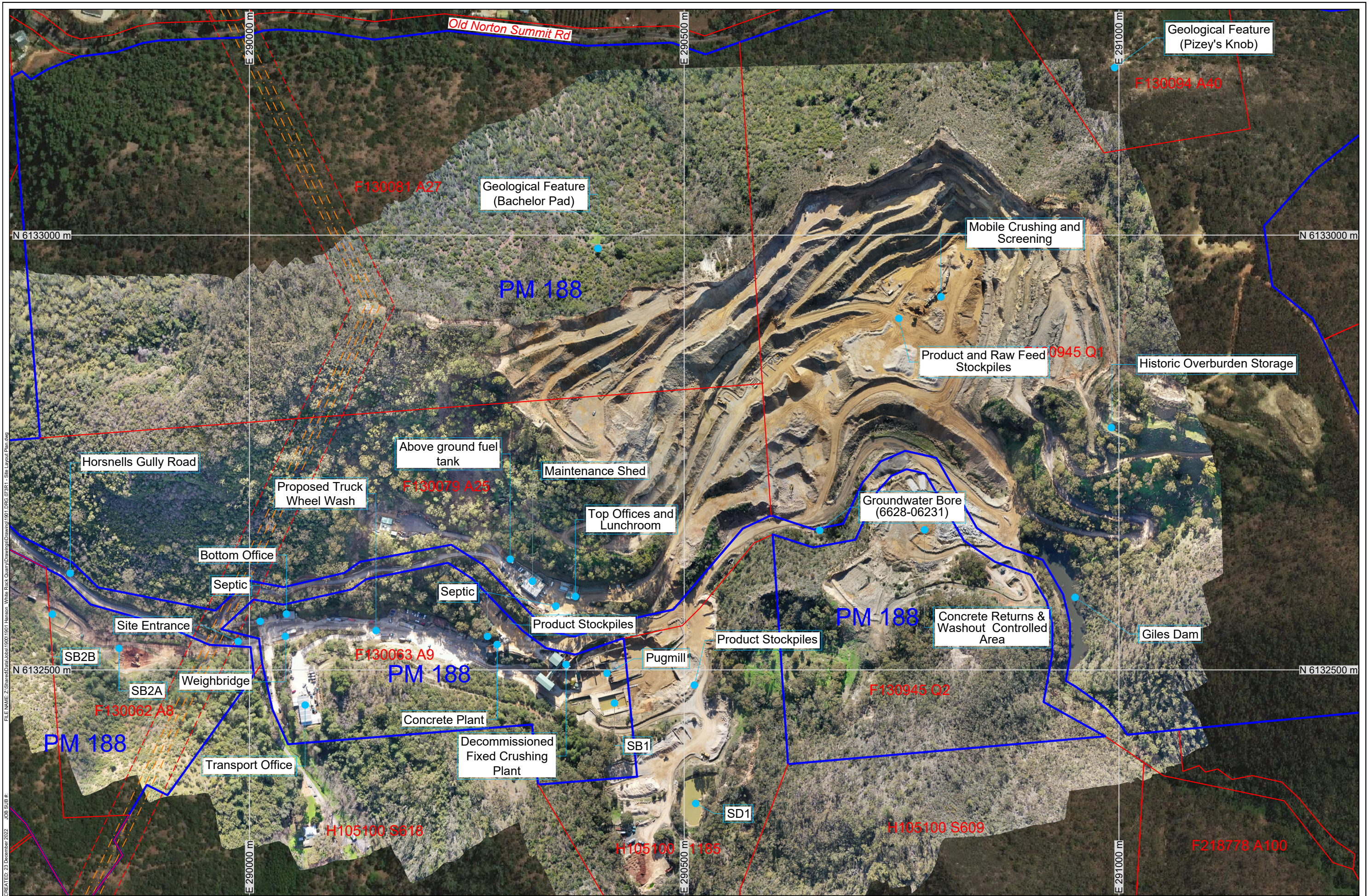


Drawing 1 – Site Location
Drawing 2 – Site Layout Plan
Drawing 3 – Land Use Map
Drawing 4 – Proximity to Infrastructure and Housing
Drawing 5 – Visual Assessment
Drawing 6 – Topographic Plan
Drawing 7 – Stormwater Management Plan - 2022
Drawing 8 – Hanson Magill Concrete Water Management Plan
Drawing 9 – Stormwater Management Plan - Stage 1
Drawing 10 – Stormwater Management Plan - Stage 2
Drawing 11 – Stormwater Management Plan - Stage 3
Drawing 12 – Stormwater Management Plan - Stage 3A
Drawing 13 – Bushland Vegetation Assessment Map
Drawing 14 – Heritage and Conservation Areas Map
Drawing 15 – Conceptual Revegetation Plan
Drawing 16 – Regional Geology
Drawing 17 – Typical Quarry Rehabilitation Detail
Drawing 18 – Interim South Wall Stockpile Design
Drawing 19 – Extraction Plan - Stage 1
Drawing 20 – Extraction Plan Cross Section - Stage 1
Drawing 21 – Quarry Development and Rehabilitation Plan - Stage 1
Drawing 22 – Extraction Plan - Stage 2
Drawing 23 – Extraction Plan Cross Section - Stage 2
Drawing 24 – Quarry Development and Rehabilitation Plan - Stage 2
Drawing 25 – Extraction Plan - Stage 3
Drawing 26 – Extraction Plan Cross Section - Stage 3
Drawing 27 – Quarry Development and Rehabilitation Plan - Stage 3
Drawing 28 – Extraction Plan - Stage 3A
Drawing 29 – Extraction Plan Cross Section - Stage 3A
Drawing 30 – Quarry Development and Rehabilitation Plan - Stage 3A (progressive)
