Our ref: PS102981-CLM-LTR-LEACH Rev002

27 July 2020

Ellen Robertshaw
DFP Planning
11 Dartford Road
Thornleigh NSW 2120

Dear Ellen

Leachate Assessment, Fairfield Sustainable Resource Centre

1. INTRODUCTION AND OBJECTIVES

This desktop leachate assessment has been prepared for DFP Planning as part of the additional reporting requirements for the Secretary's Environmental Assessment Requirements (SEARs) for the development application relating to the expansion of the Fairfield Sustainable Resource Centre (SRC), located at Hassall Street, Wetherill Park NSW (refer to Figure 1 of Attachment A for general site layout).

This letter report has been prepared based on available desktop sources. As per the proposal prepared by WSP in September 2019, the key objectives of the leachate assessment are to:

— Assess potential risks associated with leachate generation from the proposed site activities (particularly related to the proposed stockpile base).

— Assess changes to the existing leachate regime within the landfill (including likely composition and migration) resulting from the proposed development.

— Review existing and proposed leachate management infrastructure in light of the likely leachate generation model for the site.

— Recommend amendments to the current proposed leachate mitigation measures for the site as well as potential amendments to the existing monitoring network to best reflect the proposed altered landuse on the site.

2. AVAILABLE INFORMATION

In preparing this leachate assessment, WSP has reviewed the following available information:

— Historic Aerial Photographs (years 1965, 1978, 1991, 2004, 2016).

— Woodward Clyde (August 1994), *Old Sanitary Landfill Area, Hassall Street, Wetherill Park.*

— Woodward Clyde (June 1994), *Site Plan and Approximate Monitoring Locations and Methane Gas Concentrations.*

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— WSP (November 2017), *Detailed Site Investigation, Fairfield Sustainable Resource Centre Expansion.*

— WSP (November 2018), *State Environment Planning Policy 33 (SEPP 33) Screening, Proposed Expansion of Sustainable Resource Centre.*

— WSP (May 2020), *Detailed Site Investigation, Fairfield Sustainable Resource Centre Expansion.*

— WSP (May 2020), *Expansion of Fairfield Sustainable Resource Centre Soil & Water Management Plan*.

3. PROPOSED EXPANSION WORKS

The Fairfield SRC is situated on a former landfill and is currently a Council-operated recycling centre which accepts waste building material comprising terracotta, brick, concrete and asphalt and supplies aggregate, sand, topsoil and crushed concrete for construction and landscaping. The facility has a recycling drop-off centre located at the north-western end of the site which accepts a variety of waste products, including car batteries, oil, electronics, metal waste products and garden waste. The SRC operates under an Environmental Protection Licence (EPL 5713).

Fairfield City Council is proposing an expansion of the existing site infrastructure to increase capacity and improve efficiency of activities on-site.

According to WSP design drawings, the proposed expansion works relevant to the existing SRC footprint and the expansion area are to comprise the following:

— Filling of the Canal Road floodway and construction of a stockpiling area in the east of the expansion extent. The stockpiling pad is to have a gentle slope roughly towards the east. It is understood that the floodway will be filled with material from an existing stockpile within the expansion area footprint as well as imported virgin excavated natural material (VENM), excavated natural material (ENM), or a compliant recycled product.

— Construction of a flood compensation structure to the east of the expansion area (compensating for the in-filling of the Canal Street floodway.

— Construction of a sedimentation basin in the north-eastern portion of the stockpiling area with 1,061 m^3 capacity.

— Construction of a water diversion bund around the northern, southern and eastern boundaries of the expansion area flowing into the newly constructed sedimentation basin.

— Construction of an additional sedimentation basin to the north of the reservoir in the north-west of the SRC with 901 m^3 capacity.

— Retrofitting the existing sedimentation ponds (Pond 1 and 2 within the SRC) with a forebay and chemical dosing facility.

Refer to Attachment B to review a copy of the existing WSP May 2020 design plans which show the layout of the expansion area.

4. SITE CHARACTERISATION

The expansion area is located to the immediate east of the existing SRC at approximately 40 m above the Australian Height Datum (AHD) and is raised 5 m to 10 m above the surrounding area by engineered fill above a former landfill cell. The area is generally flat with slopes down in all directions at the edges of the filled portion. To the west of the expansion area is a gully where Canal Road is proposed to be constructed. The general area around the SRC slopes to the north-east toward Prospect Creek.

The SRC and expansion area is positioned on the western and central portions of a former sanitary landfill. The greater former landfill area is bounded by Hassall Street to the south, a sewer easement and Prospect Creek to the north and east and Widemere Road to the west.

The general situation of waste extents and inferred filling staging is presented in the Woodward Clyde drawing in Attachment C. According to the available information (most notably Woodward Clyde (June 1994), waste emplacement took place along the full landfill extent in seven stages with filling initially commencing under the SRC (stage 1) and then moving to the east of Canal Road floodway under the expansion area (stage 2) before moving to the north of the sewer easement and the south of Prospect Creek (stage 3). Following this stage, landfilling commenced under the SRC again (stage 4), and then moved further to the east of the stage 2 filling (stage 5). Following these phases of filling a further two stages took place beneath the current SRC extent (stages 6 and 7). It is understood that following completion of stage 7 all landfilling works ceased.

Historic aerial photography indicates that the seven stages of filling all occurred between the late 1970s and late 1980s to early 1990s. The Woodward Clyde (August 1994) report indicates that the waste emplaced within the landfill comprised sanitary and industrial waste including household garbage and to a lesser extent, commercial and industrial wastes.

A number of boreholes were drilled during the Woodward Clyde (August 1994) investigation. The general location of these boreholes is presented in the Woodward Clyde drawing in Attachment C. Of these, a total of ten boreholes were drilled within the footprint of the existing SRC and a further three within the expansion area footprint. Three of the SRC boreholes, drilled along the northern extent of the inferred waste mass (BH20, BH21 and BH22) were not reported to contain materials consistent with landfill waste. The borehole drilled in the north-eastern extent of the SRC (BH19) was identified by Woodward Clyde as containing landfill waste at 4.5 metres below ground level (described as silty gravelly clay, mottled brown and black, moist, glass, plastic, putrescible odour). Additionally, landfill gas monitoring from this material in 1994 recorded a methane concentration of 23.2 %v/v and carbon dioxide concentration of 24.9% v/v/ indicating landfill gas production in the vicinity of the borehole.

Two of the boreholes within the expansion area contained material consistent with landfill waste. These materials are summarised as follows:

— BH17 (from 2.6 metres below ground level): Silty clay, dark brown, moist, firm, moderate plasticity, small red brick or tile fragments, wire, glass, brick, plastic, rags, putrescible odour.

— BH18 (from 7.4 metres below ground level): Silty, gravelly clay, grey, wet, soft, glass, wire.

WSP notes that the remaining borehole logs from the SRC and expansion areas were not supplied with the Woodward Clyde report and could not be used to characterise waste extent.

Historic reports indicate that where landfilling is understood to have occurred, the overlying capping comprises a poorly compacted gravelly clayey silt material. This corresponds with the available borehole and test pit logs from the Woodward Clyde and WSP investigations.

WSP notes that the Woodward Clyde report cites design drawings which indicate that each landfill cell was designed to have a clay perimeter embankment with a crest of one metre and an internal batter slope of 1:1.5 and an external batter slope of 1:4 or 1:1.5 depending upon location. It is unknown whether these structures remain in place across the site.

