



CONSTRUCTION SOIL AND **WATER MANAGEMENT PLAN** **(CSWMP)**

Castle Hill Powerhouse Museum Discovery
Centre (MDC) – Early Works Carpark
Construction

Table of Contents

1. Introduction	3
1.1 Purpose	3
1.2 Scope	4
2. Objectives	5
3. Sub-Plan Reference Documents	6
3.1 Legislations	6
4. Roles and Responsibilities	8
4.1 Emergency Contacts	8
5. Implementation	10
5.1 Soil Erosion and Sediment Control Plan	11
5.2 Wet Weather Conditions	13
5.3 Water Quality	13
5.4 Protection of Flora and Fauna	13
5.5 Potential Impacts	14
5.6 Training, Monitoring, and Reporting	14
5.7 Complaint Handling Procedure	15
6. Conclusion	15

1. Introduction

This Soil and Water Management Plan (CSWMP) has been prepared by Simmons Civil for the Powerhouse Museum Discovery Centre (MDC) early works on 2 Green Rd and 172 Showground Road, Castle Hill [Lot 102 DP 11302712 & Lot 1 DP 1066281] to meet the requirements of:

- The Hills Shire Council
- Development Consent Application: SSD 10472

1.1 Purpose

The CSWMP has been developed with specific information to allow for effective soil and water management during the project's works. This plan has been developed taking into consideration the "Integrated Project Management Plan" (IPMP), Simmons Legal and other requirements including but not limited to relevant Acts, Regulations, Codes of Practice and Industry Standards/Guidelines.

In addition to this, the framework for this plan has been prepared to align with the Simmons Management System and the client's requirements. The purpose of the CSWMP is to outline the following:

- Describe the locations and types of all soil, erosion, and sediment controls
- Ensure no erosion of land and prevent sediment controls from entering waterways
- Construction works does not contaminate the soil and water

1.2 Scope

The project involves the expansion of the Museums Discovery Centre (MDC) associated with the Department of Planning Industry and Environment (DPIE) and the Hills Shire Council.

The scope of works required for the project involves the following:

- Removal of vegetation
- Site preparation
- Tree removal
- Reconstruction of new carpark area
- New line markings for the reconstructed carpark area
- Installing new road pavements
- Installing carpark light poles

Other operations may be undertaken by Simmons that is required to deliver the above activities within the projected timeframe. Additional activities may also be requested of the client throughout the duration of the project.

2. Objectives

The key objectives of the CSWMP are to:

- Minimise waste produced on site and the built environment during early works
- Provide a clear framework for contractors to operate in an efficient manner.
- Manage the impacts of soil and water during construction works
- Require that all waste generated during the project is assessed, classified and managed in accordance with the EPA's *"Waste Classification Guidelines Part 1: Classifying Waste"*.

The following soil and water objectives apply to the construction phase of the Project:

- All erosion and sediment controls are to be implemented during construction as a minimum, in accordance with the publication *"Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004), commonly referred to as the Blue Book"*.

3. Sub-Plan Reference Documents

Simmons will comply with all legislation, standards and guidelines, client documents and project approvals, as nominated within the Hills Shire of this CSWMP.

3.1 Legislations

Prior to the commencement of this project, management sub-plans are implemented according to the DA Consent Conditions.