Drawing 31 – Quarry Development and Rehabilitation Plan - Stage 3A
Drawing 32 – Conceptual Final Landform Plan
Drawing 33 – Conceptual Final Landform Cross Sections A-A to E-E

(Drawing No. 1901.DRG.028)
(Drawing No. 1901.DRG.073R1)
(Drawing No. 1901.DRG.078R1)
(Drawing No. 1901.DRG.075)
(Drawing No. 1901.DRG.076R1)
(Drawing No. 1901.DRG.081R1)
(Drawing No. 1901.DRG.082R2)
(Drawing No. 1901.DRG.012R1)
(Drawing No. 1901.DRG.067R4)
(Drawing No. 1901.DRG.068R4)
(Drawing No. 1901.DRG.069R4)
(Drawing No. 1901.DRG.070R4)
(Drawing No. 1901.DRG.120)
(Drawing No. 1901.DRG.080)
(Drawing No. 1901.DRG.119)
(Drawing No. 1901.DRG.023)
(Drawing No. 1901.DRG.114)
(Drawing No. 1901.DRG.121)
(Drawing No. 1901.DRG.47R4)
(Drawing No. 1901.DRG.47AR4)
(Drawing No. 1901.DRG.105R1)
(Drawing No. 1901.DRG.48R4)
(Drawing No. 1901.DRG.48AR4)
(Drawing No. 1901.DRG.106R1)
(Drawing No. 1901.DRG.49R4)
(Drawing No. 1901.DRG.49AR4)
(Drawing No. 1901.DRG.107R1)
(Drawing No. 1901.DRG.102R3)
(Drawing No. 1901.DRG.102AR3)
(Drawing No. 1901.DRG.110R1)
(Drawing No. 1901.DRG.111R1)
(Drawing No. 1901.DRG.083R2)
(Drawing No. 1901.DRG.083AR2)

drawings



REV	DESCRIPTION	DATE	BY
1	Addition of Proposed Truck Wheel Wash	2023-12-20	MD

Data Sources:
 Photography: GWP UAV Flyover 2020-July-07; Digital Globe
 Topography: GWP UAV Flyover 2020-July-07
 Cadastre:
 Ecosystem:
 Other:

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Legend:

- Cadastral
- - - Easement
- - - Powerline
- Private Mine



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

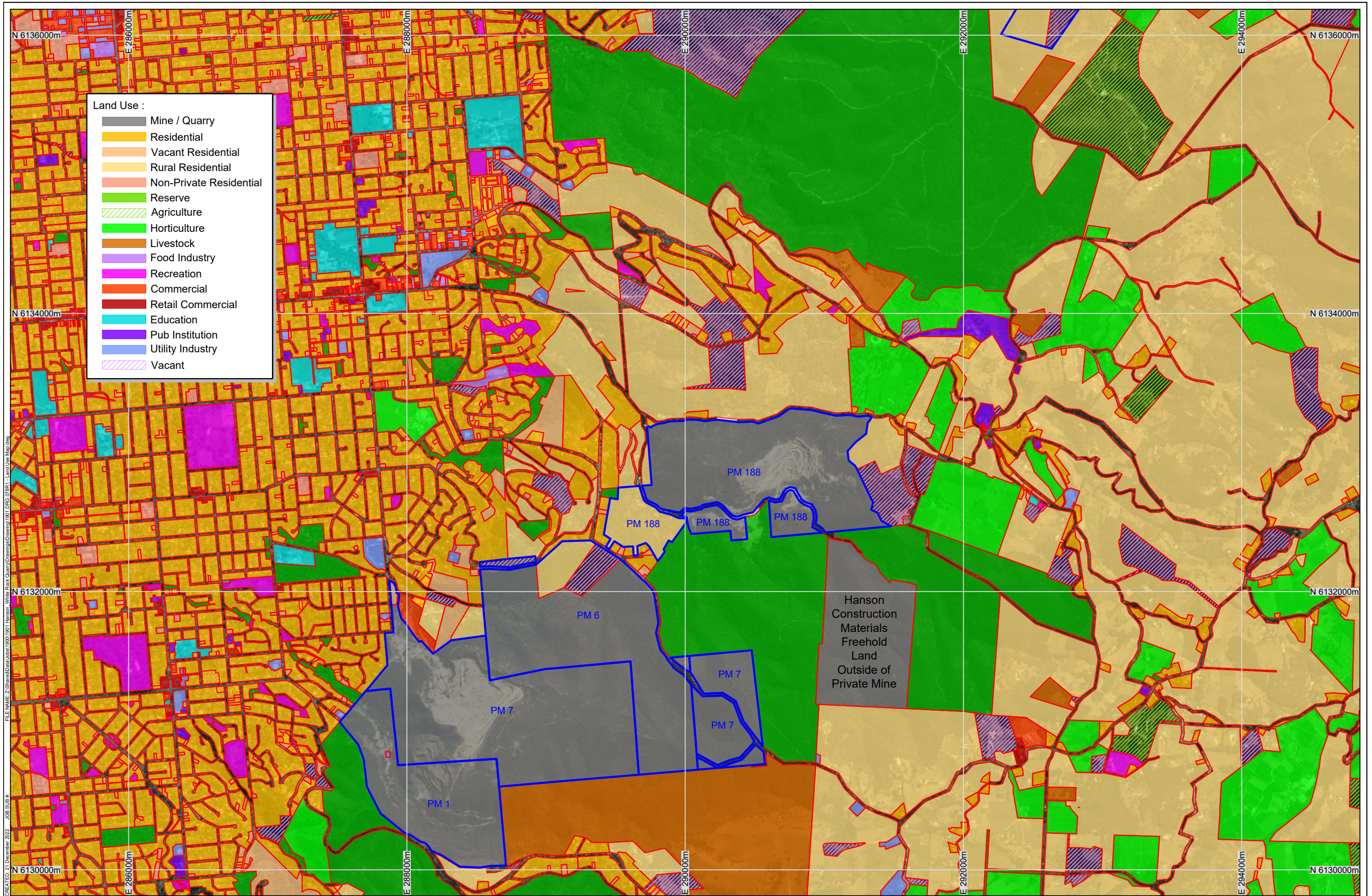
TITLE: **Site Layout Plan**

SCALE: 1:4,000
When Printed On A3

DRAWING NUMBER: **1901.DRG.073** REVISION: **1**

DATE: 20 February 2023 DRAWN: CPARHAM DATUM: HORIZONTAL / VERTICAL / ZONE
 PRINTED: 20 February 2023 CHECKED: NMANNING MGA / AHD / 54

