Construction Management Plan

For

No 5 AVON RD PYMBLE

Prepared by Tamar (Australia) Enterprises Pty Limited 2010

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1. INTRODUCTION

This Construction Methodology Plan (CMP) has been prepared to address the impact of the demolition/excavation and construction works associated with the proposed development of No 5 Avon Road Pymble and the surrounding environment and community. The CMP will outline procedures that will be implemented to manage construction activities ensuring that unacceptably high levels of environmental or community disturbance do not occur during the works.

1.2 OBJECTIVES

The objectives of the CMP are to:

- Provide a methodology within which the Demolition, excavation and construction activities may be completed in a manner which will not cause environmental or community disturbances above agreed levels;
- Provide a framework for procedures to be adopted when undertaking the construction activities;
- Provide a framework for procedures to be adopted when monitoring the construction performance against agreed criteria;
- Implement statutory requirements with respect to environmental issues associated with the construction;

1.3 REFERENCES

Local Council regulations;

- Urban Erosion and Sediment Control 1992 (CALM);
- Relevant Australian Standards;

Environment Protection Legislation;

- Clean Waters Act 1970;
- Clean Air Act 1961;
- Waste Minimisation Act 1995 (NSW);

1.4 CONSULTATION

The planning and implementation of the construction works will be completed in consultation with the following statutory authorities where applicable:

- Local Municipal Council – Ku-ring-gai Council;
- Environmental Protection Authority (EPA);
- Sydney Water;
- Energy Australia;
- Roads and Traffic Authority;
- Workcover Authority;
- RailCorp

1.5 CONSTRUCTION HOURS

The intended hours of work for construction are;

- Monday to Friday *7.00am to 5.00pm*
- Saturday *8am* to *1.00pm*
- Sundays and public holidays - no work

These hours are inline with the NSW EPA, Environment Noise Control Manual. Noise management methodology, during these working hours, is addressed in section 9 of this CMP.

1.6 SCOPE OF CONSTRUCTION ACTIVITIES

The development of No 5 Avon Road Pymble will include:

Demolition of one existing dwelling;
Construction of a new multi storey apartment building with basement car parking;
Civil works on public roads;
New sewer and stormwater drainage works;
New landscaping works;

1.7 CONNECTION OF SERVICES

The requirements for any 'road openings' to connect services etc has been addressed by our Consulting Engineers. They have advised that the following infrastructure requirements will be:

Sewer Drainage - The existing connections to SWC sewer system shall be terminated in accordance with Sydney Water regulations. The existing sewerage supply system has sufficient capacity to accommodate the proposed development and will utilise the existing connection to the existing Sydney Water Corporation (SWC) sewer main, this will be confirmed by a Section 73 Notice of Requirements. No road openings will be required for any connections to the Sydney Water sewer main.

Stormwater Drainage - The existing stormwater drainage system servicing the site will be terminated at the boundary of the property. All stormwater shall be conveyed by gravity from site directly to Council's nearest storm water pit in Arilla Road. No road openings are envisaged for any new or upgrading of connections to the stormwater main.

Domestic Water & Fire Services - Domestic water and fire services for the re-development will require a 150mm VC water line feed located in Arilla Road. Road works and Footpath works shall be required and the relevant consents shall be applied for during the course of the construction works. A suitable Work Methodology will be implemented to minimise impact on the surrounding infrastructure.

Electrical

The electrical supply to the re-development will utilise the existing connection to the Energy Australia network during the construction. Road openings will be required for the new or upgrading of connections to the Energy Australia network. The relevant consents shall be applied for during the course of the construction works. A suitable Work Methodology will be implemented to minimise impact on the surrounding infrastructure.

1.8 CRANE REQUIREMENTS

When required a mobile crane will be deployed to transport materials. Application shall be made to Council for approval of standing plant if crane / plant are used outside of the boundary. It is anticipated that all of the crane usage will take place within the site boundary at the front of the proposed dwellings.

The following guidelines will apply when operating a mobile crane.

Accredited traffic controllers will be used to manage all traffic whilst the mobile crane is in operation. The appropriate Council and Police permits shall accompany the crane whilst it is in operation. When the need for traffic controllers arises pedestrian flow will be maintained at all times when the mobile crane is being set-up, dismantled or accessing the site. This will be achieved by providing temporary controlled lanes as required. Temporary traffic lanes and pedestrian walkways will be established with the use of temporary traffic management systems as required statutory authority requirements and managed by accredited traffic controllers.