CLAUSE	DESCRIPTION
B27	<p>Prior to the commencement of construction, a Construction Environmental Management Plan (CEMP) must be submitted to the Planning Secretary, Council and Certifier. The CEMP must provide / address the following matters:</p> <ul style="list-style-type: none"> a. Details of: <ul style="list-style-type: none"> - Hours of work - 24-hour contact details of site manager - Management of dust and odour to protect the amenity of the neighbourhood; - Stormwater control and discharge - Measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the subject site - Groundwater management plan including measures to prevent groundwater contamination - External lighting in compliance with AS4282-1997 control of the obtrusive effects of outdoor lighting - Community consultation and complaints handling - Detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations b. Construction Traffic and Pedestrian Management Sub-Plan (see Condition B28); c. Construction of noise and Vibration Management Sub-Plan (See Condition B29); d. Construction Soil and Management Sub-Plan (see Condition B30); e. Construction Waste Management Sub-Plan (see Condition B31); f. An unexpected finds protocol for contamination and associated communications procedure; g. An unexpected finds protocol for contamination, Aboriginal and non-Aboriginal heritage, and associated communications procedure; and h. Waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site. i.
B28	<p>The Construction Noise and Vibration Management Sub-Plan (CNVMSP) must address, but not be limited to, the following:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified and experienced noise expert; (b) incorporate recommendations of the Acoustic Report for <i>State Significant Development Application Powerhouse Museum Discovery Centre</i> revision 6 prepared by Northrop, dated 20.02.2021 (c) describe procedures for achieving the noise management levels in EPA's <i>Interim Construction Noise Guideline</i> (DECC, 2009); (d) hours of construction in accordance with Conditions C6 to C9; (e) outline regular community liaison with sensitive receivers around the site (f) outline how noise and vibration impacts would be monitored during construction (g) describe the measures to be implemented to manage high noise generating works, in close proximity to sensitive receivers; (h) include a complaints management system that would be implemented for the duration of the construction; and (i) include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the management measures
B29	<p>The Construction Noise and Vibration Management Sub-Plan (CNVMSP) must address, but not be limited to, the</p>

	<p>following:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified and experienced noise expert; (b) incorporate recommendations of the Acoustic Report for <i>State Significant Development Application Powerhouse Museum Discovery Centre</i> revision 6 prepared by Northrop, dated 20.02.2021 (c) describe procedures for achieving the noise management levels in EPA’s <i>Interim Construction Noise Guideline</i> (DECC, 2009); (d) hours of construction in accordance with Conditions C6 to C9; (e) outline regular community liaison with sensitive receivers around the site (f) outline how noise and vibration impacts would be monitored during construction (g) describe the measures to be implemented to manage high noise generating works, in close proximity to sensitive receivers; (h) include a complaints management system that would be implemented for the duration of the construction; and (i) include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the management measures.
B30	<p>The Construction Soil and Water Management Plan (CSWMSP) must address, but not be limited to the following:</p> <ul style="list-style-type: none"> a. Be prepared by a suitably qualified expert; b. Describe all erosion and sediment controls to be implemented during construction as a minimum, in accordance with the publication <i>Managing Urban Stormwater: Soils & Constructions</i> (4th edition, Landcom 2004) commonly referred to as the ‘Blue Book’. c. Provide a plan of how all construction works will be managed in wet weather events (i.e. storage of equipment, stabilisation of the Site); and d. Detail all off-site flows from the site.
B31	<p>Prior to the commencement construction, a Waste Management Plan (WMP), prepared in accordance with Appendix A of Council’s DCP, must be submitted to the Planning Certifier, Council and Certifier. The WMP must:</p> <ul style="list-style-type: none"> a. Detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations; b. Identify an appropriate area for the storage of garbage bins and recycling containers for all waste and recyclable material generated by the works c. Demonstrate compliance with relevant legislation, particularly regarding the removal of asbestos and hazardous waste, the method of containment and control of emission of fibres to the air d. Require that all waste generated during the project is assessed, classified and managed in accordance with the EPA’s “Waste Classification Guidelines Part 1: Classifying Waste”.