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



Land Use :

[Grey Box]	Mine / Quarry
[Yellow Box]	Residential
[Light Orange Box]	Vacant Residential
[Light Yellow Box]	Rural Residential
[Light Red Box]	Non-Private Residential
[Green Box]	Reserve
[Green with Diagonal Lines Box]	Agriculture
[Bright Green Box]	Horticulture
[Brown Box]	Livestock
[Purple Box]	Food Industry
[Pink Box]	Recreation
[Orange Box]	Commercial
[Dark Red Box]	Retail Commercial
[Cyan Box]	Education
[Dark Purple Box]	Pub Institution
[Blue Box]	Utility Industry
[White with Diagonal Lines Box]	Vacant

FILE NAME: Z:\SharedData\Jobs\1901\1901_Hanson_White_Rock_Quarry\Drawings\Drawing\1901_DRG_078R1_Land_Use_Map.dwg
 CREATED: 21 December 2022
 JOB SUB #

REV	DESCRIPTION	DATE	BY
1	Updated Land Use Dataset	21-12-22	CP

Data Sources:
 Photography: Digital Globe
 Cadastral: Data.sa.gov.au. Boundaries are indicative only, not all boundaries shown
 Ecosystem: Other: https://map.sarig.sa.gov.au/
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Legend:

[Red Line]	Cadastral Boundary
[Blue Line]	Private Mine



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Land Use Map**

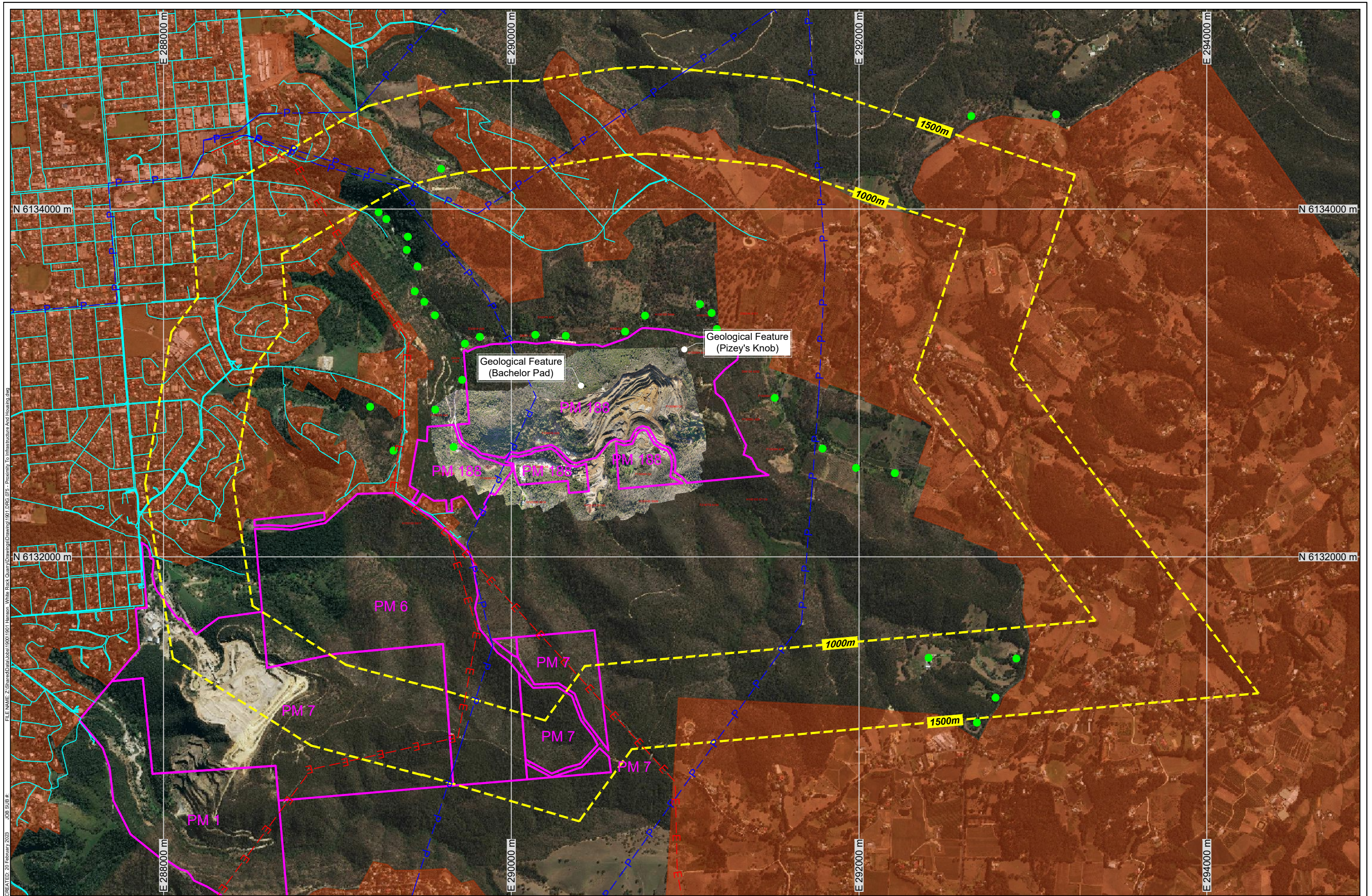