2. PEDESTRIAN AND TRAFFIC METHODOLOGY DURING CONSTRUCTION WORKS

2.1 TRAFFIC MANAGEMENT

Traffic management during the construction phase of the re-development is detailed below and also in the attached Traffic Route Plan. It includes the following;

- Proposed ingress and egress routes to the site for construction vehicles;
- Proposed work and crane pick up zone location;
- Route for deliveries to site;
- Waste bin delivery access and removal to/from site;
- Traffic control during temporary operations, such as tower crane erection, will be by accredited traffic controllers;
- Workers will be encouraged to use public transport to and from site.

2.2 PEDESTRIAN TRAFFIC

Pedestrian movement during the construction phase will not be affected by the redevelopment. Pedestrian management considerations are detailed below, also in the attached traffic route plan and site layout plan. It includes the following;

- Protection for pedestrians will be as per statutory requirements with perimeter security fencing.
- Traffic controllers for construction vehicles entering and leaving the site;
- Consideration of School activities especially during the times Monday to Friday 8.00am to 9.00am and Monday to Friday 3.00pm to 4.00pm.
- Provision of night lighting, protective barriers, overhead protective structures if applicable and traffic barriers if applicable;
- Diversion of pedestrians away from working areas except where continuity of access is required (protection to be provided to these areas) whilst maintaining existing pedestrian pathways where practical;

2.3 CONSULTATION

Consultation shall be undertaken with the following statutory authorities;

- Local Council;
- Roads and Traffic Authority (RTA);
- NSW Police

3. DEMOLITION

The following is a summary of the construction methodologies for the project;

1) Stability of Adjoining Buildings

Due to the nature of the existing site conditions, there will be little impact upon the stability of adjoining neighbours. Safety of buildings in near proximity will be further considered by the engineers in design stage.

- Shoring will be designed by structural engineers for the project if required.

- Existing buildings on adjacent sites are to be monitored by periodical inspections.

- A dilapidation survey is to be completed on all surrounding buildings and major structures prior to the commencement of the construction work;

2) Hoardings & Scaffolding

The design, approval and erection of hoardings is not required for the re-development.

The site will be securely and appropriately fenced during all phases of the demolition, excavation and construction works. The fencing shall be covered in dust suppressing shade cloth and will be kept neat at all times to ensure there are no unacceptable impacts on the amenity of adjoining properties.

3) Existing Services

Each existing service .affected by the construction work will be disconnected, capped off, removed, altered or re-directed, as necessary for the completion of the works. Any redirection or capping of any services required should not affect any surrounding property;

I. Erect all approved hoardings/fences;
II. Commence capping off/diversion of existing services;
III. Complete pre-construction analysis;

- o If required establish elevated work platforms and travelling cradies; Prior to the commencement of works, location of all existing services will be ascertained from drawings received from the relevant authorities, investigation carried out on site and by other means appropriate;
- o Complete Hazardous Materials Survey and Remediation Action Plan (RAP)
- o

VI. If applicable remove hazardous materials from the site in accordance with RAP;
VII. Deconstruction of all roof items to commence first, carefully disconnecting roof sheeting, timber framing and plant items.

4) Recycling -For recycling information refer to section 7 -Waste Management.

5) Acoustic Control - For acoustic control Information refer to section 9 -Noise Methodology.

4. EXCAVATION

Excavation is required for the project and will incorporate the following:

Bulk excavation of the approved building footprint to the required basement RL levels and benching the remaining site to the required RL levels.

Detail excavation of the lower basement level pad footings, lift pits, landscaping retaining walls etc...

All excavation will be in compliance with

- EPA guidelines;
- Workcover regulations;
- RTA regulations;
- Ku-ring-gai Council regulations.

Trucks and plant will be maintained within site boundaries whilst demolishing/excavating, and access to and exit from the site will be via the same gate entry to be constructed along Avon Road.

5. REMEDIAL METHODOLOGY

5.1 REMEDIATION OF SITE

Any remediation works that should be required will be carried out on site. The construction certificate application for the re-development shall be accompanied by the appropriate surveys identifying (if any) the required remediation. A Remediation Action Plan (RAP) will be prepared, if required. The RAP will identify the processes by which areas are to be remediated. The RAP will be prepared in accordance with the following;

- All relevant EPG Guidelines and Regulations.
- Environmental Protection Authority;
- All relevant local council regulations – Ku-ring-gai Council;
- All relevant Work Cover regulations.

