



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN for the

Australian Border Protection Dog Facility,

at 28A McPherson Street, Banksmeadow, NSW

24th October 2016

Version V1

1. INTRODUCTION.....	1
1.1 Objective of the Environmental Management Plan.....	1
1.2 Responsibility for Implementation	1
2. DESCRIPTION OF CONSTRUCTION WORKS	2
2.1 Location.....	2
2.2 Key Activities of the Construction Works.....	4
2.3 Responsibility	4
3. REGULATORY REQUIREMENTS.....	5
4. ASSESSMENT OF ENVIRONMENTAL RISK.....	6
4.1 Potential of Environmental Impact.....	6
5. ENVIRONMENTAL MANAGEMENT PROGRAM	7
5.1 Control Method Specifications.....	7
5.1.1 Diversion Drains / Banks.....	7
5.1.2 Table Drains	7
5.1.3 Sediment Control Barriers.....	7
5.1.4 Velocity Control	7
5.1.5 Stockpiles	8
5.1.6 De-watering of Site	8
5.1.7 Use of Site Machinery and Plant – including noise / vibration / fumes ...	8
5.1.8 Storage of Fuels	9
5.1.9 Shaker Grids	9
5.1.10 Installation of Underground Services.....	10
5.1.11 Waste Management	10
5.1.12 Rubbish Bins	13
5.1.13 Contaminated Land/ Asbestos Management	9
5.1.14 Cultural Heritage	
5.1.15 Salinity Management Plan	11
5.2 Training of Personnel.....	14
5.3 Contingency Plans	15
5.4 Maintenance, Inspection, Complaints, Reporting and Audit Program.....	15
5.5 Supervision.....	15
5.6 Dust Management	15

Appendix A – Traffic Management Plan (comprising Site Layout Plan)

Appendix B – Environmental Aspects & Impacts Register

Appendix C – Environmental Management Plan Inspection Record

Appendix D – Soil & Water Management Plan (from Cosentino Group, 2016)

Appendix E – Complaint Form

1. INTRODUCTION

1.1 Objective of the Environmental Management Plan

The objective of this Construction Environmental Management Plan (CEMP) is to minimise the adverse impact of construction activities on the environment.

This objective will be achieved by:

- Identifying possible environmental risks;
- Setting up systems to reduce the risk and managing; and
- Maintaining the systems throughout the project to ensure correct function of the Control Systems.

1.2 Responsibility for Implementation

Qanstruct (Australia) Pty Limited (Qanstruct) will be responsible to implement the Control Systems and procedures outlined in this CEMP.

All subcontractors will be briefed on the plan and will be required to adhere to the systems and procedures outlined. If a section of works does not comply with this plan, rectification of that area will be made a priority until such time it complies with systems and procedures of this plan.

2. DESCRIPTION OF CONSTRUCTION WORKS

2.1 Location

Qanstruct has been engaged to design and construct a single storey office building with a gross area of 1, 200 square metres, accommodation and facilities for detector dogs (49 day runs and seven kennel blocks) and car parking and internal access ways and landscaping. This facility is to be leased by the Multi- Agency Collocated Accommodation for Detector Dogs (Australian Border Force, Australian Federal Police and Department of Agriculture and Water Resources).

The 'on site' works will include site preparation, bulk earthworks & construction of the facility. During the construction of the facility it will require the use of Excavators, Rollers for bulk earthworks and the use of Cranes, EWP's for Steel and Tilt Panel Erection and the loading of the roof sheets.

Any surface run-off or pumped discharges shall be directed to properly constructed sediment controlled stormwater pits (as per Appendix D) prior to final discharge to stormwater system. Refer to the Soil and Water Management Plan (SWMP) which details the location of existing and proposed drains and is included as **Appendix D**.

We note that whilst there are no natural creeks, streams and rivers nearby that may be affected by the works, if contaminants enter the drainage system on site, there is the potential for it to enter nearby waterways. Therefore, caution will be exercised to ensure that no pollutants enter any nearby watercourse (including via the stormwater system).

The Construction Environmental Management Plan (CEMP) will provide a description of the procedures to be followed during excavation and general site works. Emphasis will be placed on the management and protection of the local environment.

A Traffic Management Plan for General Construction works (comprising the Site Layout Plan) is included as **Appendix A**. This Plan includes the:

- Location of the site compound
- Routes to and from the site for larger vehicles, proposed warning signs and traffic control
- Trucks will be staged within the site to prevent queuing and blocking access to adjacent sites on McPherson Street (truck holding bay)
- Location of warning signs for pedestrians of construction vehicle movement along the McPherson Street footpath

No fixed cranes or hoists will be used on this project and are therefore not included in Appendix A.

Additionally, truck loading zones and waiting zones are to be within the site and will not affect traffic on McPherson Street. Traffic Management within the site will also be handled internally and is therefore not included in Appendix A.

Construction Staging

Bulk Earthworks – 7/10/16 to 8/12/2016 – During these works it is an expectation that there will be plant such as Excavators, Heavy Haulage Trucks, Rollers and Water Truck for dust suppression and compaction. Minimal movement of vehicles from site, mainly water truck.

In ground Services – 2/03/17 to 5/04/2017 – Plumbing /Electrical works will require the use of plant such as Excavators, Wackers /Rollers for compaction and bobcats for clean-up of work area. Delivery of pipes and conduits to site which will be on a needs basis and should not affect traffic movement/flow.

Floor Slabs – 24/03/17 to 6/04/2017 – Works will consist of laying of sand/ rock for preparation of slabs, plant being used Excavator, Tractor for laser levelling, Bobcat and delivery trucks to provide materials (sand, rock, steel reinforcement). Concrete Trucks to provide concrete for pours.

Structural Steel – 1/03/17 to 10/03/2017 – Delivery of steel from fabricators, plant to be in use Cranes, EWPs, Scissor Lift. The bulk of steel should be delivered in the initial days of commencing on site.

Roofing – 16/03/17 to 30/03/2017 – Initially EWPs and Scissor Lifts will be used to roll safety mesh over roof. Then roof sheets will be delivered to site and loaded onto roof by Crane, during the laying of the roof there will be little if any use of plant. This will change once the wall cladding works begin.

Precast Panels – 9/03/17 to 15/03/2017 – Delivery of precast panels on heavy haulage trucks and erected with use of Cranes and EWPs.

2.2 Key Activities of the Construction Works

Following is a list of key activities undertaken in the construction of the proposed development.

- Detailed earthworks (bulk by others not engaged by Qanstruct)
- Footings
- Underground services (stormwater, fire service, sewer, water service)
- Precast concrete panels
- Structural steel
- Roof and wall cladding
- Reinforced concrete ground and external paving
- Mechanical, electrical and hydraulic services
- Finishes and fixtures etc to the office and warehouse
- Landscaping

2.3 Responsibility

All of the above works will be carried out under the supervision and instruction of Qanstruct. The works will be staged and generally in the order of the key activities as outlined above.

Qanstruct will be responsible for the implementation and maintenance of all on site Control Systems.

3. REGULATORY REQUIREMENTS

Following is a list of the documents that we have used to prepare this Environmental Management Plan:

- NSW Government (1997) *Protection of the Environment Operations Act*
- NSW Government (2011) *Protection of the Environment Legislation Amendment Act*
- NSW Government (2009) *Protection of the Environment Operations (General) Regulation*
- NSW Government (2009) *Interim Construction Noise Guideline*
- NSW Asbestos Regulations and Guidelines
- Development Consent (SSD 7692)

We have not listed all the applicable Legislation and Regulations due to the extensive number of documents relating to this area.