Table 1 - Construction Sub-Plans

4. Roles and Responsibilities

All project personnel including subcontractors have responsibilities in ensuring that the strategic plan of soil and water management is to be implemented during all construction works. The list are as follows:

ROLE	RESPONSIBILITIES
<i>Project Manager</i>	<ul style="list-style-type: none"> • Ensure appropriate resources are implemented and maintain soil and water management key objectives <ul style="list-style-type: none"> • Adhering to the soil and water management plan • Carrying out mitigation measures to ensure and promote soil and water controls are properly maintained
<i>Site Foreman</i>	<ul style="list-style-type: none"> • Carry out reports and inspections • Liaising with the Project Manager of all mitigation measures are taken in accordance with the soil and water management plan
<i>Project/Site Engineers</i>	<ul style="list-style-type: none"> • Ensure all appropriate measures are implemented and maintained on site
<i>All Construction Workers</i>	<ul style="list-style-type: none"> • Notifying site foreman of any soil and water management issues that appear

Table 2 - Roles and Responsibilities of All Personnel

4.1 Emergency Contacts

The emergency contacts for Castle Hill Powerhouse MDC – Early Works project include the following:

- Nicholas Simmons – 0433 183 253
- Marc Jamieson – 02 9620 6100
- Rhys Jones – 02 9620 6100
- Nhat Nguyen – 02 9620 6100
- Emergency Services - 000
 - Ambulance – 000
 - Hospital
 - Lakeview Private Hospital
17-19 Solent Cct, Castle Hill NSW 2154
02 8624 500
 - Fire
 - Fire and Rescue NSW Kellyville Fire Station
Windsor Rd & Poole Rd, Kellyville NSW 2155
02 9629 3222
 - Police
 - Castle Hill Police Station
Castle St & Pennant St, Castle Hill NSW 2153
02 9680 5399

- Hazardous Materials
 - These are located with the appropriate Simmons Civil storage area or storage cage located on site. All Material Safety Data sheets should be accompanied with this.
- Steps to minimise damage
 - If an environmental emergency has occurred, the site manager/relevant site personnel is to isolate the area and contact the relevant emergency personnel
 - The director is to be informed of the situation, along with the principal contractor.
- Authorities
 - Council
 - The Hills Shire Council
3 Columbia Court
02 9843 0555
 - NSW Environmental Protection Authority – 131 555
- Services:
 - Water –
 - Sydney Water – 13 20 90
 - Gas –
 - Jemena Gas North – 1300 880 906
 - Communications
 - Telstra – 1800 653 935
 - Optus/Uecomm – 1800 505 777
 - Electricity
 - Endeavour Energy – 02 9853 4161

5. Implementation

The potential works during construction of the project which include, earthworks, demolition, stockpiling of materials, are likely to deviate our soil and water management controls planned. The activities associated with the generation of these include:

- Removal of vegetation
- Earthworks
- Demolition of existing areas
- Transport of materials
- Stockpiling
- Plant and vehicle movements on site

This section describes the measures that will be implemented by the Contractors to minimise soil and water impacts produced from the construction activities of this project. All measures must be implemented, and any activities must be identified in accordance with the CEMP and CSWMP. Soil and water controls must be monitored to ensure that these impacts generated because of the early works activities do not create any contaminations to the soil and water within the community and the TAFE. Monitoring these levels will consist of:

- A logbook of complaints and incidents will be maintained.
- An extensive plan to control and manage soil and water must be processed and reported;
and
- New upcoming issues must be documented and registered.
- All mitigation measures to be implemented to manage soil and water

5.1 Soil Erosion and Sediment Control Plan

A soil erosion and sediment control plan has been developed for our construction area (refer to “*For Construction Drawing: Civil Set J-WD-C-20.01*”) to prevent any contaminations to happen on site. The controls will adhere to the plan and be updated and reviewed frequently. Each control will be managed and installed prior to the beginning of the early works construction. The controls implemented, and will include, as a minimum:

- Use of silt fences, drains and sediment traps as relevant throughout construction works
- Earthworks to be kept at a minimum near waterways and drainage lines
- Weather must be considered when planning day-to-day construction works
- Install and maintain soil erosion sediment control fence to downstream onto the side of the job site
- Install and maintain a wire mesh and gravel sediment filter to existing kerb inlet pits in accordance with the ‘Blue Book’
- Other impending soil and water contaminates should be reported to the site supervisor and recorded to implement safe and proper mitigation measures for effective performance.