6. STORM AND WASTE WATER MANAGEMENT PLAN METHODOLOGY DURING CONSTRUCTION

6.1 INTRODUCTION

A storm and waste water management plan will be implemented during the construction of the project. The purposes of these procedures are to ensure that storm and waste water runoff is managed to ensure there is no off-site environmental impact caused by overland stormwater flows and contamination of local waterways.

6.2 SCOPE

Details of procedures to be followed and implemented for the site are set out in Hydraulic/structural design documentation, which will be submitted as part of the construction certificate application.

6.3 REFERENCES

- All relevant local council regulations;
- Development Consent conditions;
- Environmental Protection Legislation;
- Clean Waters Act 1970;

6.4 CONSULTATION

The following organizations and their regulations and guidelines will be consulted in the preparation of the storm and waste water management plan:

- Environmental Protection Authority;
- North Sydney Council;
- NSW Department of Land and Water Conservation;

7. WASTE MANAGEMENT METHODOLOGY DURING CONSTRUCTION

7.1 PURPOSE

To ensure that resources are conserved and waste is processed responsibly by minimizing waste generation and maximizing recycling of materials.

7.2 SCOPE

To address the waste management procedures for the deconstruction and construction activities to be undertaken during the proposed re development of No 5 Avon Road Pymble.

i) Materials Selection & Ordering

- Selection of all materials has been undertaken by architectural designers;
- Materials requirements are to be accurately calculated to minimize waste from over ordering;
- Materials ordering process is to aim at minimisation of materials packaging;
- Material Safety Data Sheets (MSDS) are to accompany all materials delivered to site, where required, to ensure that safe handling and storage procedures are implemented;

ii) Waste Recycling

- Waste generation from construction activities on site will be minimized, reused or recycled where applicable;
- Recyclable materials are to be specified wherever practical;
- Dedicated and secure containers will be provided on site by an approved waste handling company for non-recyclable waste;

iii) Where practical, dedicated and secure recycling containers will be provided on site by an approved waste handling company, manufactures, or specialist recycling organizations for the following materials;

- Steel
- Paper/Cardboard
- Glass
- Concrete/Brick/General Rubbish
- Plasterboard

8. AIR QUALITY MANAGEMENT METHOLOGY DURING CONSTRUCTION

8.1 PURPOSE

To ensure that deconstruction and construction activities do not lead to the generation of unacceptably high levels of dust or other air pollution.

8.2 SCOPE

To establish air quality management systems and procedures to be implemented during construction activities undertaken during the proposed re-development of No 5 Avon Road Pymble.

8.3 MAJOR MEASURES

- All construction plant, equipment and vehicles are to be properly maintained and operated so as to alleviate excessive exhaust emissions;
- Waste loads leaving the site are to be covered at all times;
- All dust-generating construction activities are to cease during high wind conditions unless such operations can be controlled by localized watering or other control means;
- The burning of waste materials and the lighting of fires will be strictly prohibited on the site at all times;
- Continual visual monitoring of the site will be undertaken by site management to ensure that works do not generate unacceptably high levels of dust;
- Wherever practical, materials and processes that are non-toxic will be employed to minimize possible harmful affects to air quality;
- Wherever practical any ozone depleting gases in building services installations will be removed prior to deconstruction works;

9. NOISE MANAGEMENT METHOLOGY DURING CONSTRUCTION

9.1 PURPOSE

To ensure that construction activities do not lead to the generation of unacceptably high levels of noise.

9.2 SCOPE

To establish a noise management procedure to be implemented during construction activities to be undertaken in the proposed re-development of No 5 Avon Road Pymble.

9.3 MAJOR MEASURES

Working Hours: The intended hours of work for construction are;

- Monday to Friday 7.00am to 5.00pm
- Saturday 7.00am to 1.00pm
- Sundays and public holidays -no work
- Machinery for demolition Monday to Friday -7.00am to 5.00pm
- Machinery for excavation Monday to Friday -7.00am to 5.00pm

Standards

The maximum noise levels of all deconstruction and construction plant and equipment is to generally comply with EPA requirements;
Noise levels to comply with Local Council Statutory regulations.