4. ASSESSMENT OF ENVIRONMENTAL RISK

4.1 Potential of Environmental Impact

The following is a list of activities that have the potential to have impact upon the environment.

- Design & construction; including selection, delivery, installation & disposal of building materials & components
- Detailed earthworks
- Installation of underground services including:
 - Stormwater drainage
 - Electrical
 - Hydraulic services (inc. sewerage, fire services, plumbing)
- De-watering of the worksite
- Water runoff from disturbed ground
- Noise and vibration / fumes from machinery
- Creation of dust
- Storage of fuel
- Mud and dirt on made road
- Rubbish / litter and other waste
- Chemical storage

An Environmental Aspects & Impacts Register has been completed to assess the potential environmental impacts from site activities and determine the necessary controls and persons responsible for implementing the controls. This document is included as **Appendix B**.

An Environmental Management Plan Inspection Record will be used on site to inspect adherence to this Environmental Management Plan and is included as **Appendix C**.

5. ENVIRONMENTAL MANAGEMENT PROGRAM

5.1 Control Method Specifications

5.1.1 Diversion Drains / Banks

Earth diversion banks will be used to intercept and divert water away from the sites to stable locations.

Earth diversion banks are detailed in the Soil & Water Management Plan included as **Appendix D**.

5.1.2 Table Drains

Table drains will be used to collect water at the base of batters and divert the water away from the sites to a stable location.

The drain will be formed in a spoon drain style and at a grade. The outfall will be out into adjacent grassland areas.

5.1.3 Sediment Control Barriers

Sediment Control Barriers will be constructed using straw bales or geofabric silt fencing staked to the ground as defined in the Soil & Water Management Plan included as **Appendix D**. They will be in the bottom and up the sides of drains forming a dam. Water will slowly filter through the straw bale which will remove the suspended contaminants. GEO fabric will be used over the face of the bales to help the filtration. Construction of the GEO fabric faced straw bales is to ensure that any sediment laden water is unable to pass. Sufficient quantity of spare GEO fabric will be kept on site for availability if/when required.

Straw bales and silt fencing will be monitored and replaced as required (e.g. after heavy rains or when they are very dirty).

5.1.4 Velocity Control

Velocity of water will be controlled in 2 ways:

- i) In drains a straw bale or large rock will be placed in the base of the drain to slow the water to prevent erosion of the drain
- ii) On batters, furrows will be placed across the batter to slow the water velocity or prevent erosion of the batter

5.1.5 Stockpiles

The quantity of spoil to be stockpiled will be minimal as all contractors will be required to remove all spoil from the site.

The stockpiles will be located on a flat section of land.

Each stockpiles will be constructed with a slope no greater than 2:1 (horizontal: vertical).

As the stockpiles are temporary, they will be 'dressed' as smooth as possible to minimise dust and erosion. The stockpiles will be watered should the potential for dusting occurs.

If required, dust will be minimised by using a water truck to spray stockpile/s.

If required, a sediment control barrier will be constructed around the base and cover stockpiles if required.

5.1.6 De-watering of Site

Water will be removed from the work area by a mobile pump which will be kept as close to the surface of pool as possible. Care will be taken to avoid pumping from the bottom of pools and constant supervision will be provided during pumping operations to ensure this does not happen.

The water will be pumped to the detention basins which will allow sediments to settle. Discharge points will be regularly moved to avoid areas becoming waterlogged. Sediment contaminated water will not be pumped from the site.

5.1.7 Use of Site Machinery and Plant – including noise / vibration / fumes

As we are working in an industrial zone, our typical work hours are Monday – Friday 7-6pm, Saturdays 8- 1pm.

All plant and machinery that enters the site will adhere to local Occupational Health and Safety legislative requirements; including provision of a current logbook outlining service intervals, hours of use and maintenance carried out.

The construction activities will be limited to those permitted working times as per the Local Council Development Approval. Qanstruct will ensure that all subcontractors develop and provide Safe Work Method Statements (SWMS) for tasks that involve noise related activity. These SWMS will be monitored by Qanstruct for their effectiveness. Monitoring could be in the form of site walks or internal audits. If at any time the control measures are deemed inadequate, work will cease and SWMS reviewed.

Site signage is to be clearly displayed with relevant site contacts numbers for community enquires. If Qanstruct receive 3 or more valid complaints an independent consultant will be engaged to conduct sound monitoring at

points along the site boundary and results reported to management for review.

Qanstruct's OH&S Management Plan further details requirements for site plant and machinery, including the requirements prior to the start of works for evidence of operator's license/ competency, records of recent maintenance, current plant risk assessment and completion of a daily pre-start log book.

Any plant and machinery that has not been serviced and maintained will not be operated on site.

If any plant requires certification, then such documentation will be made available upon request. And if any plant or machinery is the subject of a Workplace Health & Safety notice, orders or any other form of restriction, then it will not be used on site.

If any machine is to be found to be producing excessive noise / vibration / fumes, it will be serviced immediately to resolve the problem. Regular site checks for noise emitting from site will be monitored and recorded on site walks. All petrol and diesel engines shall ensure that exhaust emissions comply with the Clean Air Regulations of the Protection of the Environment Operations Act 1997.

All trucks hauling bulk materials to have their loads covered, public roads will be cleaned as required to assist with dust being created by passing traffic, this will be done either manually or by street sweeper. Internal roads and excavations will be kept damp to minimise any windblown and traffic generated dust. Performance measures for these controls would be visual inspections, complaints from operations in vicinity and from statutory authorities and internal audits. Site speed limit of 10 Kph to be observed.

5.1.8 Storage of Fuels

Fuels storage will be kept to a minimum.

Minor quantities of fuel that are kept on site will be stored in containers (bunded) specifically designed for the storage of fuel (i.e. fuel tanks attached to plant and equipment).

All large machines will be re-fuelled by mini-tankers on site. Re-fuelling with small quantities of fuel kept in the site container to run generators and pumps, will also take place with care to avoid spillage. If fuel is split, the soil will be excavated and removed to a tip licensed to take contaminated spoil. Re - fuelling will take place in a designated area (on crushed rock) with spill kit located nearby.

5.1.9 Shaker Grids

A shaker grid will be installed at the entry / exit points of the site prior to the commencement of earthworks. Excessive amounts of mud will first be

removed from vehicles then all vehicles will exit the site over a shaker grid. The shaker grids will be elevated to allow any dirt / mud to drop through. If the void fills up, they will be cleaned out.

In the unlikely event that the road becomes 'dirty', a street sweeper will be engaged to promptly clean the road in order to minimise potential impact from sediment pollution to nearby watercourses.

As a secondary control, entry and exit points to the site will be minimised and sediment control barriers will be established at existing stormwater pits at entry and exit points.

An assessment of the site activities will continually be undertaken and remedial actions promptly implemented to prevent any offsite carriage of soil.

5.1.10 Installation of Underground Services

During construction, and wherever possible, pipe to be laid and trenches backfilled all in the same day (i.e. no trench will be left open overnight or for any prolonged period).

Once constructed, sewer system to be sealed until connected.

Stormwater system has been designed to discharge to existing stormwater detention basin in the southern corner of the site.

5.1.11 Waste Management

The key objectives of this waste management plan is to identify waste generated and recycle as much waste material as possible.

Consultation with subcontractors to identify areas where waste can be reduced and or re use materials,

Meet all legal requirements, local, state and federal waste minimisation legislation and environmental standards.

Waste disposal, in in a manner that causes the least harm to the natural environment.

Re - use, Recycling and Disposal

- Only project wastes that cannot be cost effectively reused or recycled will be taken to landfill or appropriate disposal facilities.
- All solid waste timber, brick, concrete rock that cannot be reused or recycled will be taken to an appropriate landfill site and disposed of in an approved manner.
- All metals will be recycled where economical viable.
- Waste oil be recycled or disposed of in an appropriate manner.