SCALE: 1:25,000
 0 500m

DRAWING NUMBER: 1901.DRG.078
 REVISION: 1

DATE: 20 February 2023
 PRINTED: 20 February 2023

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

DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54



FILE NAME: Z:\SharedData\Jobs\1901\1901_Hanson_White_Rock_Quarry\Drawings\Drawing\1901.DRG.075 - Proximity To Infrastructure And Housing.dwg
 CREATED: 20 February 2023
 JOB SUB #

REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography: GWP UAV Flyover 2020-July-07; Digital Globe
 Topography: GWP UAV Flyover 2020-July-07
 Cadastre:
 Ecosystem:
 Other:

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Legend:

- Cadastral
- Private Mine
- P- Power Overhead Transmission Lines
- E- Power Distribution Lines
- Water Mains (pipelines)

- Sensitive Receptors
- Areas Containing Sensitive Receptors



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Proximity to Infrastructure and Housing**

	SCALE: 1:20,000 <small>When Printed On A3</small>	DRAWING NUMBER: 1901.DRG.075	REVISION:
	DATE: 20 February 2023 PRINTED: 20 February 2023	DRAWN: CPARHAM CHECKED: NMANNING	DATUM: HORIZONTAL / VERTICAL / ZONE MGA / AHD / 54