Management

An Acoustic Consultant may be engaged on site to advise and recommend on minimisation of noise generated by the site deconstruction and construction work The maintenance of exhaust silencing attachments on all diesel powered equipment;

- Only silenced compressors and silenced, bagged jackhammers (if required) will be permitted to be used on site.
- Potential for noise generation is an important criterion in the selection of construction plant and equipment on the site;
- On site periodic checks are to be carried out to ensure that noise suppression devices are installed on all required plant and equipment;
- Where practicable, noise-generated plant is to be located away from residential boundaries;

Site Induction

The Site Manager will ensure that all employees and subcontractors are advised of the procedures under the 'Noise. Management Methodology during each Site Specific Safety Induction prior to commencement of work on the site.

The Site Induction will explain;

- Employee's responsibilities as outlined in the 'Noise Management Methodology.
- Highlight the sensitivity of the issue of power tool noise to adjoining residents.
- Explain the restrictions of the usage of any equipment or device on site.
- Notify approved hours of work.
- Ensure that the employee is competent and skilled in the tasks to be performed.
- Fortnightly 'Tool Box' meetings to be held on site to ensure consistent monitoring of on site activities.
- Meetings will identify if the procedures established under this Methodology are being abided and followed by all site personnel.
- A site contact phone number will be issued to surrounding neighbours so they can immediately discuss any concerns they may have regarding noise associated with construction activities on site.

10. EROSION AND SEDIMENT CONTROL

10.1 PURPOSE

To ensure that sediment and erosion during the deconstruction and construction activities are controlled and do not affect surrounding roads, footpaths, and neighbouring properties.

10.2 SCOPE

To establish erosion and sediment control measures to be implemented during construction activities to be undertaken in the proposed re development of No 5 Avon Road Pymble.