- All asbestos, hazardous and/ or intractable wastes are to be disposed of in accordance with Workcover Authority and EPA requirements.
- Completion of refuelling activities in designated areas with appropriate spill containment measures to avoid overspill to sensitive areas.
- Provision of portable, self - contained toilet and washroom facilities at the site ensuring these units are regularly emptied and serviced by a suitably licensed contractor.
- dispose of general waste via council approved system; and
- Investigate any opportunities for materials exportation and reuse with other local construction operations. This will have two benefits: minimising energy through reduction of material reprocessing, encouraging material reuse.

Training and Awareness

- All Qanstruct staff and subcontractors will undergo induction training regarding waste management for the site. Induction training will cover as a minimum;
 - legal obligations
 - emergency response procedures on site
 - waste storage locations and separation of waste
 - implication of poor waste management practices
 - correct use of General Purpose Spill Kit
 - details of responsibility and reporting (including identification of personnel responsible for waste management and individual responsibilities)

Monitoring and Reporting

- Daily visual inspections of waste storage areas will be undertaken by site personnel and checklists recorded for reporting to site manager on a weekly basis or as required. These inspection will be used to identify and rectify any resource and waste management issue.
- Waste audits are to be carried out by the EMR to gauge the effectiveness and efficiency of waste segregation procedures and recycling/reuse initiatives. Where audits show that the above procedures are not carried out effectively, additional staff training will be undertaken.
- All environmental incidents are to be dealt with promptly to minimise potential impacts. An incident register must be maintained on site at all times and include details of the 24 hour EPA Pollution line. Likely incidents to occur during the construction phase of the project may involve fuel or chemical spills, seepage of mishandling of hazardous waste, or unlicensed discharge of pollutants to environment.

- For the construction phase Qanstruct shall implement a waste management system through use of separate bins for recyclable materials, and non - recyclable materials as practicable.

Dedicated skips required for construction stages;

- Timber
- Plasterboard/Gyprock
- Concrete
- Bricks
- Steel/Scrap Metal
- General Waste
- Other waste (i.e. for the collection of materials that may be re –used on future projects)

Separate bins will be provided for the safe disposal of hazardous waste types (light bulbs, batteries, etc) where applicable.

Additional recycling bins will be provided at site compounds and nearby common areas for plastic and glass bottles, soft drink cans, tin cans etc to ensure these items don't end up at landfill. Specialised bins for cigarette butt should also be provided outside lunchrooms and nearby areas at work compounds/work sites.

All site generated building waste collected in the skip bins will leave the site and be deposited in the approved recycling centre, transfer station or landfill site.

Skips are to be checked on a daily basis by the site manager to ensure that they are not overflowing. If skips are reaching capacity, removal and replacement must be organised within the next 24 hours. All skips leaving site will be covered with a tarpaulin to prevent any spillage of wastes from skips whilst in transit to transfer station/landfill etc. All waste collection activities will take place during construction hours (7am – 6pm Mon to Fri, 8am to 1pm Sat)

During design of the structure, consideration will be given to the selection of building materials in order to minimise waste. During construction of the structure, consideration will be given to the delivery, installation and disposal methods of building materials to encourage recovery and/or recycling. A licensed waste disposal contractor will be engaged to provide waste collection and recycling. No wastes will be buried or incinerated on site. If possible recycled materials will be used on site. Where possible spoil will be used for backfilling purposes. Considerations will include:

- iii) Pallets for materials to be reused throughout the project
- iv) Manufacturing of glass, joinery and/or other materials offsite to eliminate/ minimise the production of cut-offs
- v) Collection of waste in designated separated bins, all bins leaving site will be covered to prevent windblown emissions and spillage.

- vi) Provision of waste disposal reports detailing the quantities of wastes generated by the works and the percentage of the recycling rate by volume and weight shall be kept on site
- vii) Site cleanliness is to be maintained and the site is to be left in a clean & tidy condition each day

5.1.12 Rubbish Bins

A bin with a secured lid will be placed in each site office, lunch room, change room and toilet block. These bins will be emptied every day or as necessary throughout the day.

As a minimum, one large site bin will be provided for all trades to place construction rubbish in. This bin will not be allowed to overflow or be overfilled and when full will be changed over promptly.

As part of the induction process, all workers will be advised they are required to clean up their own rubbish as they progress.

5.1.13 Contaminated Land/ Asbestos Management

In the event that any contaminated or hazardous materials are unexpectedly uncovered during demolition or excavation works, the Site Manager is to stop work immediately and contact the relevant hazardous waste contractor prior to further works being undertaken in the area.

Contaminated material stockpiled on site will be minimised as far as possible and should be stored on HD polythene liner, in a bunded location which is protected from inclement weather. Sediment fences should also be installed around the base of stockpiles and the stockpiles should be covered. Where excavated material requires validations, samples should be taken for NATA laboratory testing as per the requirements of the contamination assessment prior to restoration works, backfilling exercises and disposal. All clearance certificates to be provided prior to works recommencing.

Any trucks carrying contaminated materials should be securely and completely covered immediately after loading the material, to prevent windblown emissions and spillage.

5.1.14 Cultural Heritage

The site is located in an area of cultural heritage sensitivity. If any Aboriginal archaeological objects are exposed during construction works, Qanstruct shall immediately notify the National Parks and Wildlife Service (NPWS) and obtain any necessary approvals to continue the work. Qanstruct shall comply with any request made by the NPWS to cease work for the purposes of archaeological recording.

5.1.15 Salinity Management

It is possible for new developments be affected by salinity to varying degrees depending on its location. The result is salt accumulation in soils which can damage building foundations, corrosion of in ground services and kill low salt tolerant plants. The aim is to implement controls to minimise the effect of salinity on the environment during construction.

During construction some of the measures implemented are;

- Establish Vegetation Cover as soon as possible
- Grade surface levels to prevent ponding of surface water
- Establish set vehicular access points and roads
- Implement sediment controls
- Roads, footpaths and hardstand surfaces should be graded to prevent ponding where this water can result in infiltration into the underlying soils
- Connections between hardstand surfaces should be designed and constructed to restrict infiltration into underlying soils.
- Services located below roads, footpaths and hardstand surfaces should be installed, where possible, at the time of construction.
- Surface water runoff should be directed around all exposed surfaces, temporary stockpiles and landscaped areas.
- Avoid the use of infiltration pits to disperse surface water.
- Saline or contaminated materials are not to be imported to site. Appropriate testing should be carried out on material that is being considered for importation.

If any of these management measures are not implemented or are unsuccessful, the following contingency action could be implemented;

- Investigate the cause of the noncompliance and take preventative action to prevent reoccurrences.
- Management measures reviewed for practicality or relevance
- Subcontractors re inducted into CEMP.

5.2 Training of Personnel

All personnel on site will to be inducted. As part of this Site Induction, reference will be made to this document and an explanation of the environmental issues will be provided. Once inducted, personnel are required to sign a form stating they understand all issues discussed and will comply with all requirements.

Further to the above, all Qanstruct staff on site will be briefed on the importance of being diligent in ensuring this CEMP is followed.

5.3 Contingency Plans

A contingency plan will be established before commencement of the project, and implemented promptly in the unlikely occurrence of a failure of any of the control measures. Remedial action will be undertaken immediately to make the existing control measures operate until the contingency plan is able to be implemented fully.

The contingency plan will be devised through consultation with Qanstruct staff and the appropriate authority or occupational hygienist.

