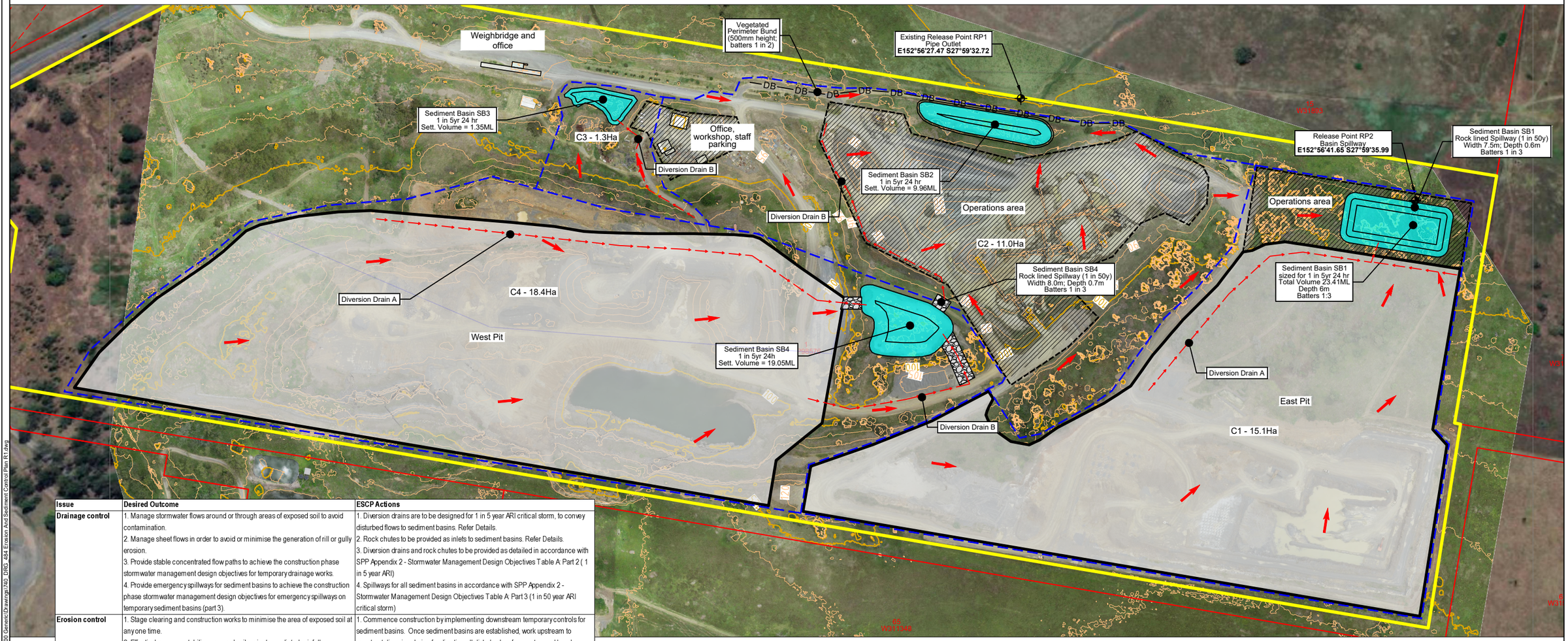
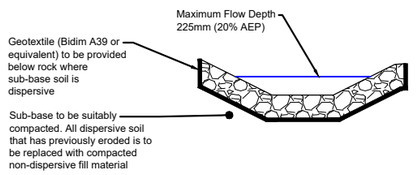
Attachment 2