5. LEACHATE CHARACTERISATION

Refer to Figure 1 of Attachment A for surface water and groundwater sampling locations referenced in this section.

5.1 WASTE MASS LEACHATE

The contaminant concentrations of water/leachate were monitored beneath the expansion area in October 2017 (represented by samples collected from monitoring wells MW01, MW02 and MW03). At the time of monitoring leachate/water levels were between 7.1 and 8.9 metres below the existing ground surface. Samples were analysed for total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), organochlorine pesticides (OCP), organophosphorus pesticides (OPP) and heavy metals.

As presented in Table 5.1, the results indicate that leachate generated from the waste mass beneath the expansion area contained the following contaminants:

— Heavy end hydrocarbons in all monitoring well samples.

— Light end hydrocarbons including naphthalene and benzene in MW03.

— Elevated chromium, nickel and zinc in all monitoring well samples.

— Elevated arsenic and copper in MW01.

Note: the concentrations of chromium, zinc and copper were only marginally above the limit of detection and may be of natural origin.

Field screening results for groundwater in all three wells were generally neutral (pH 6.5 to 7.11), brackish (conductivity of 3,440 to 7,180 µS/cm) and reducing (corrected redox of 37 to 87 mV).

Table 5.1 Leachate Characterisation Summary (October 2017 Monitoring)

MONITORING POINT	TRH – F1	TRH – F2	TRH – F3	TRH – F4	BENZENE	NAPHTHALENE	CHROMIUM	NICKEL	ZINC	ARSENIC	COPPER
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MW01	<20	290	520	<100	<1	<5	2	54	7	51	2
MW02	<20	160	520	<100	<1	<5	2	26	9	3	<1
MW03	160	850	1,750	<100	21	27	4	82	11	6	<1

Note: Blue cells exceed the criteria for 95% Protection of Freshwater Ecosystems and green cells exceed the Recreational criteria

5.2 POTENTIAL SRC EXPANSION LEACHATE

The leachate anticipated to be generated as part of the day to day processing works to be undertaken within the expansion area has been extrapolated from available long-term monitoring data from surface water and leachate points draining from the existing operations (most notably SW01 and its downgradient locations SW02 and SW03). The monitoring locations were sampled on a number of occasions between 2017 and 2019 and the samples were analysed for a range of parameters including TRH, BTEX, PAH, heavy metals and other inorganic compounds.

As presented in Table 5.2, the results indicate that runoff and leachate generated from site activities contained the following contaminants:

— Occasional heavy end hydrocarbons (October 2017 and October 2018 results).

— Regularly elevated concentrations of aluminium, copper and zinc and occasional elevated concentrations of lead and nickel.

— Occasional elevated concentrations of phosphorus, nitrate and ammonia (noting ammonia concentrations identified did not exceed the adopted criteria for the site).

In addition to the above, the following potential contaminants are considered to comprise potential leachate (based on non-compliances listed for the Environmental Protection Licence 5713):

— Total suspended solids exceedances (non-compliances in 2004, 2005, 2006, 2007, 2008 and 2009).

— Exceeding alkaline pH levels (non-compliances in 2004, 2005, 2009 and 2012).

— Exceedance of oil and grease criteria in 2011.

Based upon this information the following contaminants are considered likely to comprise the leachate to be generated within the expansion area:

— Alkaline runoff (high pH).

— Heavy metals generally comprising aluminium, copper and zinc and occasionally including lead and nickel.

— Heavy end hydrocarbons and oil and grease.

— Total suspended solids and increased turbidity.

— Occasional elevated inorganic compounds such as nitrate, ammonia and phosphorus.

Table 5.2 Leachate Characterisation Summary

MONITORING POINT	TRH - F2	TRH – F3	TRH – F4	ALUMINIUM	COPPER	ZINC	LEAD	NICKEL	PHOSPHORUS	NITRATE	AMMONIA
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L
SW01	<100	730	200	140	20	79	2	5	1.12	0.36	0.2
SW02	<100	<100	<100	60	65	96	4	17	1.28	0.03	0.07
SW03	260	2,020	530	200	26	77	2	9	0.75	0.16	0.03

Note: Blue cells exceed the criteria for 95% Protection of Freshwater Ecosystems and green cells exceed the Recreational criteria

5.3 LEACHATE MIGRATION POTENTIAL

WSP notes that there was insufficient laboratory data available to undertake leachate to native ion characterisation to assess potential pulses of leachate from the waste mass and the existing SRC area. As such WSP has assessed the potential for leachate migration potential in surface water and groundwater based on the presence of target contaminants discussed above and their identified prevalence in downgradient monitoring locations.

5.3.1 WASTE MASS LEACHATE

SURFACE LEACHATE SEEPAGE

Minimal information relating to historic leachate escapes from the landfill cells beneath the SRC and the expansion area have been provided for incorporation into this document. However, the Woodward Clyde report specifically notes that at the time of their field investigations in 1994, that there was no evidence of leachate seepage, dieback of vegetation or scouring around the Stage 1, 2 and 4 landfill cells. This is further evidenced by the surface water sample collected by Woodward Clyde from location SW001 (labelled as a "leachate pond" immediately to the north of the expansion area) which was tested for inorganic parameters, nutrients, total organic carbon and biochemical oxygen demand. The results are summarised in Table 5.3. The results demonstrate relatively low nutrient concentrations, total organic carbon (TOC) and biochemical oxygen demand (BOD), and are not indicative of detectable influence by landfill leachate at the time of testing.

Table 5.3 Woodward Clyde Leachate Pond Monitoring (May 1994)

ANALYTE	UNIT	SW001 SAMPLE RESULT
pH	pH units	7.4
Electrical Conductivity	mg/L	220
Total Dissolved Solids	mg/L	150
Biochemical Oxygen Demand	mg/L	<2
Total Kjeldahl Nitrogen	mg/L	2.1
Ammonia as N	mg/L	<0.1
Nitrate as N	mg/L	0.16
Total Organic Carbon	mg/L	14

Additionally, during our 2020 investigations, WSP undertook a field inspection of the caps and batters of Stages 1, 2 and 4 cells and found no evidence of leachate seepage. WSP noted a number of small areas of ponded water on the cap and at the base of some cells but none of the waters in these locations appeared discoloured or odorous and were considered to be the result of recent rainfall.

Based upon the above information there is no known history of surface seepage of leachate out of the existing landfill cells. WSP note that once operational, the proposed development within the expansion area is intended to be very similar to activities already occurring to the west in the existing SRC (situated above Stage 1 and 4 cells). Because no surface seepage has been identified within these areas to date it is considered unlikely that the proposed activities within the expansion area will result in an increased risk of leachate seepage. In fact, it is considered that the designed regrading of the expansion area surface and construction of the sedimentation basin should facilitate improved shedding of water off the cap and batter surface and thus reduce the potential for infiltration and subsequent leachate generation. This conclusion is dependent on the sedimentation basin being adequately designed and constructed to not act as a localised surface water infiltration point into the underlying waste mass.

LEACHATE TO GROUNDWATER MIGRATION

Table 5.4 (following page) presents a summary comparison of chemical concentrations recorded during the October 2017 groundwater monitoring round. Concentrations of target contaminants considered to be representative of leachate within the waste mass (derived from results for MW01, MW02 and MW03) have been compared to concentrations considered to be representative of downgradient groundwater (derived from results for MW04 and MW05). The results demonstrate a substantial

variation between both datasets with the majority of target contaminants in downgradient bores being either non-detect or substantially lower than the concentrations within waste mass leachate. These results from 2017 indicate that at the time of monitoring, downgradient groundwater (MW04 and MW05) was not being demonstrably affected by target leachate contaminants within the waste mass.