5.4 Maintenance, Inspection, Complaints, Reporting and Audit Program

The Environmental Management Plan Inspection Record is completed on a weekly basis or following storms and prolonged rain, this is a regular check of Stormwater, Stockpiles, Waste Control, Waterways, Batters, Diversion Drains/ Table Drains, Sediment Control Barriers, Silt Fences and Traps, Sewer and Site Movement. The report shows any remedial action required or to be taken, it also requires the date it was closed out. If the items were not closed out as required it could then escalate to an Incident/ Hazard Report which would be reported up to the OHS&E Manager.

As required, the Site Manager will liaise with the community in relation to any OHS&E issues associated with the site. Where complaints are received from the community in relation to OHS&E and the activities on the site, the Site Manager will record the details on the Complaint Form (attached) and notify the OHS&E Manager of the complaint and required corrective actions. It is Qanstruct's objective to promptly receive and respond to any complaint received from any party in regard to the activities being carried out on site or by personnel conducting works on site.

Site signage will be displayed providing the site managers contact details for the purpose of a point of contact for any concerns/ issues with the construction works. Once a complaint is received it is to be recorded on the Qanstruct complaint form. A senior representative of the contractor is informed of the complaint, notify the clients project manager of the complaint. Discuss the nature and what caused the complaint with the site team and provide /develop measure to prevent reoccurrence. Make contact with the party who made the complaint as to what the outcomes and communicate the preventative measures that will be adopted. If it is not possible to implement the preventative action required, then temporary controls will be put in place to until the issue can be satisfactorily resolved. The issues and outcomes will be communicated to site via toolbox meetings and site notice boards. A complaint should be responded to within 7 days and depending on the nature of the complaint a resolution and the actioned response achieved.

OHS&E Internal Audits will be conducted every 6-8 weeks by the OHS&E Manager

A copy of all reports will be kept on site and available for review at any time by the responsible authorities upon request.

5.5 Supervision

Josh Horan, Project Manager – 0458 397 547

Responsibilities:

- ❑ Ensure all works are undertaken in accordance with the CEMP
- ❑ Engage suitability qualified & competent subcontractors to site works so that impact to the environment is prevented/ minimised

Matthew Gordon, Site Manager – 0421 000 517

Responsibilities:

- ❑ Induct all supervisory staff into the requirements of the CEMP and ensure activities are undertaken in a manner consistent with the CEMP
- ❑ Train personnel in relation to the CEMP and allocate personnel that have adequate competency to carry out the works
- ❑ Delegate environmental responsibilities to contractor personnel, while overseeing compliance
- ❑ Document daily work practices, excavation volumes and material/ waste tracking records, inspection plans and test plans. Keep regular photographic record of the works
- ❑ Document corrective actions and control measures undertaken for the duration of the job
- ❑ Report incidents to client's Environmental Management Representative

Mick Harvey, Head of Safety & Environment – 0417 470 678

Responsibilities:

- ❑ Review and update the CEMP, define and monitor implementation programs
- ❑ Report any information concerning environmental matters to the Director

All Supervisory Staff

Responsibilities:

- ❑ Ensure works are undertaken in accordance with the CEMP
- ❑ To report regularly to all management in regard to the CEMP

5.6 Dust Management

In addition to the controls mentioned in Section 5.1.5 Stockpiles, Qanstruct is aware of the responsibilities to control / minimise dust on site. The generation of dust can be a nuisance to the adjoining properties and create unacceptable working conditions. The measures employed by Qanstruct to address this issue are;

- i) Where practicable limit the areas disturbed to a minimum.
- ii) Use water sprays to moisten dusty surfaces on a systematic basis to maintain minimum moisture content at the potentially dusty surface.
- iii) Wheel wash, truck shaker grids and visual inspection of trucks prior to exiting the construction site onto public roads.

Before construction works commence all equipment used and all site facilities have been designed and operated to control the emission of smoke, dust, and fumes. The measures for this are to spray earthworks, roads and other surfaces with water. Seal temporary haul roads as required which will be in use for prolonged periods.

Daily environmental inspections will be undertaken by the site manager or employee representative of the works and worksite. Some of the key areas for inspection may include but not limited to;

- Visual inspection of airborne dust.
- Inspection of erosion and sediment controls.
- Inspection of stockpiles.
- Inspection of internal roads.
- Inspection of waste storage areas, any rehabilitated areas
- Ensure site signage is clear and appropriate

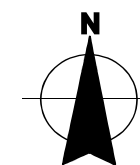
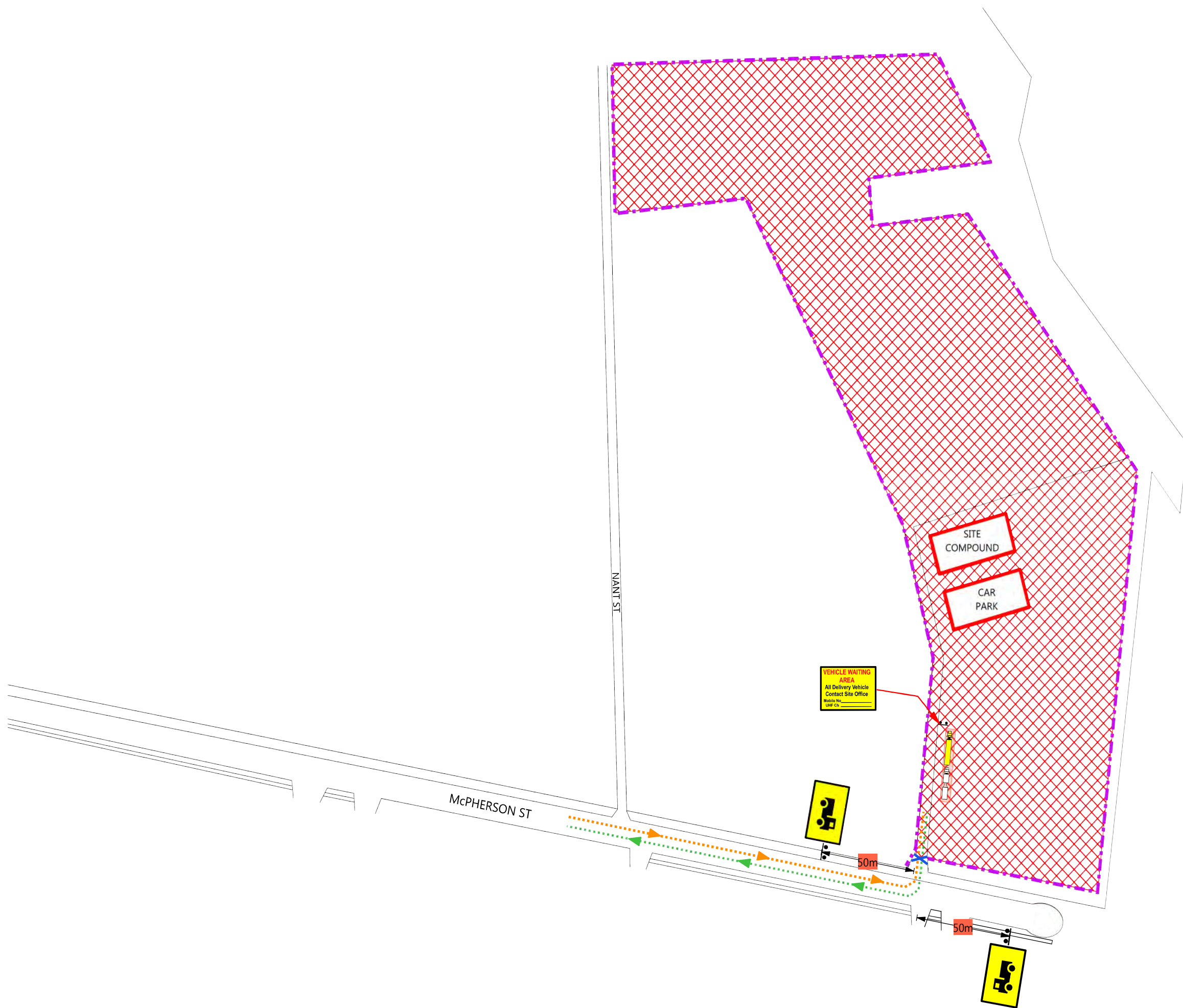
The daily inspection will be recorded on the environmental checklist to include all observations with remedial actions or corrective actions noted. Any actions noted will be reported to the site manager as soon as practicable. These reports will be issued on a weekly basis to the project manager and tabled at fortnightly site meetings for review.

