioned in accordance with the complaints procedure, as per **Section 2.4**.
- Audits of environmental compliance will be undertaken in accordance with **Section 3.2** of this Plan.



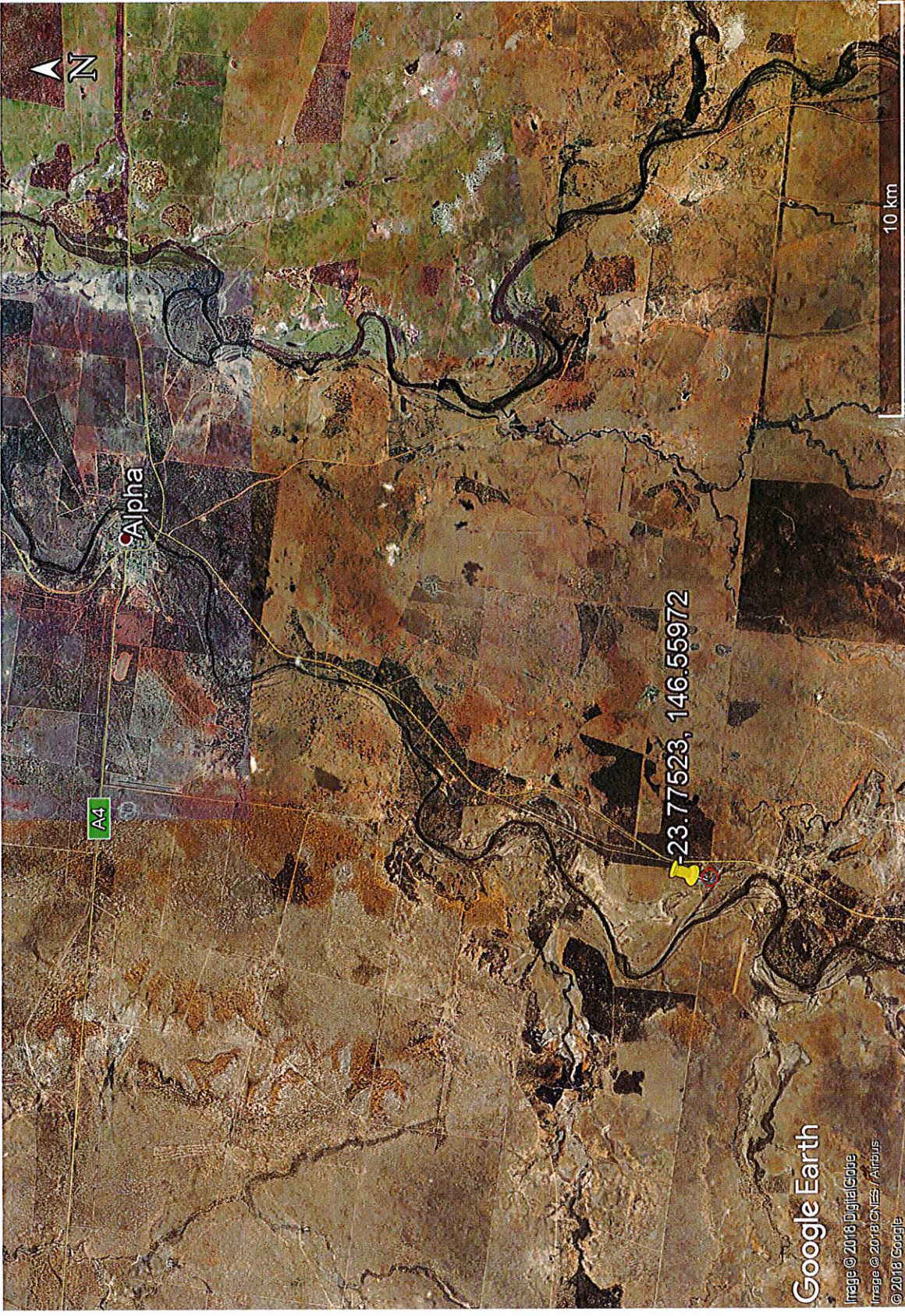


### Corrective Action

- Counsel/discipline employees or contractors responsible for non compliance with this strategy
- Enforce fuel spill clean-up procedures.