It is considered that the proposed expansion works are unlikely to directly affect existing leachate migration regime in groundwater as the filling is above the groundwater level and the designed regrading of the expansion area surface and construction of the sedimentation basin should facilitate improved shedding of water off the cap and batter surface and thus reduce the potential for infiltration and subsequent leachate generation. This conclusion is dependent on the sedimentation basin being adequately designed and constructed to not act as a localised surface water infiltration point into the underlying waste mass.

Table 5.4 Waste Mass and Downgradient Groundwater Maximum Concentration Comparison

MONITORING RANGE	TRH – F1	TRH – F2	TRH – F3	TRH – F4	BENZENE	NAPHTHALENE	CHROMIUM	NICKEL	ZINC	ARSENIC	COPPER
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Waste Mass	160	850	1,750	<100	21	27	4	82	11	51	2
Down-Gradient	<20	<100	<100	<100	<1	<5	<1	14	7	6	2

Note: Waste Mass results derived from maximum concentrations from MW01, MW02 and MW03 from October 2017 monitoring round. Down-Gradient results derived from maximum concentrations of MW04 and MW05 from October 2017 monitoring round

5.3.2 POTENTIAL SRC EXPANSION LEACHATE

As discussed in Section 5.2, leachate generated from the SRC expansion area is anticipated to comprise alkaline pH, elevated suspended solids and heavy metals and occasional elevated concentrations of oil and grease and heavy end hydrocarbons. The design controls in place (i.e. drainage to a centralised point on the expansion area surface and a sedimentation dam) is anticipated to reduce the potential for off-site migration of leachate generated as part of SRC activities within the expansion area.

However, as indicated by the non-conformances against the Environmental Protection Licence for the existing SRC, there is potential for runoff containing contaminated leachate (most notably resulting in elevated pH, suspended solids and occasional oil and grease) to leave the works area even though engineering controls are in place. This leachate has the potential to enter off-site surface water bodies (most notably Prospect Creek to the north) and impact upon water quality if adequate controls are not put in place.

6. DISCUSSION

6.1 LEACHATE GENERATION RISKS (EXPANSION AREA)

As discussed in Section 5.3.2, while the engineering controls to be implemented within the expansion area are anticipated to reduce both the risk of generation and discharge of leachate from the expansion area there is still considered to be a potential risk. This is demonstrated by recorded non-conformances against the Environmental Protection Licence for the existing SRC (assumed to originate from ongoing SRC activities).

Nevertheless, given leachate is present in the waste and the site activities also have the potential to release water of reduced quality, a program of ongoing inspection and monitoring is considered appropriate as part of the ongoing operation of the expansion area. The requirements for this system of inspection and monitoring should be contained within an overarching Environmental Management Plan to be implemented for the greater Sustainable Resource Centre.

6.2 WASTE MASS LEACHATE CONDITION

The photograph below was taken by WSP field consultants following rainfall in 2020 near the existing pond in the south-west of the expansion area. The photograph shows the pond at capacity and a number of locations of ponded water in the background. The photograph demonstrates that the current landform is not conducive to the shedding of runoff following rainfall. This ponded water will then either evaporate over time or infiltrate through the capping and potentially contribute to generation of leachate.

The proposed expansion area design as specified in Attachment B would result in improved grading of the overall ground surface and provision of a water diversion bund draining into a sedimentation pond. If these structures are appropriately constructed and then maintained over the operational phase the runoff shedding capability of the expansion area surface will be greatly improved. As a result, it is considered that the potential contribution to waste mass leachate from surface infiltration within the expansion area will be reduced by the proposed works.

Photograph 1: A small dam in the south west of the expansion area with ponded water in the background

6.3 LEACHATE MANAGEMENT INFRASTRUCTURE REVIEW

Key items of leachate management infrastructure to be constructed across the expansion area include the regrading of the expansion area surface, a downgradient sedimentation basin and upgradient water diversion bunds. These structures are considered likely to protect against generation of leachate within the former landfill waste mass as well as from ongoing activities within the expansion area.

WSP notes that the water diversion bunds are situated around the southern, northern and western extents of the whole expansion area. While this excludes runoff from around the expansion area from contributing to leachate generation it does not protect against runoff generated from within the expansion area. WSP considers that secondary runoff diversions focussing on stockpiling and processing areas will further reduce the potential for leachate generation from proposed activities with the highest risk of leachate generation potential, during the site operational phase following construction. It is considered that these controls should be incorporated into the civil plans for the works as well as the final Soil and Water Management Plan (SWMP).

7. RECOMMENDATIONS

Based upon our review of available information WSP consider that the changes to the expansion area are not likely to impact leachate generation within the underlying landfill waste mass. This conclusion is based on the understanding that:

- The ground surface across the expansion area will be regraded, the Canal Road floodway filled, water diversion bunds and sedimentation basin as specified in the plans in Attachment B will be installed; and
- These structures will be adequately constructed and maintained to ensure ongoing operation for their intended purpose.

It should be noted that the sedimentation basins should be designed, constructed and maintained to ensure that they do not become a localised area of surface water infiltration into the underlying waste mass, where it would subsequently contribute to leachate generation.

It is noted that available site data and records show evidence of non-conformances against the EPL for the existing SRC site demonstrates a potential risk of discharge of leachate and leachate contaminated runoff from the expansion area. It is noted that the engineering controls designed for the expansion area will greatly assist in reducing the risk of off-site discharge. In addition to these controls WSP recommends the following:

- WSP recommends that a plan for the ongoing inspection, monitoring and management of the leachate/runoff controls along with contingencies and a review process which can be implemented during the operational phase of the expansion area. This plan should be incorporated into the overarching Environmental Management Plan for the greater SRC site. The plan should identify leachate as a hazard along with associated risks (based upon the findings of this assessment and any subsequent investigations), and provide inspection and monitoring protocols specifically relating to management of leachate/runoff controls.
- In addition to the water diversion bunds around the outer extent of the greater expansion area WSP recommends installing further diversions upgradient and around the stockpile processing areas of the site to minimise overland flow from entering the processing and processed stockpile storage areas potentially generating lower quality runoff. Runoff from these diversions should drain into the sedimentation basin prior to discharge off-site or potential reuse on the site as dust suppression in accordance with the EPL requirements. These controls should be incorporated into the civil plans and SWMP for the expansion area.