During the Construction phase these are the measures to be implemented;

- Sealing of roads (where possible) and regular watering of roads utilising water carts or a spray system.
- All unsealed trafficable areas should be kept sufficiently damp during working hours to minimise windblown or traffic generated dust emissions. Continued use of water on dirt roads helps the formation of a crust so that dust is not as easily generated.
- Truck loads should always be covered with a lid or tarpaulin.
- Truck movements should be controlled on site and restricted to designated roadways.
- Truck wheel washes or other dust removal procedures should be installed to minimise transport of dust off site.

- No dust, soil or mud should be deposited from any vehicle on public roads.
Where wheel washing
- Facilities and or truck shaker grids are provided at the construction site, all drivers of construction vehicles shall utilise the wheel wash prior to leaving the works area and entering public roads.
- Any dust, soil or mud deposited on public roads by subcontractors construction activities and vehicle movements should be removed immediately and disposed of appropriately.
- If necessary, modifying construction activities during periods of high wind.
- If visible smoke can be seen from any equipment (while working on a construction site) for longer than 10 seconds duration, the equipment will be taken out of service and adequately repaired or tuned so that smoke is no longer visible for periods longer than 10 seconds.

APPENDIX A
TRAFFIC MANAGEMENT PLAN



Legend	
	Work Area
	Gate
	Site access
	Site egress
	Site fence

Persons erecting temporary signage shall have RMS
Apply Traffic Control Plans qualification or equivalent.

NOTES *****

- (1) All Temporary Traffic Management Devices are to be in accordance with the A.S. 1742.3
- (2) ALL sign facings SHALL be of CLASS 1 MATERIAL as specified in the AS/NZS 1906-1
- (3) Employees' are to wear High Visibility Clothing
- (4) All signs & devices SHALL be erected within line of sight of the road users. They SHALL NOT be obscure by vegetation or parked vehicles & SHALL be positioned where they do not become a hazard to pedestrians or vehicles
- (5) All conflicting signage, including Parking Signs within the work site SHALL be covered or removed while traffic operation is in progress
- (6) The contractor responsible for the work site Temporary Traffic Management SHALL comply with the requirements of the A.S. 1742.3 2009

(7) EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES

D	-	-
C	-	-
B	-	-
A	-	-
REV	DESCRIPTION	DATE

Drawn By: **Adam King**
Checked By: **Mark Ritchie**
PWZTMP
Card No: **0026375684**



Territory Traffic Engineering
14/160 Lysaght Street Mitchell ACT 2911
PO Box 545 Mitchell ACT 2911
T: 02 6241 3230 F: 02 6241 0230

Client:



Project:
**28A McPherson Street,
Banksmeadow NSW**
Drawing Title:
Site Establishment

Temporary Traffic Management Plan

Designed to comply with A.S. 1742.3

Project Number:	Stage:	Plan Number:
TTE16-QPL-1922	1	1
Scale: NTS	Compilation Date: 01/06/2016	Rev: -

Location Risk Assessment



Job No: **TTE16-QPL-1922** Location: **28A McPherson Street, Banksmeadow**

Type of Work: **Site Establishment**

Date: **01/06/2016** Completed By: **Mark Ritchie** Signature: *Mark Ritchie*

1	Will existing signs have to be covered?	☐	Yes	☒	No	☐	n/a
2	Will existing road markings have to be removed?	☐	Yes	☒	No	☐	n/a
3	Will there be safe clearances between workers and through traffic?	☒	Yes	☐	No	☐	n/a
4	Will any excavations affect the safety of workers or traffic?	☐	Yes	☐	No	☒	n/a
5	Will the location of intersections etc. within the worksite increase the risk to workers?	☐	Yes	☐	No	☒	n/a
6	Will vehicles enter or exit the worksite from private or commercial driveways?	☒	Yes	☐	No	☐	n/a
7	Will nearby features (schools, shops, railway stations etc.) affect the worksite?	☐	Yes	☐	No	☒	n/a
8	Will there be any restrictions on taper lengths, bollard spacing and delineation?	☐	Yes	☐	No	☒	n/a
9	Will allowances for queuing be required?	☐	Yes	☐	No	☒	n/a
10	Will allowance be required for oversize loads and / or load limits?	☒	Yes	☐	No	☐	n/a
11	Will there be adequate sight distance to see signs and traffic controllers?	☒	Yes	☐	No	☐	n/a
12	Will the time of day be significant (i.e. sunrise / sunset) for signs / traffic controllers?	☐	Yes	☒	No	☐	n/a
13	Will any signs or traffic controllers be in the shade?	☐	Yes	☒	No	☐	n/a
14	Will there be night works?	☐	Yes	☒	No	☐	n/a
15	Will work be undertaken outside peak times?	☐	Yes	☒	No	☐	n/a
16	If not, will the control measures cater for the traffic peak?	☒	Yes	☐	No	☐	n/a
17	Will the TTM be required for after hours?	☐	Yes	☐	No	☒	n/a
18	Will pedestrians be affected by the works?	☐	Yes	☒	No	☐	n/a
19	Will cyclists be affected by the works?	☐	Yes	☒	No	☐	n/a
20	Will any bus operations be affected by the works? – ACTION notification required?	☐	Yes	☐	No	☒	n/a
21	Will any local parking restrictions affect the worksite? P&CS notification required?	☐	Yes	☐	No	☒	n/a
22	Will there be adequate space for worker parking?	☒	Yes	☐	No	☐	n/a
23	Will any public unleased land be affected? P&CS notification required?	☐	Yes	☐	No	☒	n/a
24	Will any trees & landscaped areas be affected? P&CS notification required?	☐	Yes	☐	No	☒	n/a
25	Will any traffic lights be affected? Traffic Lights Manager notification required?	☐	Yes	☐	No	☒	n/a
26	Will any loading zones be affected? TWU notification required?	☐	Yes	☐	No	☒	n/a
27	Will any taxi ranks be affected? – Canberra Cabs notification required?	☐	Yes	☐	No	☒	n/a
28	Will any upcoming local events (regular or special events) affect the works?	☐	Yes	☐	No	☒	n/a
29	Will advertising be required?	☐	Yes	☐	No	☒	n/a

Notes

Truck access and egress from site in McPherson Street



Traffic Management Plan V2.1

The bulk of the truck movements will be during the period between January 2017 and August 2017. For the duration of the project it is expected that we will have large vehicles i.e. semi-trailers when we have structural steel deliveries, precast panels and roof sheets being delivered. At these times it is expected that we would have a maximum of 8 to 10 trucks over the course of that particular day. On days in which concrete pours were being conducted it would increase to 10 to 15 trucks depending on size of concrete pour.

We anticipate size of trucks ranging from small delivery trucks, flat bed semi-trailer trucks, truck and dock semi-trailers, extendable semi-trailer trucks for roof sheeting and concrete trucks.