## FIGURES





Google Earth  
 Image © 2018 DigitalGlobe  
 Image © 2018 CNES / Airbus  
 © 2018 Google

 <b>DUGGAN &amp; HEDE</b> Pty Ltd Professional Engineers, Planners and Environmental Consultants PO Box 496 Clayfield Qld 4011 Telephone (07) 3357 3666 Facsimile (07) 3857 6233 e-mail <a href="mailto:dh@dhenv.com.au">dh@dhenv.com.au</a>	FULTON HOGAN PROPOSED ASPHALT PLANT ALPHA TAMBO RD. SITE LOCATION	SCALE	REF.
		SCALE	FIGURE 2.1





100 metres  
 Print Date: 14/8/2018  
 Paper Size: A3

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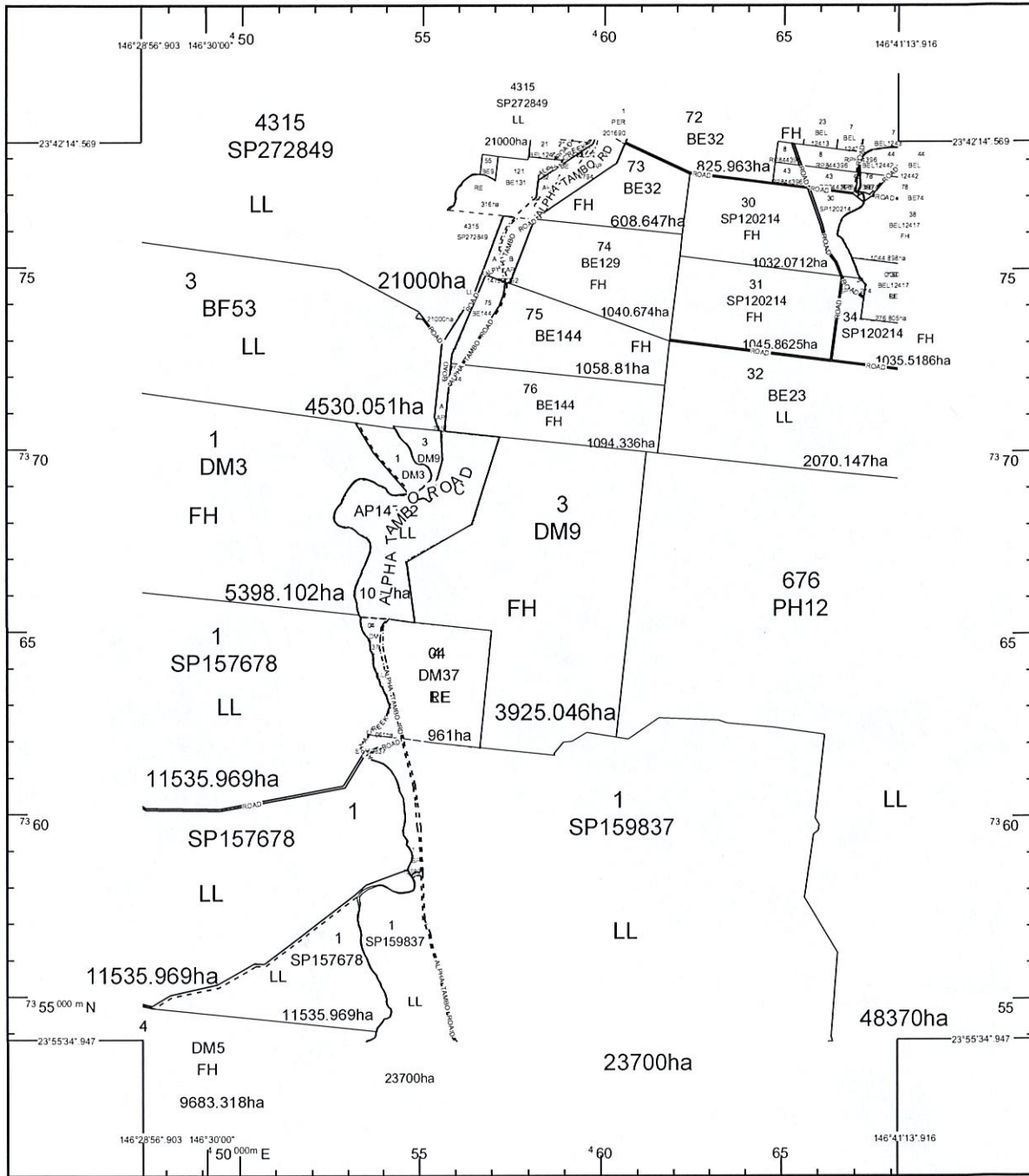


