6. ENVIRONMENTAL MANAGEMENT

This section describes the environmental management system for the site during both the construction and operational phases.

6.1 INTRODUCTION

REMONDIS has adopted an Integrated Management System as its principal method of delivering company policy. This encompasses a Quality Assurance System and Occupational Health and Safety System, along with other supporting management policies that cover Environment, Human Resource and Operations Management streams.

The Business Management Systems principle is "Working for a Clean and Healthy Environment" focussing on:

- Customers, through listening, consulting and communicating;
- Maintaining quality system certification to ISO 9001:2000; and
- Maintaining service standards, regulatory obligations, management responsibility and increased efficiencies in service provision.

The Occupational Health and Safety System aim to:

- Provide safety equipment and safe systems of work;
- Ensure compliance with legislative requirements and current industry standards;
- Provide information, training, instruction and supervision to all employees and contractors to ensure their health and safety;
- Provide support and assistance for all employees;
- Provide a consultative framework for all employees in the provision of a safe work place; and
- Provide for best practice and continuous improvement in health and safety at all work sites.

6.2 REMONDIS ENVIRONMENTAL MANAGEMENT SYSTEM

REMONDIS will implement an Environmental Management System specific to the Camellia site. The company has recently achieved certification under AS/NZS ISO 14001:2004 standard for the Port Macquarie Organic Resource Recovery Facility. The system ensures the organisation's structure, responsibilities, practices, procedures, processes and resources for environmental management are clearly defined and monitored so as to ensure compliance with legislative requirements, the International Standard and with the organisation's policies, objectives and targets.

Compliance to the EPL and safe operation of the facility at Camellia would be supported and embedded into the overall REMONDIS Environmental Management System. The EMS at Camellia would comprise the company's Environmental Policy (refer Appendix G) as well as Standard Operational Procedures (SOP's) specifically developed to ensure the safe operation of the RIRP and its equipment.

Based on the company's environmental management policies, the findings of the EA, Conditions of Approval, EPL conditions and other approvals REMONDIS will prepare and implement:

- A Construction Environmental Management Plan; and
- An Operational Environmental Management Plan.

6.3 CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

All construction activities undertaken on the site would be undertaken in accordance with a Construction Environmental Management Plan. The plan would incorporate the requirements of Conditions of Approval and the EPL. The plan would address management of activities undertaken during the course of construction including:

- Installation of site services;
- Construction of the platform; and
- Construction of the RIRP.

Erosion and Sediment Control Plans have been prepared for the site during the proposed excavation works and the construction phase (refer Figures 6.1 and 6.2).

All works associated with the installation of site services would be undertaken in accordance with the Site Work Plan prepared by Billbergia (refer Appendix D). The Site Work Plan includes measures to manage and control:

- Excavation below the capping layer;
- Handling and disposal of contaminated soils; and
- Soil and water management.

The objective is to handle any contaminated soil safely, minimise soil erosion, contain sediment within the site and to minimise the impact of construction below the capping layer. The Site Work Plan has been prepared to address the requirements of the:

- Site Management Plan (SMP) – Eastern Portion Former James Hardie Site Grand Avenue Camellia (dated 17 Marchn2004); and
- NSW Department of Housing (2004) Guideline *Managing Urban Stormwater - Soils & Construction* (also known as the "Blue Book") and other applicable regulation.

Prior to construction of the platform voids below the site cap will be treated in accordance with the requirements of a Work Method Statement to be prepared in accordance with the above objectives. In addition the Grouting Contractor will be required to comply with relevant OEH Goals.

During construction of the platform and the facility specific measures will be in place to address dust, noise, surface water drainage; visual amenity, waste disposal and traffic.