As construction staff and activity fluctuates during the construction phase a worst case scenario is provided:

Construction Vehicles/ Cars arrive between 6.30am and 7.00am for a 7.00am start.

Depart between 3.00pm and 3.30pm, at peak times there will be 15 to 20 vehicles on site.

Trucks

It is expected that larger trucks (ie Semi trailer) will be on site prior to peak period (arriving between 7.00am and 8.00am). During steel and precast panel erection, concrete pours it is anticipated that up to 10 to 15 trucks per day will enter and exit the site during the course of the day. The departure of these vehicles will be spread throughout the day.

The construction phase will be approximately 8 months, with large trucks being used for mainly for the erection of the structure which makes up 3 months of the 8 month program.

We anticipate that there will be no interruptions to nearby residents as the site is located in an industrial estate away from residential areas.

General Site Access Rules

- Site access times will be in accordance with the times as outlined in section 5.1.7 of CEMP. As we are working in an industrial zone, our typical work hours are – Monday to Friday 7am- 6pm, Saturdays 8am – 1 pm
- All vehicles are to be directed by appropriate contractor to the nominated work areas.
- All subcontractors and suppliers whom will be delivering goods to site or removing material from site will be inducted into the agreed travel access requirements.
- Construction vehicles are not permitted on site without approval from Qanstruct.
- All extracted material such as rubbish, excavation spoils are to be covered prior to leaving site.
- Any transportation of hazardous materials will be carried in accordance with Authority Requirements and Qanstructs Safety requirements.

Driver Code of Conduct

General Requirements:

Heavy vehicle drivers entering/exiting the construction site.

- Drivers have been made aware of site requirements by appropriate subcontractors.
- Obey all relevant road laws and speed limits, including the site speed limit of 10 kph
- Adhere to all OHS requirements in the workplace.
- Be fit for duty by observing fatigue regulations and drug & alcohol laws.
- Minimise noise by avoiding the use of air brakes.
- Subcontractors/Qanstruct to ensure truck drivers are aware of truck holding areas available on site.
- Hold a valid driver's licence for the class of vehicle that you operate.
- Operate the vehicle in a safe manner within and external to the construction site.
- All trucks entering/exiting site to do so in an orderly and safe manner, all bulk loads to covered prior to leaving construction area.
- When exiting to McPherson Street it is important for truck drivers to leave promptly and not stop outside construction site as this could impact on adjacent sites.
- Comply with the direction of authorised site personnel when within the site.
- Drivers are to observe posted speed limits within and external to the construction site.
- All trucks to leave via exits with shaker grids to minimise spoil/ debris being deposited on external roadways

Proposed Construction Staging (Preliminary)

Inground Services – 2/03/2017 to 5/04/17

Floor Slabs – 24/03/17 to 6/04/17

Structural Steel – 1/03/17 to 10/03/17

Roofing – 16/03/17 to 30/03/17

Precast Panels – 9/03/17 to 15/03/17

APPENDIX B
ENVIRONMENTAL ASPECTS & IMPACTS REGISTER

Project:		Australian Border Protection Detector Dog Facility		Date of Risk Assessment:		10/10/2016	
Address:		28A McPherson Street , Banksmeadows,NSW		Persons Involved in PRA Workshop:		M Harvey, J. Horan	
Category	Aspect/ Activities	Potential Environmental Impact	Inherent Risk Ranking	Additional Controls Required	Residual Risk	Responsibility	Applicable Legislation & Standards
Air	Dust - general earthmoving & construction activities	Release into immediate atmosphere of dust	Low	Works planned to minimise dust generation, water truck to be used where visible dust is generated, housekeeping maintained (inc. sweeping), adequate bins provided that are emptied regularly	Low	Construction Manager, Site Manager, workers & subcontractors	NSW Government (1997) Protection of the Environment Operations Act ; NSW Government (2011) Protection of the Environment Legislation Amendment Act ; NSW Government (2009) Protection of the Environment Operations (General) Regulation ; NSW Government (2009) Interim Construction Noise Guideline ; relevant OHS legislation - refer OHS&E Plan for specific details
Air, Land, Water Chemicals	Storage & use of chemicals on site	Storage & use of chemical which may result in spills & release of fumes	Moderate	Minor quantities to be kept on site and storage & used in designated areas, in accordance with MSDSs. Mini tankers used to refuel plant rather than storing bulk fuel on site. Low VOC chemicals to be used.	Low	Site Manager, workers & subcontractors	
Land	Erosion of soils and structures	Uncontrolled release to stormwater	Moderate	Refer Soil & Water Management Plan (SWMP) from at&I for DHL - Lot 3B Oakdale, Millner Avenue, Horsley Park, NSW (2015)	Low	Site Manager & earthworks subcontractor	
Land	Vehicles regularly exiting site after driving on site (potential to pick up mud on site)	Mud on vehicle tyres transferring to public roads	Moderate	Install shaker grids at exit points, sediment control barriers installed at existing stormwater pits.	Low	Site Manager, workers & subcontractors	
Land, Sewer, Water	Washing trucks	Uncontrolled release of waste water (inc. concrete slurry)	Moderate	Signage to designated truck wash area. Minimise water usage. Truck washing in designated area.	Low	Site Manager, workers & subcontractors	
Sewer	Tapping into existing sewer	Uncontrolled release into sewer	Low	Works to proceed according to authority's approval.	Low	Construction Manager, Site Manager, plumbing subcontractor	
Waste	Construction activities	Uncontrolled release of rubbish, attraction of rats, birds etc	Low	Appropriate rubbish bins provided (inc. lids), monitored and emptied regularly. Ongoing housekeeping maintained.	Low	Site Manager, workers & subcontractors	
Water	Rain on earth	Uncontrolled sediment release	Moderate	De-watering of site via use of mobile pumps, only to stormwater when sediment is filtered.	Low	Site Manager, workers & subcontractors	
Noise, Vibration & Air	Construction activities; including operation of plant	Elevated noise, vibration causing disturbance earth/structures/personal, chemical emission into atmosphere	Moderate	Vehicle, plant & equipment to be maintained as per operator's manual and comply with OHS&E Management Plan requirements (inc. maintenance, logbooks & service records). Timing of works to comply with council noise restrictions.	Low	Site Manager, workers & subcontractors	

APPENDIX C
ENVIRONMENTAL MANAGEMENT PLAN
INSPECTION RECORDS

Environmental Management Plan Inspection Record

This Inspection Record is intended to be a guide following storms & prolonged rain and should be filled in on a monthly basis.

Project:	3879, 28A McPherson Street, Banksmeadow, NSW		Date of Inspection:	
Checks with occur: At least weekly and after every rain fall event				
CONTROL METHOD / INSTALLATION	FUNCTIONING (Yes / No / NA)	TYPE OF REMEDIAL ACTION REQUIRED & TAKEN	DATE ACTION CLOSED OUT	
BATTERS				
Erosion				
Velocity control barriers/ furrows working effectively				
Table drain & diversion drains working effectively				
DIVERSION DRAINS/ TABLE DRAINS				
Open swale drains along boundary				
Minimal ponding				
Traffic not crossing drains				
Water being diverted into sediment basin then released to turfed area				
Sediment control barriers in place				
No erosion of drains				
SEDIMENT CONTROL BARRIERS, SILT FENCES and TRAPS				
Installed to all gully pits fronting the site				
Fixed Securely to ground (as per SWMP)				
Catching all water flow				
Geo fabric securely fixed				
Build up of sediment				
No erosion surrounding barrier				
SEWER				
Not collecting any waste until connected correctly				
SITE MOVEMENT				
All vehicles exiting over shaker grid				
Road has minimal dirt/ mud on it				
Void under grid is not full				
Grids aligned with access points				
Main traffic areas free of mud				

Environmental Management Plan Inspection Record

This Inspection Record is intended to be a guide following storms & prolonged rain and should be filled in on a monthly basis.