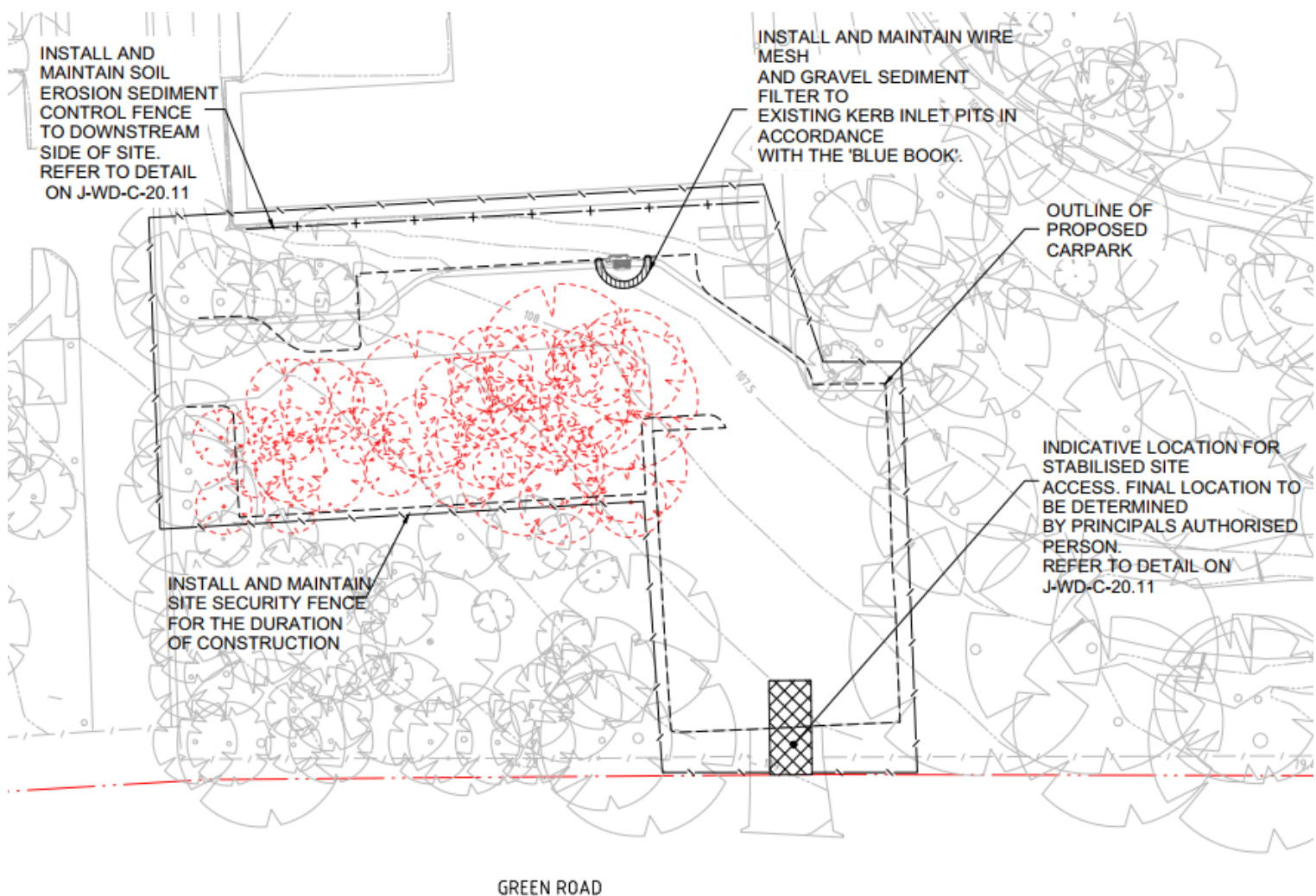
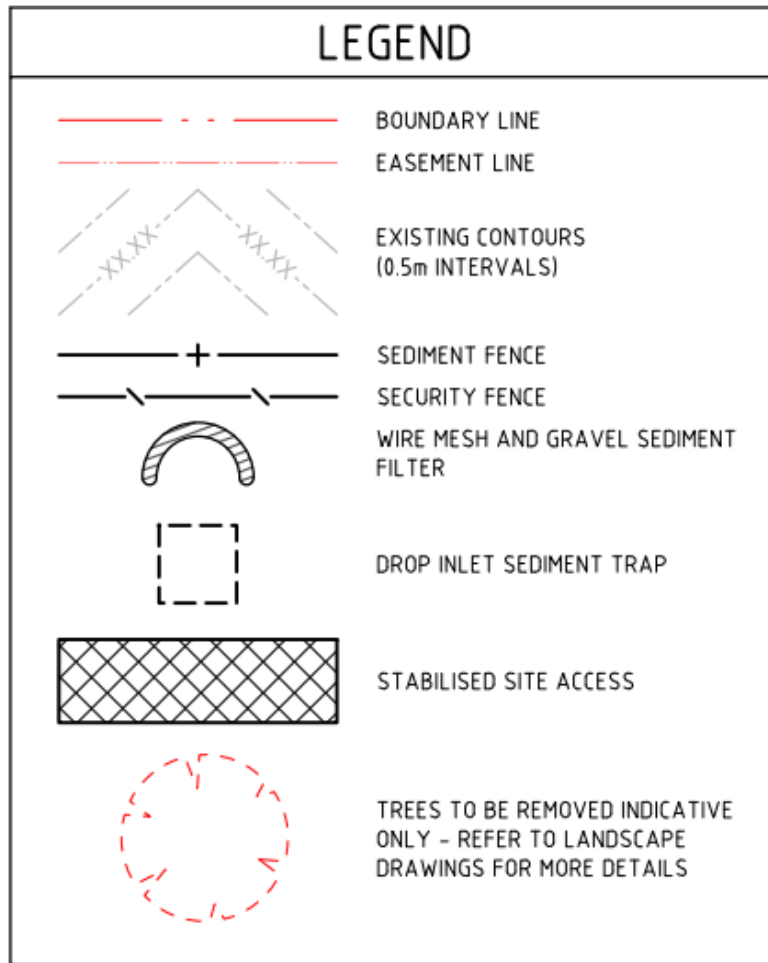