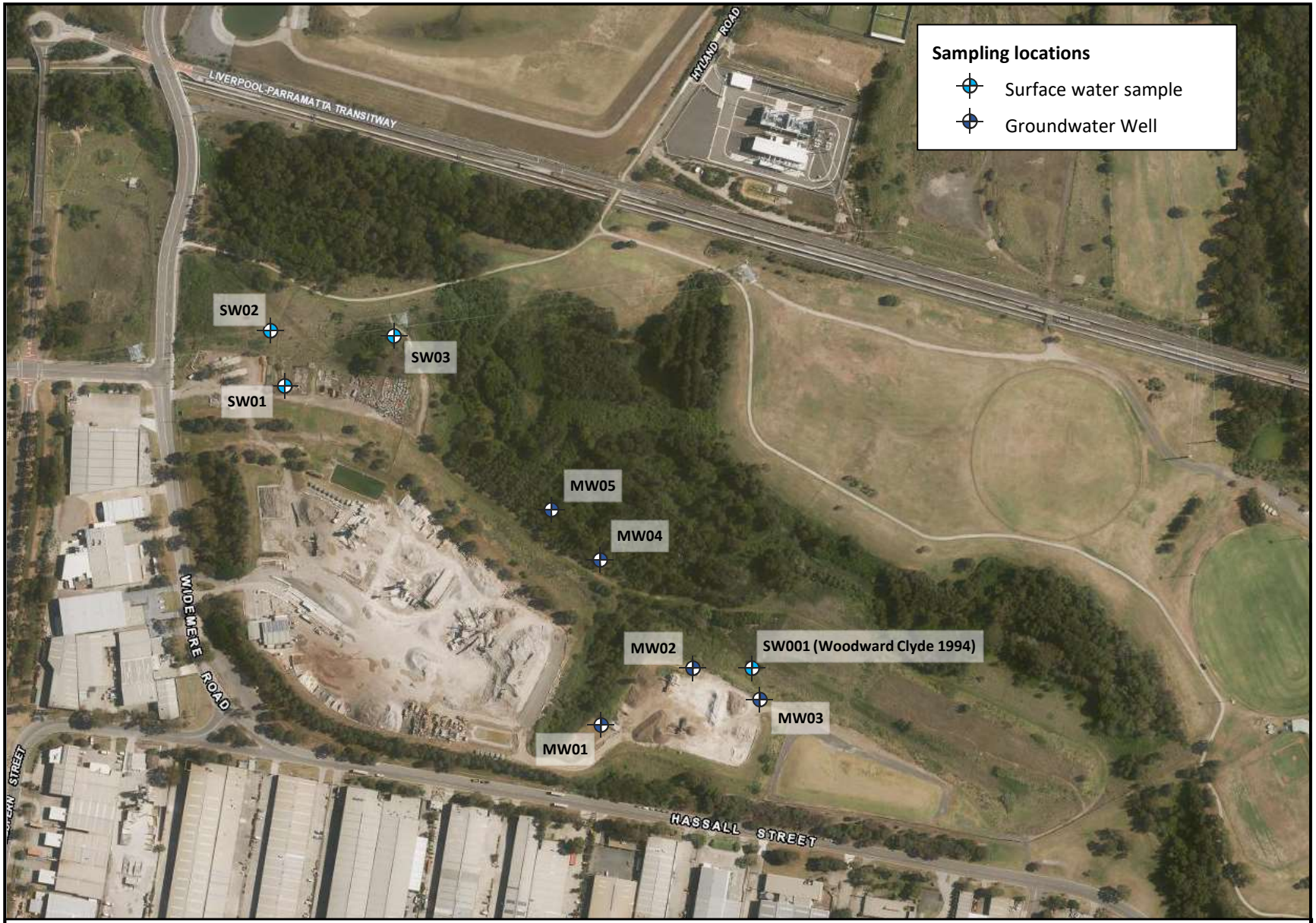
8. CLOSING

We trust that this report meets the agreed objectives specifically related to the assessment of leachate risk as set out in our proposal dated September 2019. Should you have any further queries please do not hesitate to contact the undersigned.

Yours sincerely

Jonathon Hilliard
Principal Environmental Scientist

ATTACHMENT A
FIGURE



Fairfield Sustainable Resource Centre
Leachate characterisation
FIGURE 1: Surface Water and Groundwater Sampling Locations

ATTACHMENT B
EXPANSION AREA DESIGN

EXPANSION OF FAIRFIELD SUSTAINABLE RESOURCE CENTRE

SOIL AND WATER MANAGEMENT PLAN

LOCALITY SKETCH
NTS

DRAWING INDEX	
SHEET NO	DESCRIPTION
PS102891_C000	COVER SHEET, DRAWING INDEX AND LOCALITY PLAN
PS102891_C001	GENERAL NOTES
PS102891_C005	EXISTING SITE PLAN
PS102891_C010	OVERALL GENERAL ARRANGEMENT PLAN
PS102891_C011	GENERAL ARRANGEMENT PLAN SHEET 1 OF 4
PS102891_C012	GENERAL ARRANGEMENT PLAN SHEET 2 OF 4
PS102891_C013	GENERAL ARRANGEMENT PLAN SHEET 3 OF 4
PS102891_C014	GENERAL ARRANGEMENT PLAN SHEET 4 OF 4
PS102891_C020	BULK EARTHWORKS PLAN
PS102891_C021	EXPANDED AREA BULK EARTHWORKS PLAN
PS102891_C025	BULK EARTHWORKS CROSS-SECTION SHEET 1 OF 2
PS102891_C026	BULK EARTHWORKS CROSS-SECTION SHEET 1 OF 2
PS102891_C030	OVERALL OVERLAND FLOW PLAN
PS102891_C031	OVERLAND FLOW PLAN SHEET 1 OF 3
PS102891_C032	OVERLAND FLOW PLAN SHEET 2 OF 3
PS102891_C033	OVERLAND FLOW PLAN SHEET 3 OF 3
PS102891_C070	OVERALL SEDIMENT AND EROSION CONTROL CONSTRUCTION PLAN
PS102891_C071	SEDIMENT AND EROSION CONTROL PLAN SHEET 1 OF 3
PS102891_C072	SEDIMENT AND EROSION CONTROL PLAN SHEET 2 OF 3
PS102891_C073	SEDIMENT AND EROSION CONTROL PLAN SHEET 3 OF 3
PS102891_C075	SEDIMENT AND EROSION CONTROL MAINTENANCE PLAN
PS102891_C076	SEDIMENT AND EROSION CONTROL DETAILS AND NOTES SHEET 1 OF 1

SUPPLEMENTARY DRAWING INDEX	
SHEET NO	DESCRIPTION
S-214	S-214 SUBSOIL DRAINAGE
S-228	S-228 POLLUTION CONTROL STANDARD MEASURES

ISSUE	REVISION	DATE	INTIAL
C	ISSUE FOR 95% DA APPROVAL	31.07.20	PS
B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

Sydney, NSW, Australia
www.wsp.com

PRELIMINARY

FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

COVERSHEET, LOCALITY SKETCH AND DRAWING INDEX

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: AS INDICATED
Date: APRIL 2020

Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
Project No: PS102981
Drawing No: C000
North
Issue: C

GENERAL NOTES

1. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS.
2. ALL CONSTRUCTION WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CIVIL SPECIFICATION, APPROVED PLANS AND TO THE SATISFACTION OF THE SUPERINTENDENT.
3. ALL WORKS IN THE PUBLIC ROAD RESERVE ARE TO BE CARRIED OUT TO THE SATISFACTION OF AND IN ACCORDANCE WITH THE SPECIFICATION AND STANDARDS OF FAIRFIELD COUNCIL
4. SURVEY BACKGROUND INFORMATION SUPPLIED BY: MEPSTEAD AND ASSOCIATES,