Project:	3879, 28A McPherson Street, Banksmeadow, NSW		Date of Inspection:	
Checks with occur: At least weekly and after every rain fall event				
CONTROL METHOD / INSTALLATION	FUNCTIONING (Yes / No / NA)	TYPE OF REMEDIAL ACTION REQUIRED & TAKEN	DATE ACTION CLOSED OUT	
STORMWATER				
Not collecting contaminated water and running into stormwater system				
STOCKPILES				
Erosion				
Dusting				
Separation of different spoil				
Diversion drains in place as required				
Sediment control barriers in place as required				
WASTE CONTROL				
Bins to site sheds and amenities emptied as required & covers maintained				
Site bins not allowed to be over filled				
No loose rubbish around site				
Check beyond site for rubbish				
Concrete waste pits maintained & emptied as necessary				
Dust is kept to a minimum				
Hessian cloth/ similar on windward side of boundary fence tied at top, centre, bottom & 1m intervals				
WATERWAYS				
Visual inspection of waterways				
Site specific -				

Name of Inspector/s:	
Duration of Inspection:	

OHS Representative's Close Out:	Name:	
Signature:	Date:	

Site Manager's Close Out:	Name:	
Signature:	Date:	

APPENDIX D
SOIL & WATER MANAGEMENT PLAN (SWMP)

REFER TO DRAWING NO. 17625 - C3 FOR CONTINUATION



H	GENERAL REVISION	19.10.16
G	BATTER / CROSSOVER REVISED	29.9.16
F	LEVELS REVISED	22.9.16
E	ISSUED FOR CONSTRUCTION	16.9.16
D	LEVELS REVISED	19.8.16
C	GENERAL REVISION	1.8.16
B	LEVELS REVISED	28.7.16
A	TENDER ISSUE	20.6.16
ISSUE	DESCRIPTION	DATE

REVISIONS		
PLOT DATE	19 October 2016	

CONSTRUCTION ISSUE

CLIENT



500 Burwood Road, Hawthorn, VIC 3122
Telephone 03 9810 8300 Facsimile 03 9810 8399
ACN 070 953 874 ABN 88 765 907 859

PROJECT

AUSTRALIAN BORDER FORCE
AT:
McPHERSON STREET,
BANKSMEADOW, NSW.

DRAINAGE PLAN - SHEET 4

Cosentino Group Pty Ltd
Designers & Engineers
12 Business Park Drive,
Notting Hill, Victoria 3168, Australia.
Telephone (03) 9265 9888 Fax (03) 9265 9876
engineering@cosentingroup.com.au

DESIGNED	T.C.	DATE	APRIL 16
DRAWN	T.C.	SCALE	1 in 200 @ B1
DRAWING No	17625 - C4	ISSUE	H

REFER TO DRAWING NO. 17625 - C2 FOR CONTINUATION

EXISTING DETENTION BASIN
Q100 FLOOD LEVEL= 4.10



REFER TO DRAWING NO. 17625 - C4 FOR CONTINUATION

G	GENERAL REVISION	19.10.16
F	BATTER REVISED	29.9.16
E	ISSUED FOR CONSTRUCTION	16.9.16
D	LEVELS REVISED	19.8.16
C	GENERAL REVISION	1.8.16
B	LEVELS REVISED	28.7.16
A	TENDER ISSUE	20.6.16

ISSUE	DESCRIPTION	DATE
REVISIONS		
PLOT DATE	19 October 2016	

CONSTRUCTION ISSUE

CLIENT

Qanstruct
Partner of choice

500 Burwood Road, Hawthorn, VIC 3122
Telephone 03 9810 8300 Facsimile 03 9810 8399
ACN 070 953 874 ABN 88 765 907 859

PROJECT

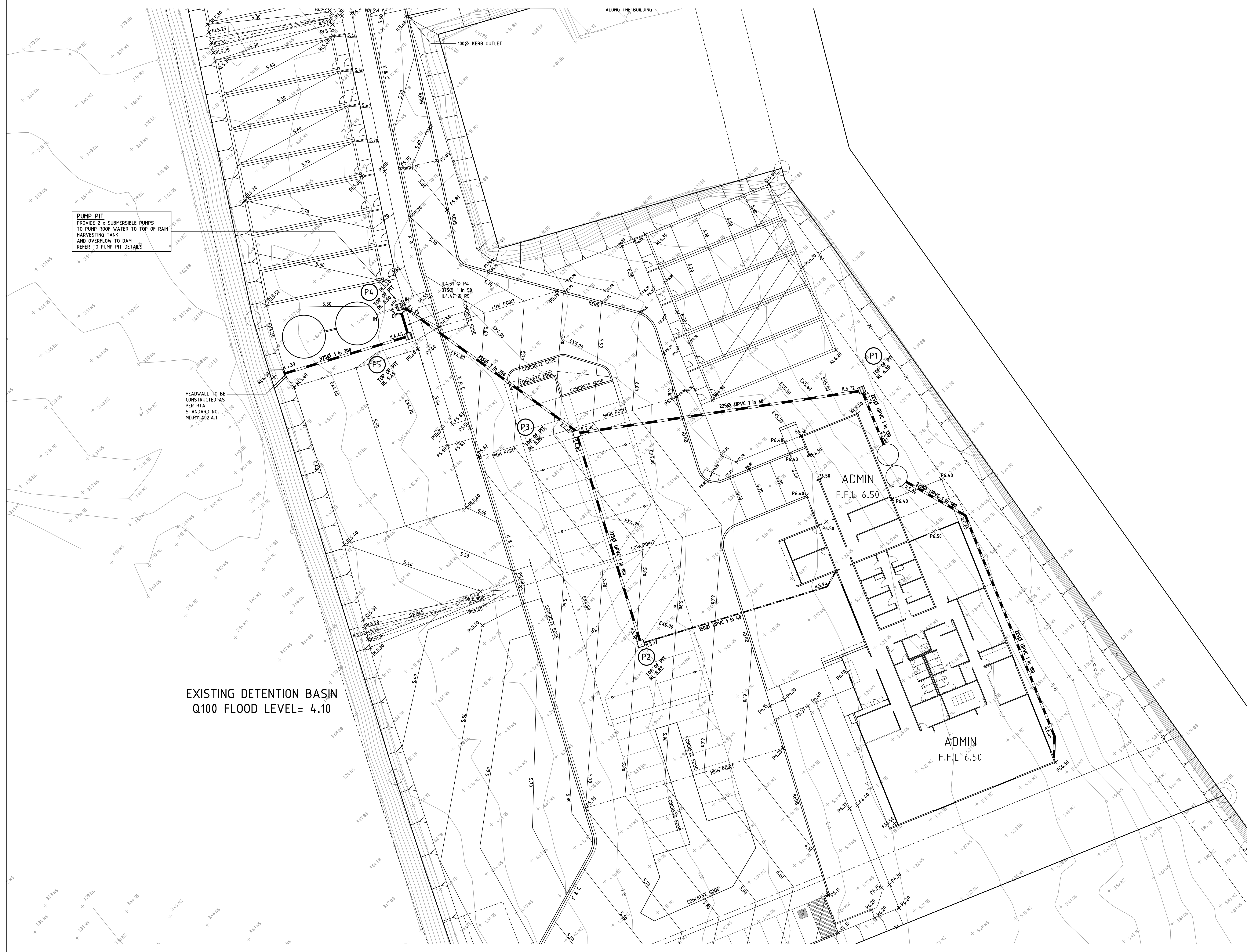
**AUSTRALIAN BORDER FORCE
AT:
McPHERSON STREET,
BANKSMEADOW, NSW.**