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 Professional Engineers, Planners and Environmental Consultants  
 PO Box 498 Clayfield Qld 4011  
 Telephone (07) 3357 3666  
 Facsimile (07) 3857 6233  
 e\_mail dh@dhenv.com.au

FULTON HOGAN	SCALE
PROPOSED ASPHALT PLANT ALPHA TAMBO RD. AERIAL PHOTOGRAPH	REF.
	FIGURE 2.2



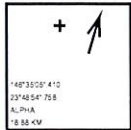


STANDARD MAP NUMBER  
8250-34241



**SmartMap**  
An External Product of  
SmartMap Information Services

MAP WINDOW POSITION &  
NEAREST LOCATION



**SUBJECT PARCEL DESCRIPTION**

DCDB	
Lot/Plan	3/DM9
Area/Volume	3925.046ha
Tenure	FREEHOLD
Local Government	BARCALDINE REGIONAL
Locality	DRUMMONDSLOPE
Segment/Parcel	44701/13

**CLIENT SERVICE STANDARDS**

PRINTED (dd/mm/yyyy) 23/03/2018

DCDB 22/03/2018 (Lots with an area less than 5.000ha are not shown)

Users of the information recorded in this document (the Information) accept all responsibility and risk associated with the use of the Information and should seek independent professional advice in relation to dealings with property.

Despite Department of Natural Resources and Mines (DNRM)'s best efforts, DNRM makes no representations or warranties in relation to the Information, and, to the extent permitted by law, exclude or limit all warranties relating to correctness, accuracy, reliability, completeness or currency and all liability for any direct, indirect and consequential costs, losses, damages and expenses incurred in any way (including but not limited to that arising from negligence) in connection with any use of or reliance on the Information.

For further information on SmartMap products visit <http://nrw.qld.gov.au/property/mapping/blnmap>

Based upon an extraction from the  
Digital Cadastral Data Base



(c) The State of Queensland,  
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Resources and Mines) 2018.