   DWG NO 5593-DET2-A., 11/02/20
5. EXISTING CONTOURS SHOWN REFLECT SITE CONDITIONS AT TIME OF SURVEY.
6. THE CONTRACTOR IS TO REVIEW THE GEOTECHNICAL REPORT AND CIVIL SPECIFICATION FOR SUBGRADE PREPARATION, SOIL PARAMETERS AND CONSTRUCTION METHODOLOGY TO SUIT THE CONDITIONS ON SITE.
7. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
8. LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (m AHD).
9. ALL DIMENSIONS RELEVANT TO SETTING OUT SHALL BE CONFIRMED AND VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION IS COMMENCED. THE CONTRACTOR SHALL REPORT ANY IDENTIFIED DISCREPANCIES TO THE SUPERINTENDENT FOR CLARIFICATION.
10. THE CONTRACTOR MUST ARRANGE THE REQUISITE INSPECTIONS OF THE WORKS WITH THE SUPERINTENDENT OR THEIR REPRESENTATIVE AS PER THE SPECIFICATIONS.
11. ALL REDUNDANT ASSETS AND THEIR ASSOCIATED INFRASTRUCTURE (I.E PIPE WORK/MANHOLE ETC) ARE TO BE REMOVED AND DISPOSED OF OFF SITE AT THE CONTRACTORS EXPENSE.
12. ALL TRENCHING WORKS TO BE IN ACCORDANCE WITH THE RELEVANT ACT AND REGULATIONS.
13. CONTRACTOR IS TO ALLOW FOR BACK FILLING ASSOCIATED TRENCHES IN ACCORDANCE WITH THE CIVIL SPECIFICATION / RELEVANT DRAWINGS.
14. ALL EXISTING ASSETS AFFECTED BY THE WORKS; e.g. SIGNS, VEHICLE CROSSINGS, FOOTPATHS, KERB AND LINEMARKING, SHALL BE REINSTATED BY THE CONTRACTOR PRIOR TO THE COMPLETION OF THE WORKS TO THE SATISFACTION OF THE SUPERINTENDENT OR THEIR REPRESENTATIVE.
15. AT THE COMPLETION OF ALL WORKS, ALL RUBBISH, DEBRIS AND SURPLUS SPOIL SHALL BE REMOVED AND THE SITE SHALL BE CLEARED TO THE SATISFACTION OF THE SUPERINTENDENT OR THEIR REPRESENTATIVE.
16. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT THE AS-BUILT DRAWINGS (INCLUDING DIGITAL FORMAT) TO THE SUPERINTENDENT AND DESIGN ENGINEER AT THE COMPLETION OF THE CONSTRUCTION WORKS. ANY UNAPPROVED DISCREPANCIES MUST BE RECTIFIED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE SUPERINTENDENT AND / OR ENGINEER.

TREE PROTECTION

17. ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN ON THE DRAWINGS TO BE REMOVED OR DIRECTED BY THE SUPERINTENDENT OR THEIR REPRESENTATIVE. UNDER NO CIRCUMSTANCES SHALL WORKS BE CARRIED OUT, MATERIALS STORED OR CONSTRUCTION VEHICLES BE PARKED WITHIN THE CANOPY OF EXISTING TREES WITHOUT THE APPROVAL OF THE SUPERINTENDENT.
18. THE CONTRACTOR SHALL BRING TO THE ATTENTION OF THE SUPERINTENDENT ANY TREES THAT ARE IN CONFLICT WITH THE PROPOSED WORKS AND SEEK DIRECTION ON HOW TO PROCEED.

EXISTING SERVICES

19. IRWINCONSULT ACCEPTS NO RESPONSIBILITIES IN RELATION TO EXTENT AND LOCATION OF EXISTING SERVICES IN THE VICINITY OF THE SITE.
20. CONTRACTORS MUST ASCERTAIN THE PRECISE LOCATION AND DEPTH OF ALL EXISTING SERVICES WHICH COULD BE AFFECTED BY THE WORKS. WHERE EXISTING SERVICES ARE FOUND TO BE IN CLASH OF THE WORKS, THE CONTRACTOR SHOULD NOTIFY THE SUPERINTENDENT ACCORDINGLY.
21. THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT SERVICE AUTHORITIES WITH RESPECT TO ANY SERVICE ALTERATIONS OR FOR WORKS IN VICINITY OR CLOSE PROXIMITY TO EXISTING SERVICES. THE CONTRACTOR SHALL BE REQUIRED TO SEEK CLEARANCE, PROGRAM AND COORDINATE THESE WORKS WITH THE RELEVANT SERVICE AUTHORITY AND THEIR CONTRACTORS AT THEIR OWN EXPENSE.
22. ANY INFRASTRUCTURE DAMAGE DURING THE DEFECTS LIABILITY PERIOD IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REINSTATED TO THE SATISFACTION OF THE SUPERINTENDENT OR THEIR REPRESENTATIVE.
23. ALL SERVICE CONDUITS TRENCHES UNDER ROAD PAVEMENTS ARE TO BE BACKFILLED WITH 20mm 3% CEMENT TREATED CLASS 3 CRUSHED ROCK COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY VALUE DETERMINED BY THE MODIFIED COMPACTION TEST IN ACCORDANCE WITH A.S.1289.5.2.1-2003.

OCCUPATIONAL HEALTH AND SAFETY

24. PRIOR TO COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR MUST ENSURE THAT ALL MATTERS RELATING TO THE OCCUPATIONAL HEALTH AND SAFETY ACT 2004, HAVE BEEN AND WILL BE COMPLIED WITH.
25. CONTRACTOR TO INTRODUCE MANUAL HANDLING PROCEDURES PRIOR TO CONSTRUCTION AND MAINTENANCE WORKS.
26. CONTRACTOR TO INTRODUCE SAFE MAINTENANCE PROCEDURES PRIOR TO UNDERTAKING MAINTENANCE WORKS ON THESE ASSETS.

SEDIMENT CONTROL

27. ON COMMENCEMENT OF CONSTRUCTION WORKS, THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENT PROTECTION AUTHORITY PUBLICATION "CONSTRUCTION TECHNIQUES FOR SEDIMENT POLLUTION CONTROL." APPROPRIATE SILTATION CONTROL IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PERIOD OF THE WORKS.

SITE CLEARING

28. TOP SOIL TO BE STRIPPED ACROSS THE DEVELOPMENT SITE AS REQUIRED.
29. STRIPPED TOPSOIL SHALL BE STOCKPILED ON SITE FOR FUTURE LANDSCAPING USE. THE LOCATION OF TOPSOIL STOCKPILE SHALL BE AS APPROVED OR DIRECTED BY THE SUPERINTENDENT. SUBJECT TO THE SUPERINTENDENTS APPROVAL TOPSOIL IN EXCESS TO SITE REQUIREMENTS SHALL BE DISPOSED OFF SITE.

EARTHWORKS

30. A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER SHALL BE ENGAGED AT CONTRACTORS EXPENSE TO WITNESS AND APPROVE THE SUBGRADE PREPARATION WORKS AND FINAL PROOF ROLLING AS ADEQUATE FOR CONSTRUCTION.
31. DESIGN LEVELS PROVIDED IN THE DRAWINGS ARE FINISHED SURFACE LEVELS. EARTHWORKS SHOULD THEREFORE BE FINISHED AT THE APPROPRIATE LEVELS TO ALLOW FOR THE CONSTRUCTION OF PAVEMENTS AND SHOULDERS AS DOCUMENTED.
32. EARTHWORK SPOIL IN EXCESS OF SITE FILL REQUIREMENTS SHALL BE DISPOSED OFF SITE.
33. PRIOR TO EARTH FILLING WORKS THE EXPOSED EMBANKMENT FOUNDATION SHALL BE MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM OF 98% STANDARD COMPACTION PRIOR TO FILLING OR PAVEMENT CONSTRUCTION.
34. ANY SOFT, WET OR UNSUITABLE SUBGRADE MATERIALS, AS DEFINED IN THE SPECIFICATION, SHALL BE REMOVED AND REPLACED WITH AN APPROVED MATERIAL.
35. EXCAVATED MATERIAL THAT COMPLIES WITH THE SPECIFICATION REQUIREMENTS FOR FILL MAY BE USED AS BACKFILL.
36. ALL COMPACTION TO BE CARRIED OUT IN ACCORDANCE WITH COMPACTION TEST PROCEDURES DEFINED IN AS 1289. CERTIFICATION IS TO BE BY AN INDEPENDENT GEOTECHNICAL ENGINEER (AT CONTRACTORS EXPENSE).
37. ALL EXCAVATED AND FILLED BATTER AREAS SHALL BE SURFACED WITH A 150mm LAYER OF APPROVED TOPSOIL OR AS SHOWN OTHERWISE ON THE DRAWINGS.