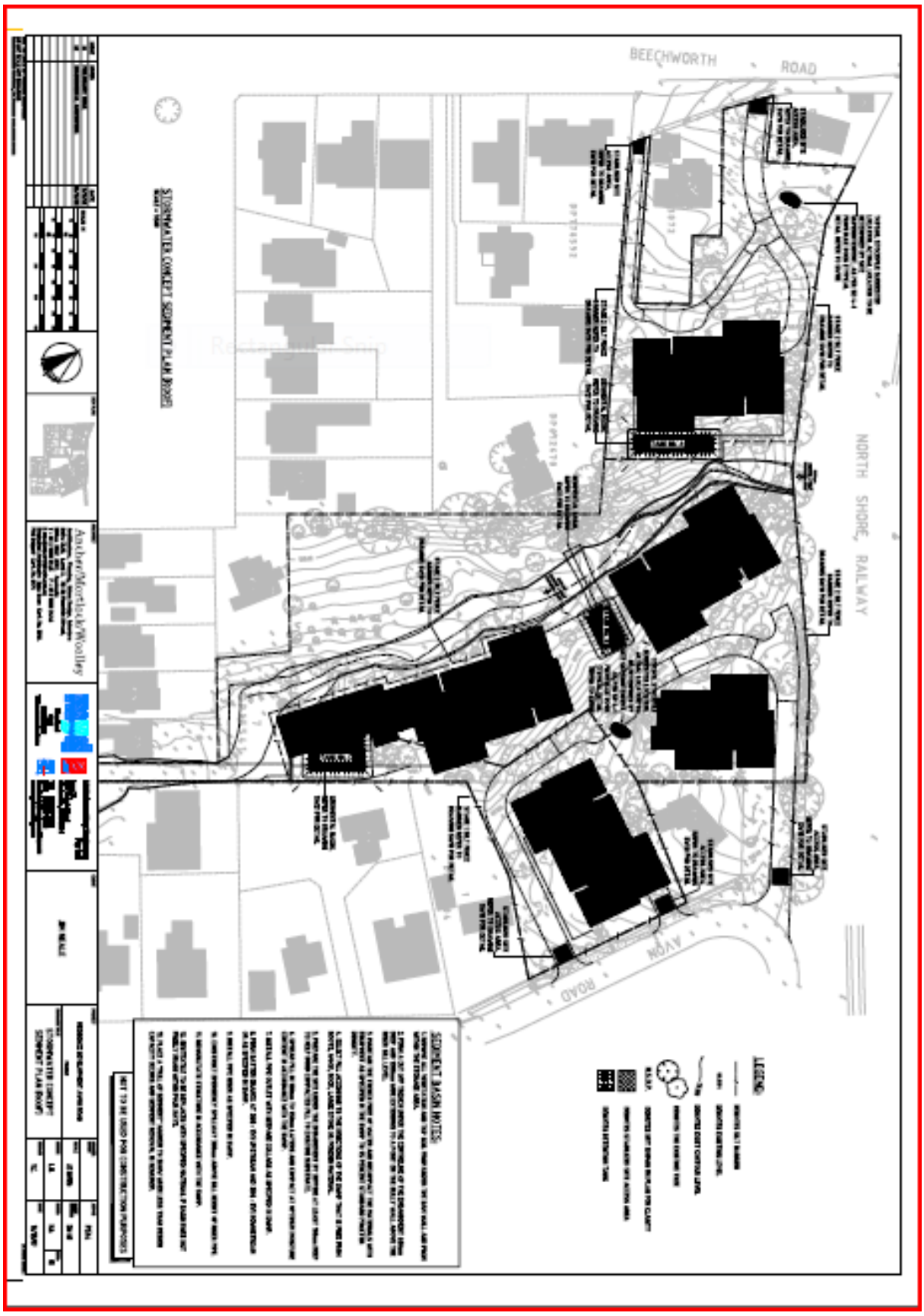
10.3 MAJOR MEASURES

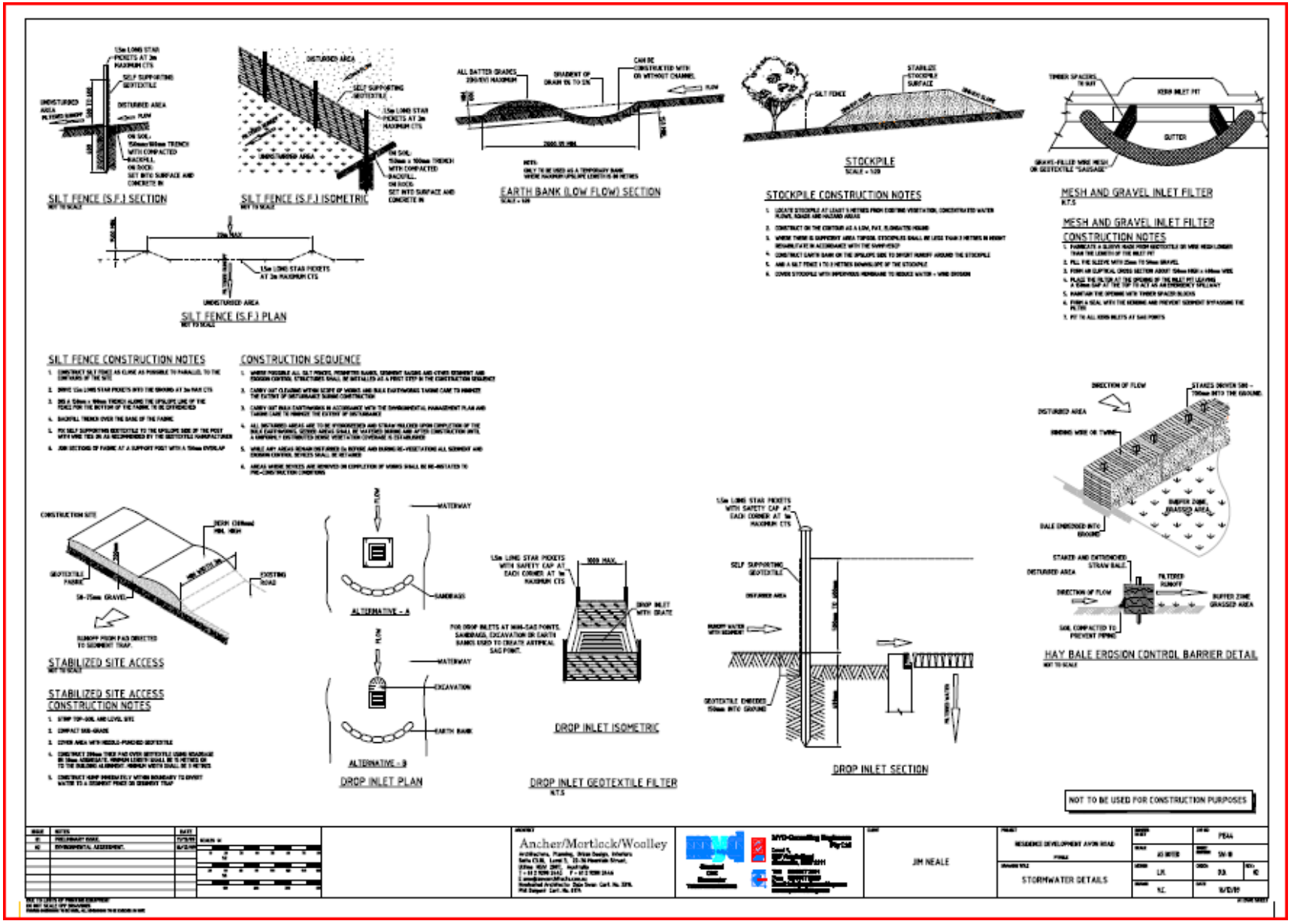
All construction plant, equipment and vehicles are to follow sediment control procedures when entering and leaving site. Prior to construction temporary sediment control devices are to be established and maintained throughout construction at the development in Avon Road Pymble.