Figure 1 - Sediment and Erosion Control Plan (J-WD-C-20.01)



GENERAL NOTES:

1. REFER SPECIFICATIONS NOTES FOR SEDIMENT AND SOIL EROSION CONTROL GENERAL REQUIREMENTS.
2. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL / RELEVANT AUTHORITY SPECIFICATIONS AND DETAILS.
3. ALL SEDIMENT AND SOIL EROSION CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE 'BLUE BOOK'. CONTRACTOR TO ENSURE THESE MEASURES ARE IN PLACE AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION WORKS.
4. CONTRACTOR TO PROVIDE 'WIRE MESH AND GRAVEL SEDIMENT FILTER' TO ALL PAVED / ROAD AREAS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'.
5. CONTRACTOR TO PROVIDE 'GEOTEXTILE INLET FILTER TRAPS' TO ALL STORMWATER DRAINAGE INLETS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'

Figure 2 Sediment and Erosion Control Legend (J-WD-C-20.01)

5.2 Wet Weather Conditions

A plan must be implemented to control how all construction works will be managed. Using daily weather updates from the Bureau of Meteorology provides information to construction personnel with purpose of implementing productive operations in case of wet weather conditions. The table below indicates the measures taken if weather conditions change:

DESCRIPTION	ACTION
Storage of Equipment	Sufficient storage capacity is available in the event of wet weather conditions which will include: <ul style="list-style-type: none"> - Controls are correctly in place and maintained - Sheds and containers will be placed in existing handstand pavements
Stabilisation of the site	Rumble bar cattle grid is to be installed as the indicative stabilised site accessway for all construction workers driving into site. This ensures that soil will not attach onto truck wheels and end up on public roads.