DRAINAGE PLAN - SHEET 3

Cosentino Group Pty Ltd
Designers & Engineers
12 Business Park Drive,
Notting Hill, Victoria 3168, Australia.
Telephone (03) 9265 9888 Fax (03) 9265 9876
engineering@cosentingroup.com.au ABN 54 095 419 562

DESIGNED	T.C.	DATE	APRIL 16
DRAWN	T.C.	SCALE	1 in 200 @ B1
DRAWING No	17625 - C3	ISSUE	G

REFER TO DRAWING NO. 17625 - C1 FOR CONTINUATION



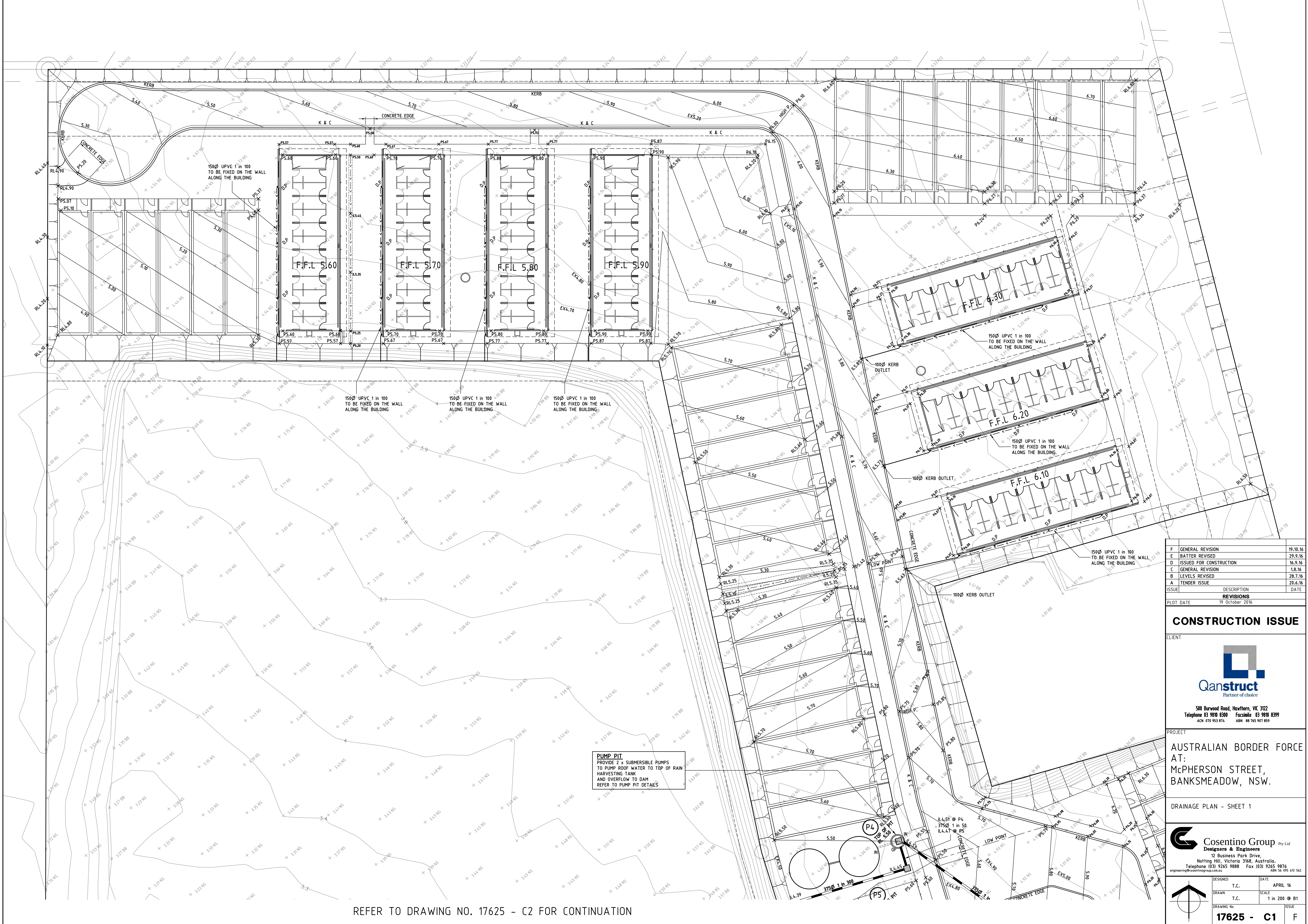
PUMP PIT
PROVIDE 2 x SUBMERSIBLE PUMPS
TO PUMP ROOF WATER TO TOP OF RAIN
HARVESTING TANK
AND OVERFLOW TO DAM
REFER TO PUMP PIT DETAILS

HEADWALL TO BE
CONSTRUCTED AS
PER RTA
STANDARD NO.
MD.R11.A02.A.1

EXISTING DETENTION BASIN
Q100 FLOOD LEVEL= 4.10

REFER TO DRAWING NO. 17625 - C3 FOR CONTINUATION

F	GENERAL REVISION	19.10.16
E	BATTER REVISED	29.9.16
D	ISSUED FOR CONSTRUCTION	16.9.16
C	GENERAL REVISION	1.8.16
B	LEVELS REVISED	28.7.16
A	TENDER ISSUE	20.6.16
ISSUE	DESCRIPTION	DATE
REVISIONS		
PLOT DATE 19 October 2016		
CONSTRUCTION ISSUE		
CLIENT		
 500 Burwood Road, Hawthorn, VIC 3122 Telephone 03 9810 8300 Facsimile 03 9810 8399 ACN 070 953 874 ABN 88 765 907 859		
PROJECT		
AUSTRALIAN BORDER FORCE AT: McPHERSON STREET, BANKSMEADOW, NSW.		
DRAINAGE PLAN - SHEET 2		
 Cosentino Group Pty Ltd Designers & Engineers 12 Business Park Drive, Notting Hill, Victoria 3168, Australia. Telephone (03) 9265 9888 Fax (03) 9265 9876 engineering@cosentinogroup.com.au ABN 54 095 410 562		
DESIGNED	T.C.	DATE
DRAWN	T.C.	SCALE
DRAWING No		ISSUE
17625 - C2		F



REFER TO DRAWING NO. 17625 - C2 FOR CONTINUATION

F	GENERAL REVISION	19.10.16
E	BATTER REVISION	29.9.16
D	ISSUED FOR CONSTRUCTION	16.9.16
C	GENERAL REVISION	1.8.16
B	LEVELS REVISION	28.7.16
A	TENDER ISSUE	20.6.16
ISSUE	DESCRIPTION	DATE
REVISIONS		
PLOT DATE 19 October 2016		
CONSTRUCTION ISSUE		
CLIENT		
 Qanstruct Partner of choice		
500 Burwood Road, Hawthorn, VIC 3122 Telephone 03 9610 8300 Facsimile 03 9610 8399 ACH 070 953 874 ABN 88 765 907 859		
PROJECT		
AUSTRALIAN BORDER FORCE AT: McPHERSON STREET, BANKSMEADOW, NSW.		
DRAINAGE PLAN - SHEET 1		
 Cosentino Group Pty Ltd Designers & Engineers 12 Business Park Drive, Notting Hill, Victoria 3168, Australia. Telephone (03) 9265 9888 Fax (03) 9265 9876 engineering@cosentino-group.com.au ABN 54 095 419 562		
DESIGNED	T.C.	DATE
DRAWN	T.C.	SCALE
DRAWING No	17625 - C1	ISSUE
		F

Appendix E