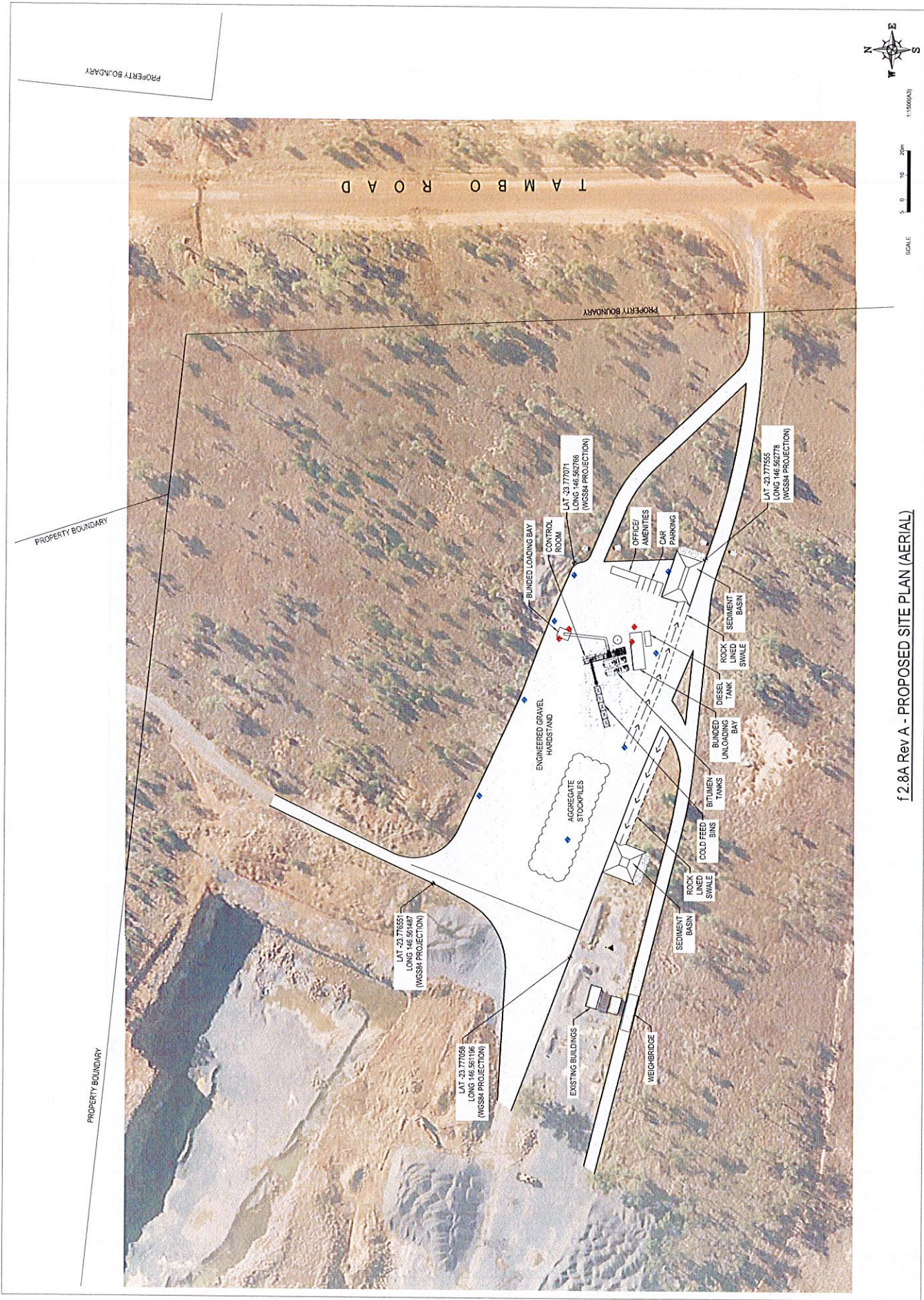


**DUGGAN & HEDE** Pty Ltd  
Professional Engineers, Planners, Environmental Consultants  
PO Box 496 Cloyfield Qld 4011  
Telephone (07) 3357 3686  
Facsimile (07) 3851 6233  
e\_mail dh@dhenv.com.au

FULTON HOGAN  
PROPOSED ASPHALT PLANT  
ALPHA TAMBO RD.  
SMART MAP

SCALE	
SHEET	
FIGURE	2.3





f.2.8A Rev A - PROPOSED SITE PLAN (AERIAL)

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 Facsimile (07) 3357 6233  
 e-mail [dh@dhen.com.au](mailto:dh@dhen.com.au)