Measures to be implemented where appropriate include the following:

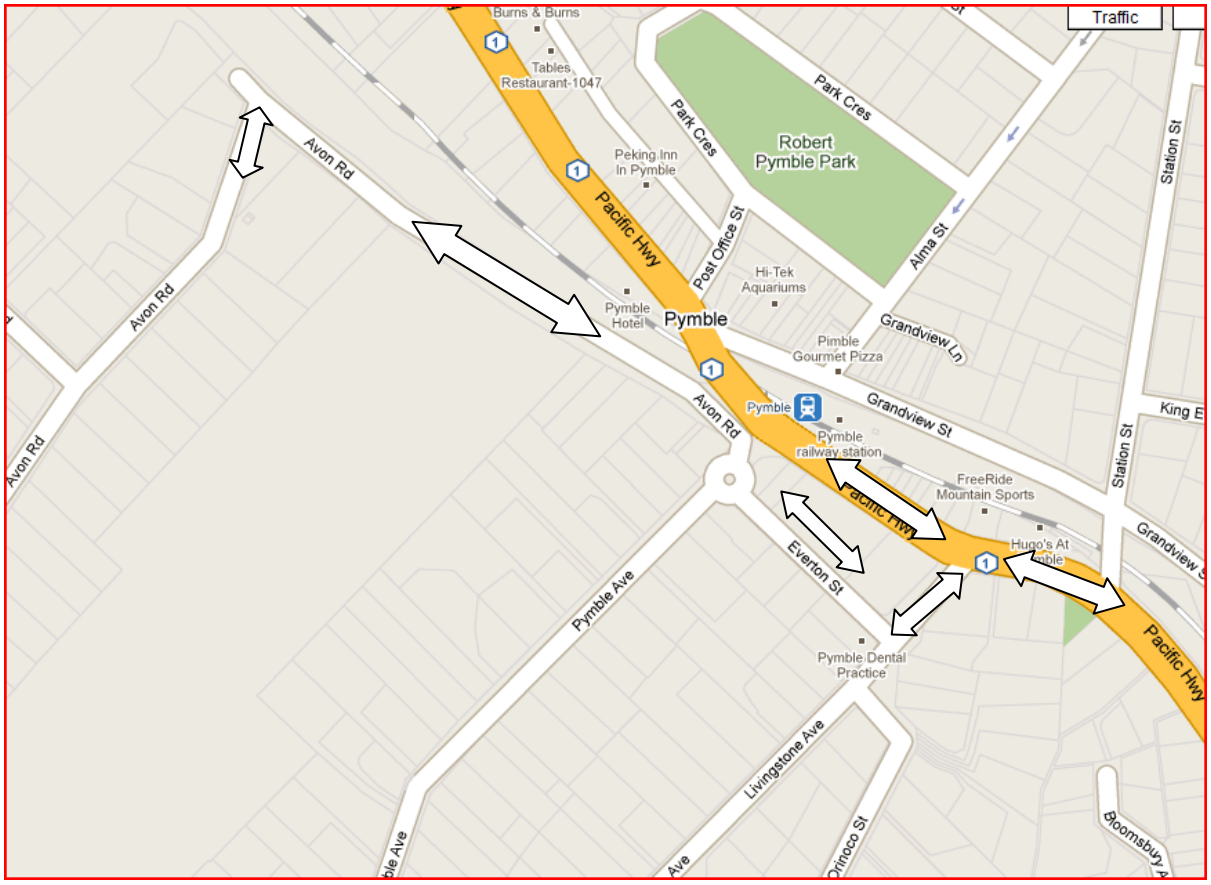
- Temporary Construction Exit (refer to attached detail)
- Sediment Fence (refer to attached detail)
- Sandbag sediment trap (refer to attached detail)
- Geotextile filter fabric drop inlet sediment trap (refer to attached detail)