The Environmental Goals of the Construction EMP will include:

- Compliance with Conditions of Approval and the EPL;

A1

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

1. THE SITE SUPERINTENDENT WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED.
2. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
   a. LOCAL AUTHORITY REQUIREMENTS
   b. EPA REQUIREMENTS
   c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. THE WATER IN THE SEDIMENT BASIN(S) SHALL BE LOWERED PERIODICALLY TO MAINTAIN THE MINIMUM STORAGE VOLUME REQUIRED FOR FINE SOILS
5. AT ALL TIMES A WATER CART(S) SHALL BE MAINTAINED ON SITE TO:
   (A) WATER THE AREAS OF HYDROMULCH
   (B) CONTROL DUST
   WATERING OF MULCH, DUST OR VEGETATION MUST BE KEPT TO THE MINIMUM REQUIRED TO ACHIEVE SPECIFIED OUTCOMES. IN NO CASE SHALL AREAS BE OVER WATERED TO SATURATION OR TO THE POINT WHERE WATER PONDS ON THE SURFACE.
6. STORMWATER IN THE SETTLING ZONE SHALL BE DRAINED OR PUMPED OUT WITHIN 7 DAYS (NO LATER THAN 14 DAYS AS SITE CONDITIONS ALLOW) FOLLOWING RAINFALL EVENT IF THE NOMINATED WATER QUALITY TARGETS CAN BE MET. THE LOWER LEVEL OF THE SETTLING ZONE SHALL BE IDENTIFIED WITH A PEG THAT SHOWS CLEARLY THE LEVEL WHICH DESIGN CAPACITY IS AVAILABLE.
7. ON THE SUPERINTENDENT'S INSTRUCTIONS AIDED FLOCCULATION SHOULD BE EMPLOYED WHERE EXTENDED SETTLING IS LIKELY TO FAIL TO MEET QUALITY STANDARDS WITHIN 5 DAYS.
8. STORED SEDIMENT SHALL NOT ENCROACH INTO SETTLING ZONE. SEDIMENT REMOVED FROM SEDIMENT BASINS SHALL BE DISPOSED IN PLACES THAT WILL NOT RESULT IN A FUTURE EROSION OR POLLUTION HAZARD.
9. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
10. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

LAND DISTURBANCE

11. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
    (A) INSTALL A WIND FENCE ALONG THE BOUNDARIES
    (B) INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES REFER DETAIL.
    (C) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
    (D) INSTALL SEDIMENT BASIN AS SHOWN ON PLAN
    (E) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
    (F) UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

12. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
13. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

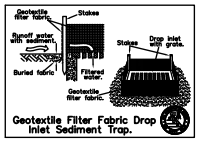
14. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
15. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
16. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
17. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

OTHER MATTERS

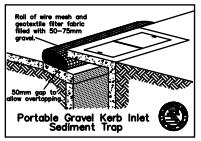
18. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
19. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
    (A) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
    (B) ENSURING THAT NOTHING IS NAILED TO THEM
    (C) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS.

LEGEND

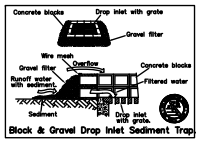
- Sewermain
- Sewer manhole
- Watermain
- Water hydrant
- Water stop valve
- Telstra line
- Telstra Pit/Manhole
- Gasmains
- Electricity power pole
- Electricity overhead cables
- Electricity underground cables
- Bench mark
- Top of roof gutter (TG)
- Tree (Canopy spread, trunk diameter) (Sp8 ø0.4)
- SEDIMENTATION TRAP
- CATCHDRAIN
- SILT FENCING
- STRAW BALE BARRIER
- 150ø uPVC PIPE
- TEMPORARY CONSTRUCTION ACCESS



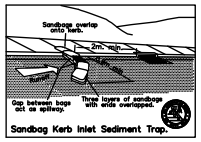
Geotextile Filter Fabric Drop Inlet Sediment Trap.



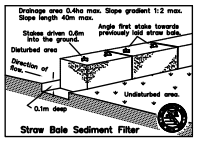
Portable Gravel Kerb Inlet Sediment Trap



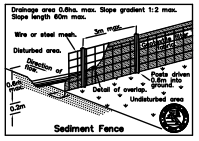
Block & Gravel Drop Inlet Sediment Trap.



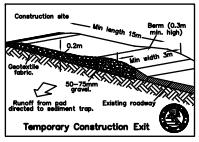
Sandbag Kerb Inlet Sediment Trap.