FULTON HOGAN  
 PROPOSED ASPHALT PLANT  
 ALPHA TAMBO RD.  
 SITE LAYOUT (WITH AERIAL PHOTO)

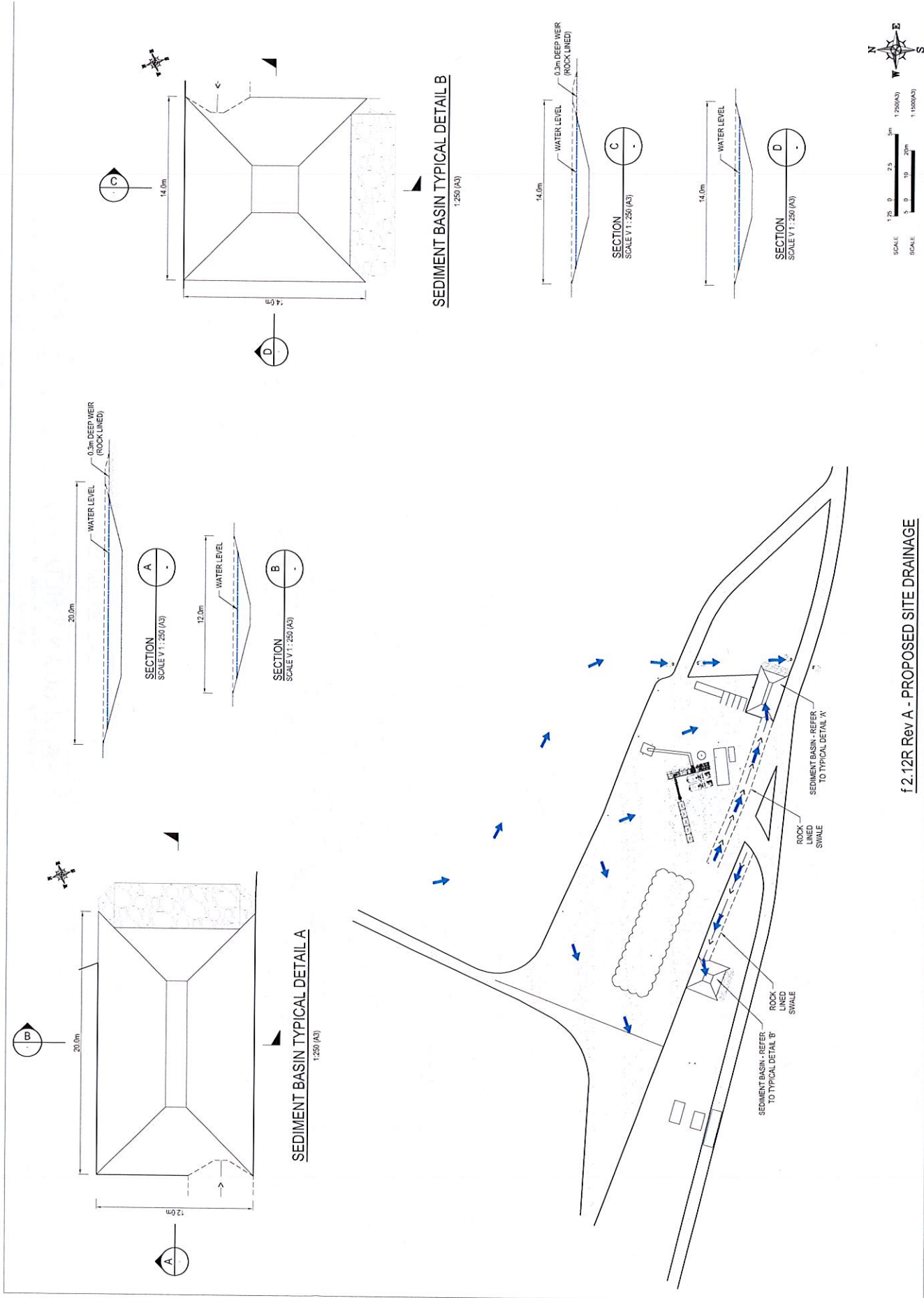
SCALE  
 REF.  
 FIGURE 2.8a





f2.8B Rev A - PROPOSED SITE PLAN

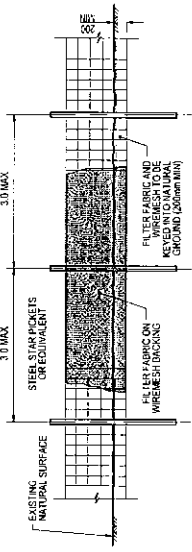
 <b>DUGGAN &amp; HEDE</b> Pty Ltd Professional Engineers, Planners and Environmental Consultants PO Box 496 Clayfield Qld 4011 Telephone (07) 3357 3666 Facsimile (07) 3857 6233 e_mail dh@dhenv.com.au	FULTON HOGAN PROPOSED ASPHALT PLANT ALPHA TAMBO RD. SITE LAYOUT (WITHOUT AERIAL PHOTO)	
	2.8b	



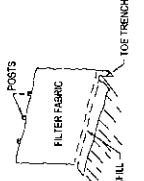
f 2.12R Rev A - PROPOSED SITE DRAINAGE

<p><b>DUGGAN &amp; HEDE</b> Pty Ltd          Professional Engineers, Planners and Environmental Consultants          PO Box 408 Clayfield Qld 4011          Telephone (07) 3357 3666          Facsimile (07) 3957 6233          e_mail dh@dhen.com.au</p>		<p>FULTON HOGAN          PROPOSED ASPHALT PLANT          ALPHA TAMBO RD.          SITE DRAINAGE</p>