Table 3 – Wet Weather Condition Measures

5.3 Water Quality

Water quality and rainfall must be monitored during the early works of the construction to ensure water quality in receiving waterways are not contaminated. The measures listed below ensures all waterways shall be retained in their natural states:

- Construction shall be programmed during dry conditions when wetlands and waterways are dry
- Plant equipment are not to be cleaned, refuelled, or serviced within 20m of stormwater drains/swales/waterways
- Soil or debris that enters waterways shall be removed immediately for any further contamination
- Appropriate erosion controls must be established, inspected, and maintained

5.4 Protection of Flora and Fauna

A scheme for the protection of flora and fauna plan must be identified and implemented in accordance with the CEMP and the Flora and Fauna Management Plan provided by WSP. The requirements that comply to the protection of flora and fauna include:

- Site vegetation adjacent to construction area shall not be impacted by construction works.
- Boundaries are to be fenced off and flora clearly marked prior to the construction works.
- A qualified arborist shall be engaged to undertake tree protection/removal plans (see Tree Protection Plan).
- Native fauna to be handled or harmed and must be protected from being trapped.

5.5 Potential Impacts

The potential impacts in relation to the CSWMP are listed in the table below:

ASPECT	POTENTIAL IMPACT
Erosion	<ul style="list-style-type: none"> • Sediment degrading the surrounding environment • Sediment to be washed into stormwater systems causing pollution to community waters
Contaminated water entering watercourse	<ul style="list-style-type: none"> • Water quality and ecosystem function significantly decreases <ul style="list-style-type: none"> • Pollution to waters
Hazardous chemical leakage	<ul style="list-style-type: none"> • Contamination of watercourse causing pollution • Contamination of soil and environment

5.6 Training, Monitoring, and Reporting

Construction personnel will receive training on the requirements to following the CSWMP on the project. Construction personnel are also responsible to monitor and report any other issues that may appear outside of the control perimeters of the CSWMP. This is to ensure an active soil and water management plan, which will minimise potential impacts to the local community.

ACTIVITY	ASPECT	RESOURCE	RESPONSIBILITY	ACTION REQUIRED
Visual check-ups	Sediment Control Water Quality Controls	Supervisor Report Log	All construction personnel	Daily monitoring of control plans
Wet Weather Conditions	All soil and water management plans affected on job site	Supervisor Report Log	Supervisor and all construction workers	Supervisor and all construction workers to withhold all construction works

Table 4 – Soil and Water Management Monitoring Register

All erosion and sediment controls are to be implemented during construction as a minimum, in accordance with the publication “Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004), commonly referred to as the “Blue Book”.

5.7 Complaint Handling Procedure

Any complaints from occupants, stakeholders, or authorities in relation to noise and vibration impacts from construction activities shall be recorded and investigated as soon as possible, addressed, and controlled through a coherent management system. This is to be implemented throughout the duration of our construction. All complaints will be investigated, mitigation measures implemented, and resolutions found and documented. A response to the complaint will be made and all actions will be taken to resolve any issues caused by construction activities. A draft complaint register will be provided below as a guide.

DATE	TIME	CONTACT DETAILS	INCIDENT DESCRIPTION	ACTION TAKEN	FOLLOW-UP ACTION (IF REQUIRED)
		Name: _____ Contact Number: _____			

Table 5 - Draft Complaint Register

6. Conclusion

In conclusion, this CSWMP will be achieved by the ongoing evaluation of the management performance in order to target our key objectives of minimising soil and water management impacts onto the local community.