11. EROSION AND SEDIMENT CONTROL MEASURES

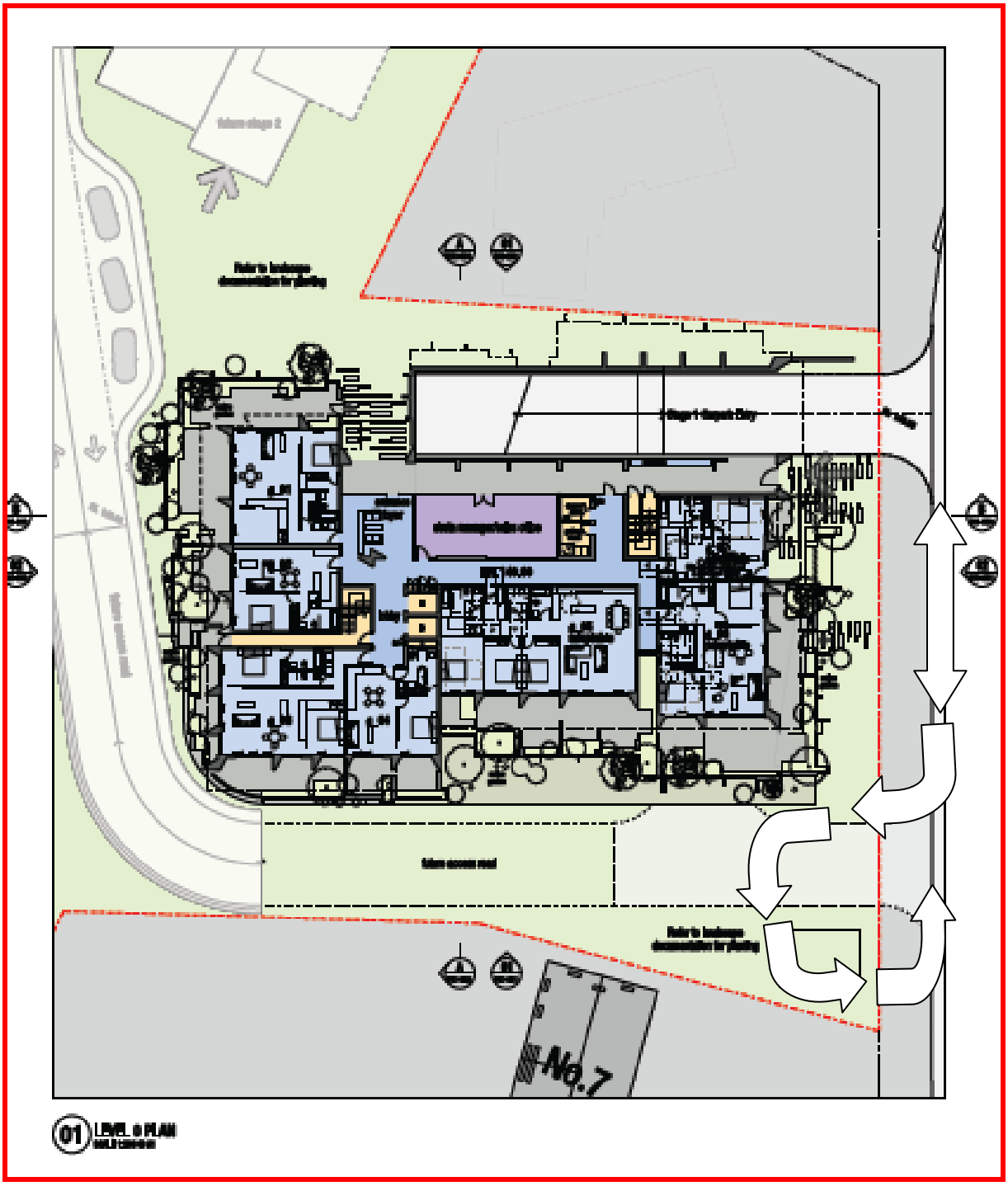



SILT FENCE (S.F.) SECTION
SILT FENCE (S.F.) ISOMETRIC
SILT FENCE (S.F.) PLAN
EARTH BANK (LOW FLOW) SECTION
STOCKPILE
STOCKPILE CONSTRUCTION NOTES
MESH AND GRAVEL INLET FILTER
MESH AND GRAVEL INLET FILTER CONSTRUCTION NOTES
SILT FENCE CONSTRUCTION NOTES
CONSTRUCTION SEQUENCE
STABILIZED SITE ACCESS
STABILIZED SITE ACCESS CONSTRUCTION NOTES
DROP INLET PLAN
DROP INLET ISOMETRIC
DROP INLET GEOTEXTILE FILTER
DROP INLET SECTION
HAY BALE EROSION CONTROL BARRIER DETAIL
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Ancher/Mortlock/Woolley
JIM NEALE
STORMWATER DETAILS