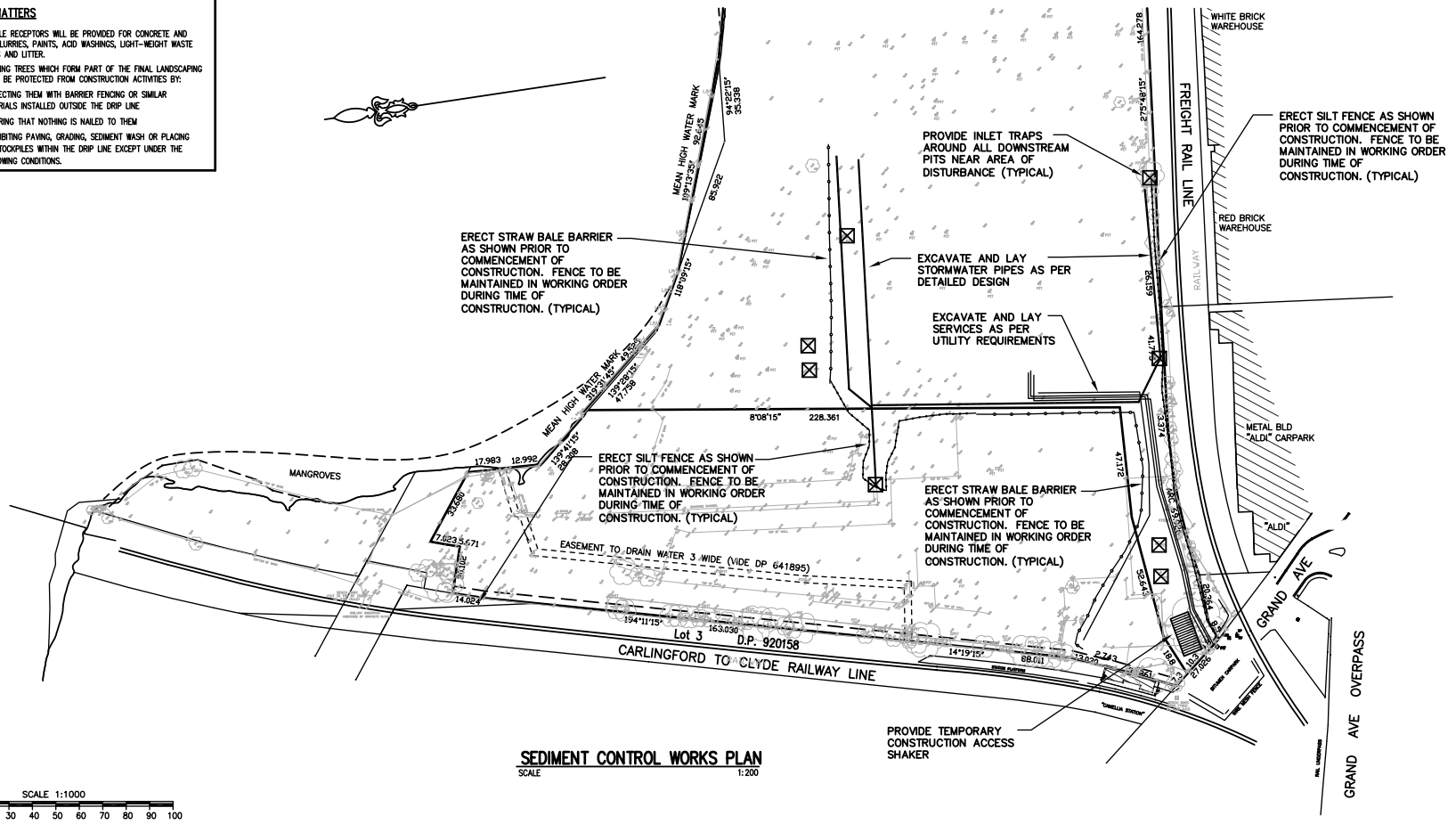
Straw Bale Sediment Filter



Sediment Fence



Temporary Construction Exit



SEDIMENT CONTROL WORKS PLAN

SCALE 1:200

SCALE 1:1000

0 10 20 30 40 50 60 70 80 90 100

Figure 6.1 Erosion and Sediment Control Plan – Excavation

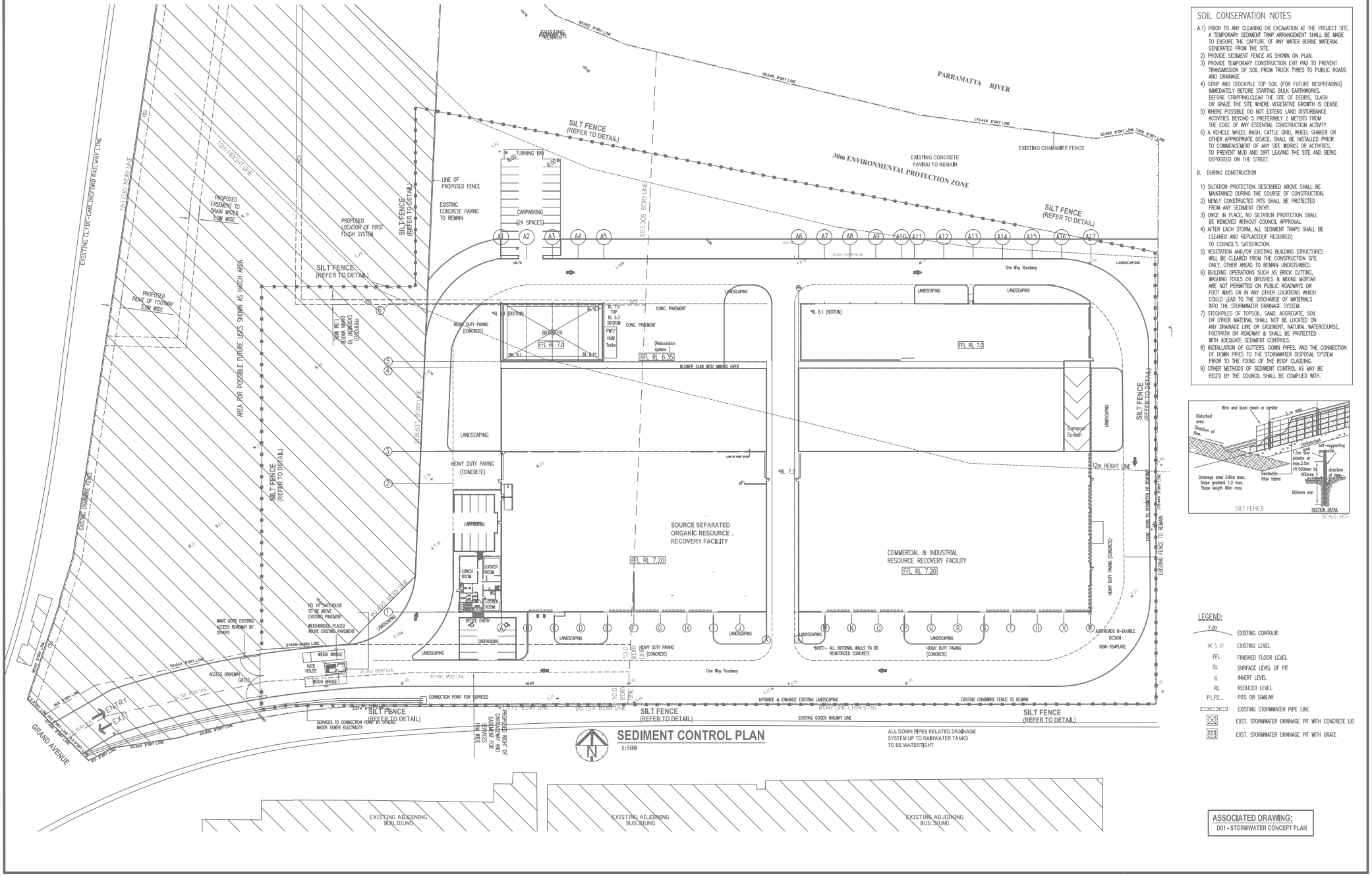


Figure 6.2 **Erosion and Sediment Control Plan – Construction**

Source : ALGORY ZAPPIA & ASSOCIATES 2010

- Avoidance of generation of dust nuisance to the local community;
- Management of odour;
- Avoidance of noise nuisance to the local community;
- Avoidance of surface water pollution;
- Management of waste water;
- Management of groundwater;
- Avoidance of disturbance to heritage sites;
- Minimisation of disruption to the local community associated with traffic movements;
- Amelioration of visual impacts of the facility by commencing landscaping as soon as possible; and
- Minimisation of waste generation and correct disposal of material.