Erosion and Sediment Control Plan

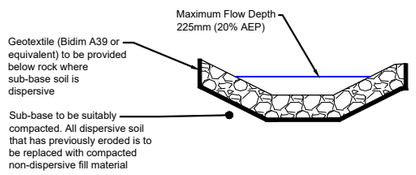


Issue	Desired Outcome	ESCP Actions
Drainage control	1. Manage stormwater flows around or through areas of exposed soil to avoid contamination. 2. Manage sheet flows in order to avoid or minimise the generation of rill or gully erosion. 3. Provide stable concentrated flow paths to achieve the construction phase stormwater management design objectives for temporary drainage works. 4. Provide emergency spillways for sediment basins to achieve the construction phase stormwater management design objectives for emergency spillways on temporary sediment basins (part 3).	1. Diversion drains are to be designed for 1 in 5 year ARI critical storm, to convey disturbed flows to sediment basins. Refer Details. 2. Rock chutes to be provided as inlets to sediment basins. Refer Details. 3. Diversion drains and rock chutes to be provided as detailed in accordance with SPP Appendix 2 - Stormwater Management Design Objectives Table A: Part 2 (1 in 5 year ARI) 4. Spillways for all sediment basins in accordance with SPP Appendix 2 - Stormwater Management Design Objectives Table A: Part 3 (1 in 50 year ARI critical storm)
Erosion control	1. Stage clearing and construction works to minimise the area of exposed soil at any one time. 2. Effectively cover or stabilise exposed soils prior to predicted rainfall. 3. Prior to completion of works for the development, and prior to removal of sediment controls, all site surfaces must be effectively stabilised using methods which will achieve effective short-term stabilisation.	1. Commence construction by implementing downstream temporary controls for sediment basins. Once sediment basins are established, work upstream to construct diversion drains for diverting all disturbed surface water, and bunds as detailed to divert clean water around disturbed areas. 2. Exposed soils / overburden dumps are to be stabilised and vegetated where possible. 3. Sediment basins and diversion drains to remain operational for the life of the quarry.
Sediment control	1. Direct runoff from exposed site soils to sediment controls that are appropriate to the extent of disturbance and level of erosion risk. 2. All exposed areas greater than 2500 metres must be provided with sediment controls which are designed, implemented and maintained to a standard which would achieve at least 80% of the average annual runoff volume of the contributing catchment treated (i.e. 80% hydrological effectiveness) to 50mg/L Total Suspended Solids (TSS) or less, and pH in the range (6.5–8.5).	1. All runoff from exposed areas must be diverted as detailed to relevant sediment basins for treatment, reuse and/or discharge in accordance with the site EA. 2. All disturbed areas of the quarry are treated by sediment basins sized to retain the 1 in 5 year ARI 24 hour duration rainfall event, in accordance with the DES Stormwater Guideline - Environmentallly Relevant Activities. Treatment limits and discharge criteria are outlined in the quarry EA conditions. Refer Details.
Litter, hydrocarbons and other contaminants	1. Remove gross pollutants and litter. 2. Avoid the release of oil or visible sheen to released waters. 3. Dispose of waste containing contaminants at authorised facilities.	1. Site to be managed in accordance with EA
Waterway stability and flood flow management	1. Where measures are required to meet post-construction waterway stability objectives (specified in table B), these are either installed prior to land disturbance and are integrated with erosion and sediment controls, or equivalent alternative measures are implemented during construction. 2. Earthworks and the implementation of erosion and sediment controls are undertaken in ways which ensure flooding characteristics (including stormwater quantity characteristics) external to the development site are not worsened during construction for all events up to and including the 1 in 100 year ARI (1% AEP).	1. Table B objectives are not applicable. Quarry to be managed in accordance with water quality release and conditions in EA 2. Sediment basins onsite designed to retain the 1 in 5 year 24 hour duration event and result in non-worsening of release (quantity) for all events up to and including the 1 in 100 year ARI (1% AEP) critical storm.

State Planning Policy (SPP) Appendix 2 - Table A: Stormwater management design objectives



Detail A
Rock-lined Diversion Drain (Typical)
V_{MAX} =1.4m/s
Width = 5.0m
Depth = 640mm
$Batters_{MAX}$ = 1 in 3
Rock Size = 150mm - 300mm



Detail B
Rock-lined Diversion Drain (Typical)
V_{MAX} = 1.03m/s
Width = 3.0m
Depth =340mm
$Batters_{MAX}$ = 1 in 3
Rock Size = 150mm - 200mm

REV	DESCRIPTION	DATE	BY
1	Altered pit design	05/10/22	MR

Data Sources:
Photography: Groundwork Plus RPA Survey, Captured 2021-12-23
Topography: Groundwork Plus RPA Survey, Captured 2021-12-23 UAV_DSM_1m
Cadastre: © The State of Queensland (DNRME) 2022
Ecosystem:
Other: Background Photography: © The State of Queensland (DNRME) 2019

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Legend:
- Site Boundary
- Cadastral Boundary
- Easement Boundary
- Proposed Extraction Boundary
- Catchment
- Sediment Basin / Water Storage

PROJECT: Bromelton North Quarry

CLIENT: Neilsens Quality Gravels Pty Ltd

TITLE: Figure 1 - Stormwater and ESC Plan

GROUNDWORK plus
PH: +61 7 3871 0411
WWW.GROUNDWORK.COM.AU

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