SCALE	SCALE	FIGURE
REF.		2.12

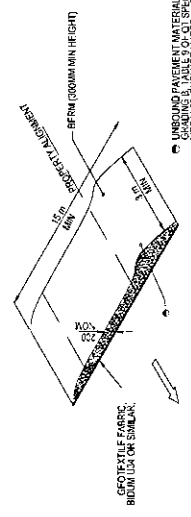




- MAINTENANCE PROGRAM FOR SILT FENCES**
1. REGULAR INSPECTIONS WILL BE REQUIRED TO CONTROL DAMAGE CAUSED BY ON SITE VEHICLES OR MOVEMENT OF MATERIALS.
  2. INSPECTED AFTER EACH STORM EVENT THAT RESULTS IN RUN-OFF.
  3. REMOVE EXCESS SEDIMENT DEPOSITS.
  4. NOTIFY THE SUPERVISOR OF ANY EXCESSIVE SEDIMENT.
- NOTE: SILT MANAGEMENT**
- SILT FENCES ARE TO BE EMPLOYED WHERE THE CONDITIONS DURING CONSTRUCTION REQUIRE THE CONTROL OF ANY POSSIBLE SILT MOVEMENT ON THE SITE AS DIRECTED BY THE SUPERVISOR.

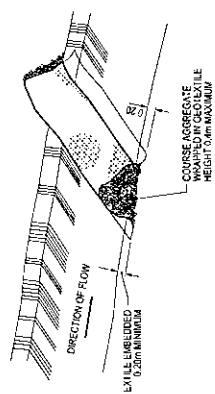


**TYPICAL SEDIMENT FENCE DETAIL**  
NTS

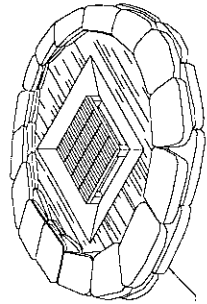


- MAINTENANCE PROGRAM FOR GRASS FILTER STRIPS**
1. THE SUBGRADE BUILD UP ON FILTER STRIPS MUST BE INDEPENDENT ON SITE EROSION AND SEDIMENT CONTROLS.
  2. THE SOURCE OF ANY EXCESSIVE SEDIMENT DEPOSITS IS TO BE INVESTIGATED.