PAVEMENTS

38. WHERE NEW ASPHALT, CONCRETE KERB & CHANNEL, PATHS AND DRIVEWAYS MATCH INTO EXISTING, THE EXISTING SURFACE IS TO BE SAW CUT AND MATCHED NEATLY.
39. ANY PAVEMENT SOFT SPOTS IDENTIFIED SHALL BE EXCAVATED TO A PROOF ROLLED BASE AND BACKFILLED WITH APPROVED MATERIAL COMPACTED IN 150mm LAYERS TO ACHIEVE THE REQUIRED DRY DENSITY VALUE.
40. CRUSHED CONCRETE COMPLYING WITH VICROADS SECTION 820 MAY BE USED IN LIEU OF VIRGIN CRUSHED ROCK SUBJECT TO APPROVAL BY THE SUPERINTENDENT.

KERBING AND THE ANCILLARY WORKS

41. SET OUT DIMENSIONS GIVEN TO KERBING ARE TO THE INVERT OF KERB AS DEFINED ON THE STANDARD DRAWINGS.
42. PEDESTRIAN CROSSING TO CONFORM TO AS 1428.1 AND RELEVANT AUTHORITIES STANDARD DETAILS WHERE APPLICABLE.

STORMWATER DRAINAGE

43. ALL STORMWATER DRAINS >150DIA ARE TO BE CLASS 2 RC, FRC, HDPE OR POLYPROPYLENE PIPES COMPLYING WITH REQUIREMENTS OF AS3500 UNLESS NOTED OTHERWISE. ALL PIPES ARE TO BE RUBBER RING JOINTED. ALTERNATIVE PIPE MATERIALS MAY BE USED SUBJECT TO APPROVAL BY THE SUPERINTENDENT.
44. ALL STORMWATER DRAINAGE PIPES LESS THAN 225DIA TO BE SEWER QUALITY UPVC WITH SOLVENT WELDED JOINTS, UNLESS NOTED OTHERWISE.
45. DRAINAGE TRENCHING WORKS TO BE IN ACCORDANCE WITH THE RELEVANT ACT AND REGULATIONS.
46. PIT COVER LEVELS (CL'S) TO EXISTING OR PROPOSED FINISHED LEVELS AS APPROPRIATE. ACCORDINGLY THE CONTRACTOR IS TO VERIFY DOCUMENTED CL'S PRIOR TO DRAINAGE INSTALLATION AND NOTIFY THE SUPERINTENDENT OF ANY ANOMALIES WITH CL'S AND FINISHED LEVELS FOR CLARIFICATION.
47. ALL DOWNPIPE CONNECTIONS TO BE MINIMUM 150Φ OR EQUAL TO DOWNPIPE DIAMETER, UNLESS OTHERWISE NOTED. ALL PIPES TO BE SEWER QUALITY UPVC, WITH SOLVENT WELDED JOINTS. DOWNPIPE CONNECTIONS SHALL TYPICALLY BE PLACED AT MIN GRADE OF 1:100.
48. EXISTING STORM WATER PIPE TO BE ABANDONED IS TO BE CUT AND SEALED WITH CONCRETE AT BOTH ENDS.
49. PIT SETOUT COORDINATES ARE TO THE CENTRE OF THE PIT.
50. ALL TABLE DRAINS AND VERGES ARE TO BE REINSTATED UPON COMPLETION OF WORKS TO THE SATISFACTION OF THE SUPERINTENDENT/OR THEIR REPRESENTATIVE.
51. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND
52. MAINTAINING A TEMPORARY SITE DRAINAGE SYSTEM AND TO MAINTAIN THE SITE IN A DRY AND STABLE CONDITION. DETAILS OF THE DRAINAGE SYSTEM SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERINTENDENT.

SUBSOIL DRAINAGE

53. PAVEMENT SUBSOIL DRAINS ARE TO BE PLACED IN ACCORDANCE WITH STANDARD DRAWINGS BEHIND ALL KERB AND CHANNEL, ON THE LOW SIDE OF ALL PAVEMENTS, AND ROAD CROSSINGS AT SAG VERTICAL CURVES.
54. SUBSOIL DRAINAGE SHALL OUTLET TO DRAINAGE PITS OR LAND DRAINS.

ISSUE	REVISION	DATE	INTIAL
C	ISSUE FOR 95% DA APPROVAL	31.07.20	PS
B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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PRELIMINARY

FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

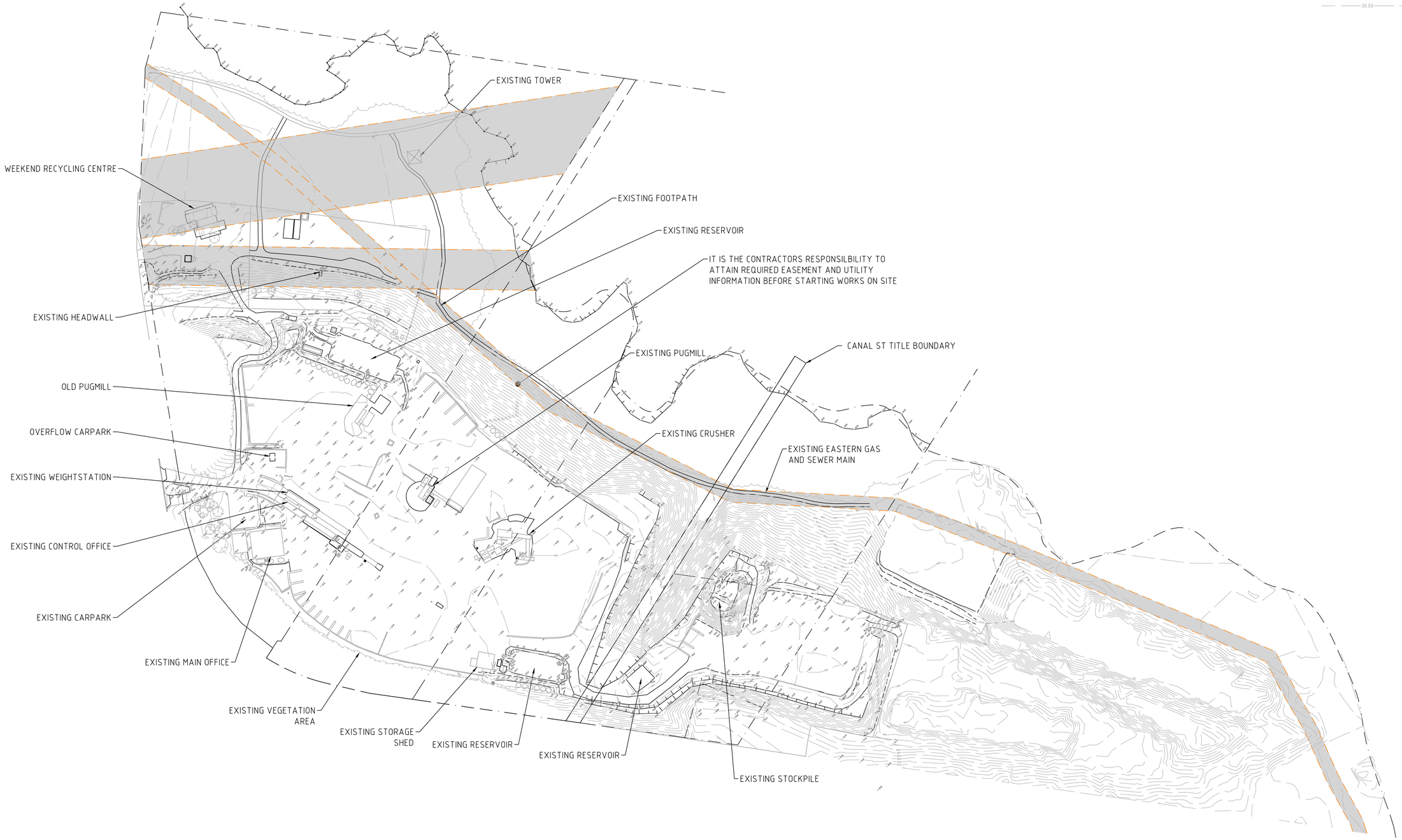
GENERAL NOTES

CIVIL DRAWING

Designed: PS	Approved: - STEVE NOVAK		
Drawn: MR	Project Engineer/Director:	Date: 15/05/2020	North
Scale: N/A	Project No: PS102981	Drawing No: C001	Issue C
Date: APRIL 2020			

LEGEND

- BOUNDARY
- EXISTING EASEMENT-REFER SURVEY
- EXISTING TOP OF BATTER
- 30.00 EXISTING SURFACE CONTOUR



1:1500 (A1)
1:3000 (A3)
0 20 40 60 80 100 120 140 m

ISSUE	REVISION	DATE	INTIAL
C	ISSUE FOR 95% DA APPROVAL	31.07.20	PS
B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

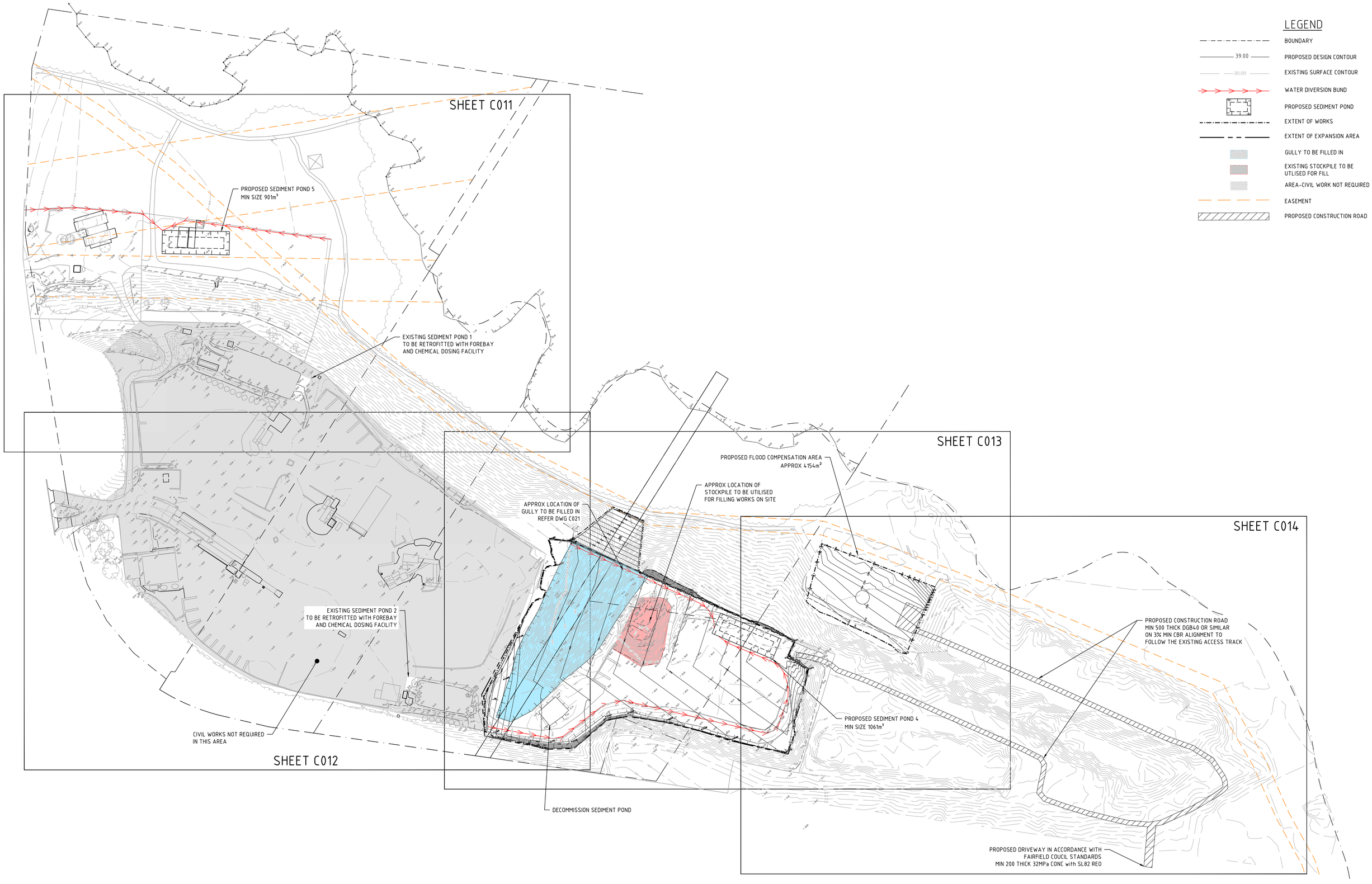
EXISTING SITE PLAN

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:1500
Date: APRIL 2020

Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
North

Project No: PS102981
Drawing No: C005
Issue: C



LEGEND

- BOUNDARY
- 39.00 — PROPOSED DESIGN CONTOUR
- 30.00 — EXISTING SURFACE CONTOUR
- WATER DIVERSION BUND
- PROPOSED SEDIMENT POND
- EXTENT OF WORKS
- EXTENT OF EXPANSION AREA
- GULLY TO BE FILLED IN
- EXISTING STOCKPILE TO BE UTLISED FOR FILL
- AREA-CIVIL WORK NOT REQUIRED
- EASEMENT
- PROPOSED CONSTRUCTION ROAD

1:1000 (A1)
1:2000 (A3)
0 10 20 30 40 50 60 70 80 90 100 m

ISSUE	REVISION	DATE	INTIAL
C	ISSUE FOR 95% DA APPROVAL	31.07.20	PS
B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

OVERALL GENERAL ARRANGEMENT PLAN

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:1250
Date: APRIL 2020
Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
North
Project No: PS102981
Drawing No: C010
Issue: C

PROPOSED SEDIMENT POND 5
MIN SIZE 901m³

CIVIL WORKS NOT REQUIRED
IN THIS AREA

EXISTING SEDIMENT POND 1
TO BE RETROFITTED WITH FOREBAY
AND CHEMICAL DOSING FACILITY.
REFER TO WSP REPORT
REF SWMP-001R REV C