The Construction Manager will be responsible for ensuring the EMP is implemented and that any incidents are addressed and mitigated immediately. Regular inspections and monitoring of activities will be undertaken to ensure compliance with all requirements.

Stakeholders including users of Camellia railway station and adjoining businesses will be advised of activities being undertaken during construction to ensure they aware of the nature and extent of activities during construction. The Construction Manager will be identified as the primary point of contact.

6.4 OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

An Operational Environmental Management Plan (OEMP) will be prepared for the site. It will:

- Outline legislative and management requirements;
- Identify key environmental risks;
- Outline procedures for managing and mitigating risks;
- Identify roles and responsibilities;
- Outline monitoring, audit and reporting requirements;
- Provide a contingency plan for handling emergency events;
- Outline procedures for handling complaints; and
- Provide a summary of environmental commitments.

The OEMP would be updated periodically in light of ongoing monitoring results, site audits, EPL requirements and Conditions of Approval. The OEMP would incorporate the requirements of the REMONDIS Environmental Management System.

Environmental aspects/issues addressed by the OEMP will include:

- Air quality;
- Noise;
- Water;
- Flooding;
- Subsidence Management;
- Visual amenity;
- Waste;
- Traffic and access;
- Flora and fauna;
- Cultural heritage;
- Environment Protection Zone;
- Pest control;
- Litter management
- Energy and resource use; and
- Site security and fire management.

6.5 COMMUNITY CONSULTATION AND COMPLAINT MANAGEMENT

REMONDIS has initiated a consultation programme with the local community with a study group having been established. It is proposed that this group would be the basis for a Community Liaison Committee which would meet on a regular basis to review environmental performance of the RIRP.

Any complaints received would be responded to quickly and efficiently. The EPL for the facility would require REMONDIS to keep a record of all complaints made in relation to pollution arising from any activity to which the Licence applies. The EPL would specify the details to be provided in the record and a complaint handling procedures. A 24 hour telephone complaints line would be operating for the purpose of receiving any complaints from members of the public and that number would be notified to the community. Complaints received would be recorded.

REMONDIS will keep a legible record of all complaints in relation to the operation of the RIRP. The record will include details of the following:

- The date and time of the complaint;
- The method by which the complaint was made;

- Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- The nature of the complaint;
- If no action was taken by REMONDIS the reasons why no action was taken; and
- A record of the complaint will be kept for at least four years.

The Site Manager would organise an immediate investigation into the cause of the complaint and any corrective actions required to mitigate its effect. If necessary, the Site Manager would initiate further corrective action, such as introducing changes in operational procedures, work instructions or modification to equipment etc which may be required to reduce the possibility of further incidents.

6.6 ENVIRONMENTAL INCIDENTS

An Emergency Response Procedure would be developed for the operations. The ERP would describe the general policy and approach to be adopted when dealing with an emergency or incident at the site.

Response to fire would be in accordance with the Fire Safety Plans in the Emergency Procedures. Response to other emergencies would be detailed in an Emergency Plan. Emergency procedures would be located throughout the facility.

Incidents are to be responded to in accordance with the instructions of the relevant SOP.

All environmental incidents would be recorded on an Environmental Incident Report form.

6.7 ENVIRONMENTAL MONITORING

The Site Manager would be responsible for ensuring any monitoring is undertaken in accordance with the EPL and Conditions of Approval. Implementation of the OEMP would be the basis for compliance with monitoring requirements which would be reported to OEH and DoPI as required.

6.8 STAFFING AND TRAINING REQUIREMENTS

An environmental training programme would be prepared and implemented for the site to provide all employees and contractors with information about their environmental responsibilities. The programme would focus on:

- Environmental legislation and the concept of due diligence;
- Environmental impacts of activities;
- REMONDIS Environmental Policy;
- Reporting of incidents; and
- Site environmental management.

Training would be by site induction workshops.

6.9 AUDIT AND REVIEW

This OEMP will be audited on a yearly basis for the first few years of operation. Depending on findings, this may later be extended to a two yearly interval.

Where adherence to the requirements in the OEMP are found to be unsatisfactory, action will be taken to investigate the cause, install appropriate controls, make amendments to the OEMP if required, and implement appropriate preventative and corrective strategies.