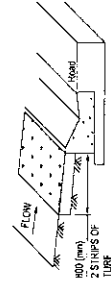
**VEHICLE SHAKEDOWN**  
NTS



**TYPICAL SECTION ROCK CHECK DAM**  
NTS



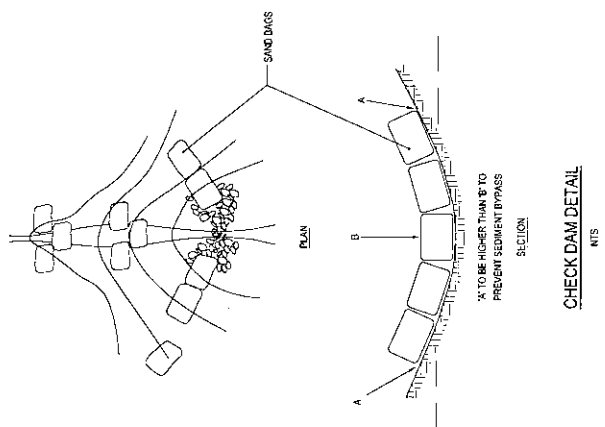
**FIELD INLET PROTECTION**  
NTS



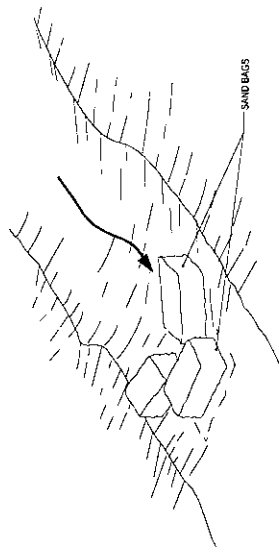
- MAINTENANCE PROGRAM FOR GRASS FILTER STRIPS**
1. THE SUBGRADE BUILD UP ON FILTER STRIPS MUST BE INDEPENDENT ON SITE EROSION AND SEDIMENT CONTROLS.
  2. THE SOURCE OF ANY EXCESSIVE SEDIMENT DEPOSITS IS TO BE INVESTIGATED.

**TURF FILTER STRIPS**  
NTS

- EROSION AND SEDIMENT CONTROL NOTES:**
1. 40mm TURF TO EDGE OF BRIM/SHOULDER.
  2. 80mm TURF TO BACK OF KERBS AND CONCRETE PATHS.
  3. 100mm TURF TO BACK OF CURBS AND CONCRETE PATHS.
  4. PROVIDE INLET PROTECTION NEAR ALL DRAINAGE OUTLETS.
  5. GRASS SPEC'D ALL DISTURBED AREAS.
  6. DUST CONTROL BY WATERING AS NECESSARY TO PREVENT VISIBLE DUST CLOUDS AT PROPERTY BOUNDARIES.



**CHECK DAM DETAIL**  
NTS



**SAND BAG OPEN DRAIN DETAIL**  
NTS

**SILT MANAGEMENT DETAILS AND MAINTENANCE PROGRAMS.**

REVISIONS				TECHNICALLY APPROVED:			
No.	By	Date	Description	DATE	TIME	DATE	TIME

FULTON HOGAN		SCALE	AS SHOWN
ALPHA - TAMBO ROAD, ALPHA		SHEET	01 of 01
PROPOSED ASPHALT PLANT DEPOT		DRG No.	PH1812-SW-05
EROSION & SEDIMENT CONTROL DETAILS			

**DUGGAN & HEDE** Pty Ltd  
 145/177/178  
 Professional Engineers, Planners and Environmental Consultants  
 PO Box 658 Chynoweth Qld 4071  
 Brisbane Australia  
 Telephone (07) 3857 6233  
 Fax (07) 3857 6233  
 e mail: dgh@dwhe.com.au