ADJOINS SHEET C013

ADJOINS SHEET C012

LEGEND

- BOUNDARY
- 39.00 — PROPOSED DESIGN CONTOUR
- 30.00 — EXISTING SURFACE CONTOUR
- WATER DIVERSION BUND
- PROPOSED SEDIMENT POND
- EXTENT OF WORKS
- EXTENT OF EXPANSION AREA
- GULLY TO BE FILLED IN
- EXISTING STOCKPILE TO BE UTLISED FOR FILL
- AREA-CIVIL WORK NOT REQUIRED
- EASEMENT
- PROPOSED CONSTRUCTION ROAD

1:500 (A1)
1:1000 (A3)
0 5 10 15 20 25 30 35 40 45 50 m

ISSUE	REVISION	DATE	INTIAL
C	ISSUE FOR 95% DA APPROVAL	31.07.20	PS
B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

GENERAL ARRANGEMENT PLAN
SHEET 1 OF 4

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:500
Date: APRIL 2020
Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
Project No: PS102981
Drawing No: C011
Issue: C
North

ADJOIN SHEET C011

ADJOINS SHEET C013

EXTENT OF WORKS LINE TO REFLECT ACTUAL CONDITION

APPROX LOCATION OF GULLY TO BE FILLED IN REFER DWG C021

CIVIL WORKS NOT REQUIRED IN THIS AREA

EXISTING SEDIMENT POND 2 TO BE RETROFITTED WITH FOREBAY AND CHEMICAL DOSING FACILITY. REFER TO WSP REPORT REF SWMP-001R REV C

CIVIL WORKS NOT REQUIRED IN THIS AREA

DECOMMISSION OF SEDIMENT PONDS

LEGEND

- BOUNDARY
- 39.00 PROPOSED DESIGN CONTOUR
- 30.00 EXISTING SURFACE CONTOUR
- WATER DIVERSION BUND
- PROPOSED SEDIMENT POND
- EXTENT OF WORKS
- EXTENT OF EXPANSION AREA
- GULLY TO BE FILLED IN
- EXISTING STOCKPILE TO BE UTLISED FOR FILL
- AREA-CIVIL WORK NOT REQUIRED
- EASEMENT
- PROPOSED CONSTRUCTION ROAD

1:500 (A1)
1:1000 (A3)
0 5 10 15 20 25 30 35 40 45 50 m

ISSUE	REVISION	DATE	INTIAL
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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

GENERAL ARRANGEMENT PLAN
SHEET 2 OF 4

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:500
Date: APRIL 2020

Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
Project No: PS102981
Drawing No: C012
North
Issue: C

ADJOINS SHEET C012

EXTENT OF WORKS LINE TO REFLECT ACTUAL CONDITION

APPROX LOCATION OF STOCKPILE TO BE UTILISED FOR FILLING WORKS ON SITE

APPROX LOCATION OF GULLY TO BE FILLED IN REFER DWG C021

FLOOD COMPENSATION AREA APPROX 4154m²

EXISTING TREE TO REMAIN

PROPOSED SEDIMENT POND 4 MIN SIZE 1061m³

PROPOSED CONSTRUCTION ROAD MIN 500 THICK DGB40 OR SIMILAR ON MIN 3% CBR ALIGNMENT TO FOLLOW THE EXISTING ACCESS TRACK

DIVERSION TO BE ADJACENT TO BATTER EDGE

CIVIL WORKS NOT REQUIRED IN THIS AREA

DECOMMISSION OF SEDIMENT PONDS

LEGEND

- BOUNDARY
- 39.00 PROPOSED DESIGN CONTOUR
- 30.00 EXISTING SURFACE CONTOUR
- WATER DIVERSION BUND
- PROPOSED SEDIMENT POND
- EXTENT OF WORKS
- EXTENT OF EXPANSION AREA
- GULLY TO BE FILLED IN
- EXISTING STOCKPILE TO BE UTLISED FOR FILL
- AREA-CIVIL WORK NOT REQUIRED
- EASEMENT
- PROPOSED CONSTRUCTION ROAD

1:500 (A1)
1:1000 (A3)
0 5 10 15 20 25 30 35 40 45 50 m

ISSUE	REVISION	DATE	INTIAL
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B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

GENERAL ARRANGEMENT PLAN
SHEET 3 OF 4

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:500
Date: APRIL 2020
Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
Project No: PS102981
Drawing No: C013
North
Issue: C

FLOOD COMPENSATION AREA
APPROX 4154m²

EXISTING TREE TO REMAIN

PROPOSED SEDIMENT POND 4
MIN SIZE 1061m³

PROPOSED CONSTRUCTION ROAD
MIN 500 THICK DGB40 OR SIMILAR ON MIN 3% CBR
ALIGNMENT TO FOLLOW THE EXISTING ACCESS TRACK

DIVERSION TO BE ADJACENT
TO BATTER EDGE

PROPOSED CONSTRUCTION ROAD
MIN 500 THICK DGB40 OR SIMILAR ON MIN 3% CBR
ALIGNMENT TO FOLLOW THE EXISTING ACCESS TRACK

PROPOSED DRIVEWAY IN ACCORDANCE WITH
FAIRFIELD COUCIL STANDARDS
MIN 200 THICK 32MPa CONC with SL82 REO

ADJOINS SHEET C012

LEGEND

- BOUNDARY
- 39.00 — PROPOSED DESIGN CONTOUR
- 30.00 — EXISTING SURFACE CONTOUR
- WATER DIVERSION BUND
- PROPOSED SEDIMENT POND
- EXTENT OF WORKS
- EXTENT OF EXPANSION AREA
- GULLY TO BE FILLED IN
- EXISTING STOCKPILE TO BE UTLISED FOR FILL
- AREA-CIVIL WORK NOT REQUIRED
- EASEMENT
- PROPOSED CONSTRUCTION ROAD

1:500 (A1)
1:1000 (A3)
0 5 10 15 20 25 30 35 40 45 50 m

ISSUE	REVISION	DATE	INTIAL
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B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

GENERAL ARRANGEMENT PLAN
SHEET 4 OF 4

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:500
Date: APRIL 2020
Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
Project No: PS102981
Drawing No: C014
North
Issue: C

LEGEND

- CUT AREA
- FILL AREA
- 39.00 — PROPOSED DESIGN CONTOUR
- 30.00 — EXISTING SURFACE CONTOUR
- EXTENT OF WORKS
- BOUNDARY
- EASEMENT
- 0.5 — CUT CONTOUR (FCA)

C C026

D C026

A C025

B C025

SHEET C021

1:1500 (A1)
1:3000 (A3)
0 20 40 60 80 100 120 140 m

ISSUE	REVISION	DATE	INTIAL
C	ISSUE FOR 95% DA APPROVAL	31.07.20	PS
B	ISSUE FOR 90% DA APPROVAL	27.07.20	PS
A	ISSUE FOR DA APPROVAL	15.05.20	PS

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FAIRFIELD SUSTAINABLE RESOURCE CENTRE
WIDEMERE RD AND HASSELL ST

OVERALL EARTHWORKS PLAN

CIVIL DRAWING

Designed: PS
Drawn: MR
Scale: 1:1500
Date: APRIL 2020

Approved: - STEVE NOVAK
Project Engineer/Director: Date: 15/05/2020
North

Project No: PS102981
Drawing No: C020
Issue: C