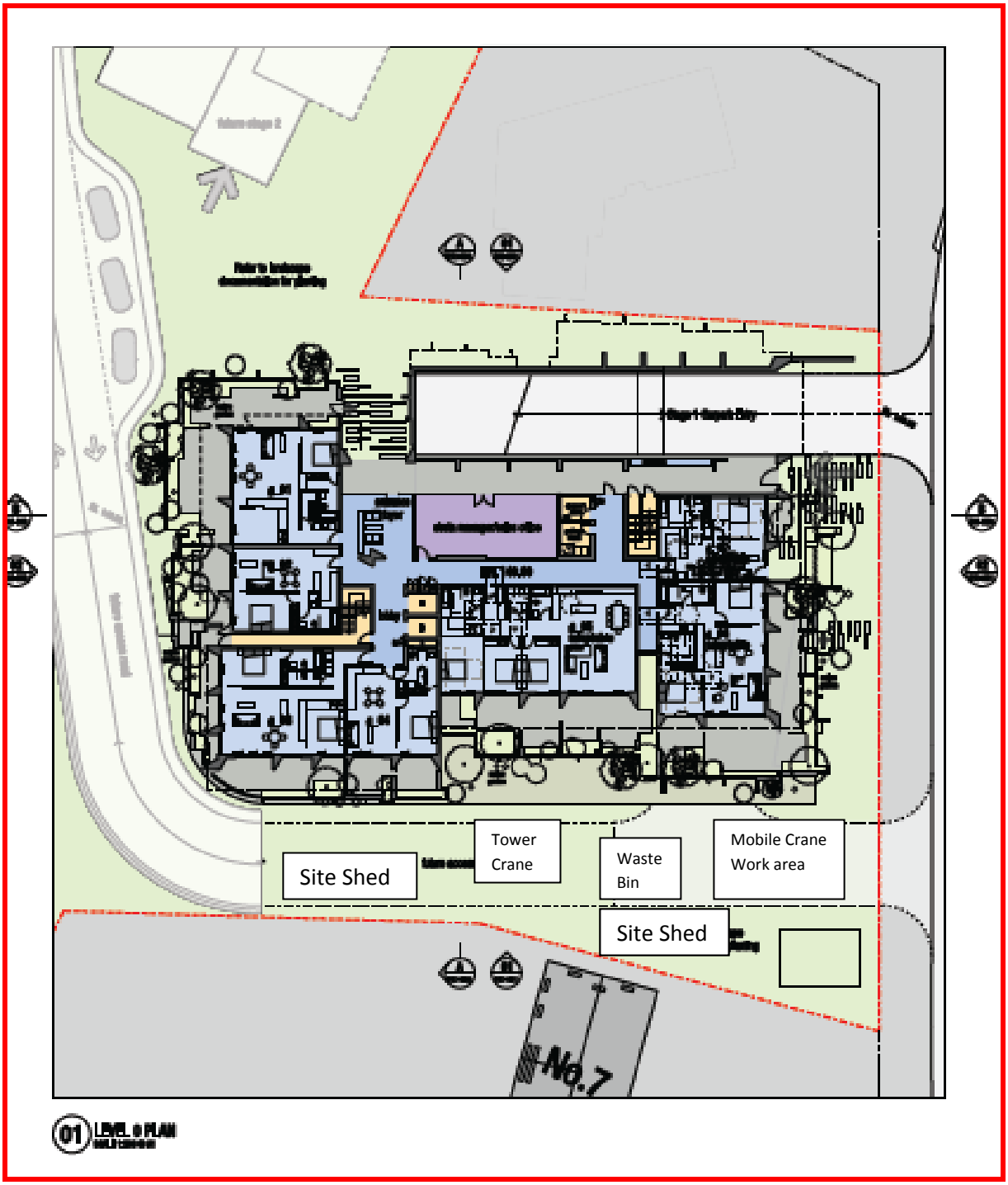
12. PROPOSED VEHICULAR INGRESS AND EGRESS ROUTES



13. TRUCK TURNING AREA



14. SITE PLAN


Tower Crane
Waste Bin
Mobile Crane Work area
Site Shed
Site Shed
No.7