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

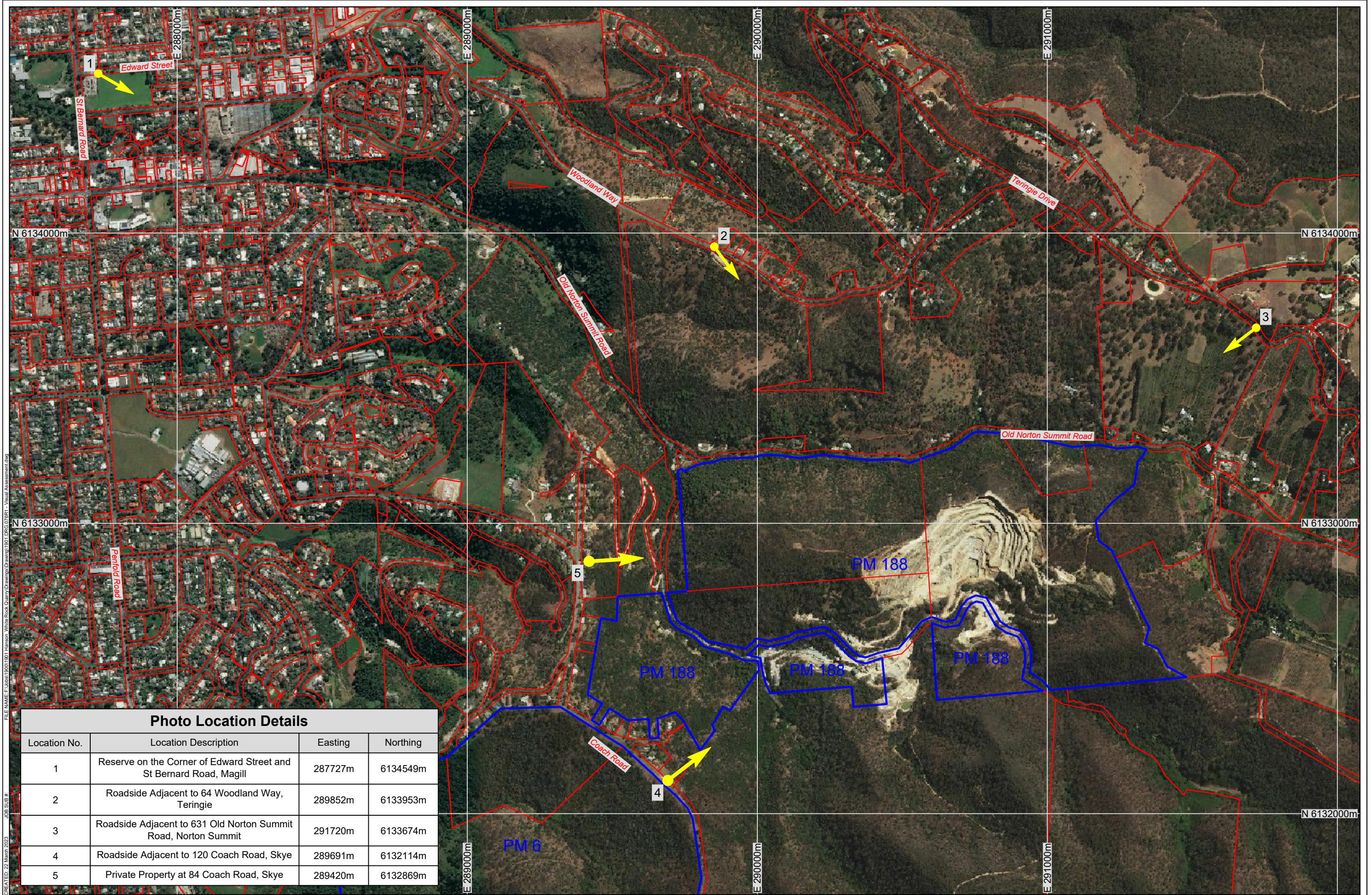


Photo Location Details

Location No.	Location Description	Easting	Northing
1	Reserve on the Corner of Edward Street and St Bernard Road, Magill	287727m	6134549m
2	Roadside Adjacent to 64 Woodland Way, Teringie	289852m	6133953m
3	Roadside Adjacent to 631 Old Norton Summit Road, Norton Summit	291720m	6133674m
4	Roadside Adjacent to 120 Coach Road, Skye	289691m	6132114m
5	Private Property at 84 Coach Road, Skye	289420m	6132869m

FILE NAME: P:\Jobs\1901\1901_Hanson White Rock Quarry Drawings\Drawings\1901_DRG_076\1 - Visual Assessment.dwg
 JOB SUB #
 CREATED: 22 March 2023

REV	DESCRIPTION	DATE	BY
1	Added Photo Point 5	21-12-22	CP

Data Sources:
 Photography: GWP UAV Flyover 2020-July-07; Digital Globe
 Topography: GWP UAV Flyover 2020-July-07
 Cadastre:
 Ecosystem:
 Other:

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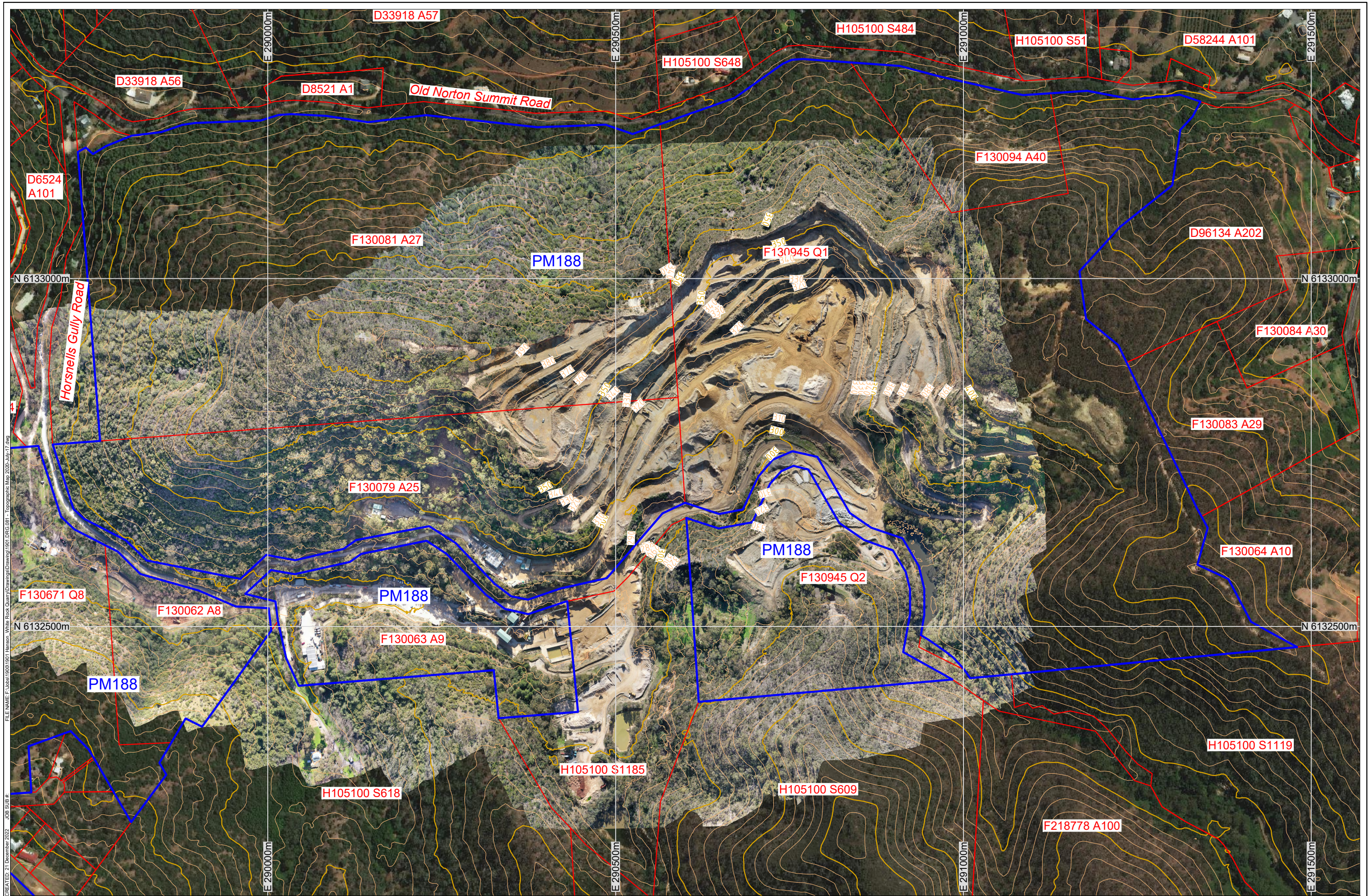
Legend:

- Cadastral
- Private Mine
- Photo Location



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Visual Assessment**
GROUNDWORK plus
 SCALE: 1:12,000
 0 160m
 DRAWING NUMBER: 1901.DRG.076
 REVISION: 1
 DATE: 22 March 2023
 DRAWN: CPARHAM
 DATUM: HORIZONTAL / VERTICAL / ZONE
 PRINTED: 22 March 2023
 CHECKED: NMANNING
 MGA / AHD / 54



REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography: UAV Flyover 2020-Mar-26 & 2019-Nov-19
 Topography: LiDAR Data 2019-Dec-06
 Cadastral: data.sa.gov.au
 Ecosystem:
 Other:

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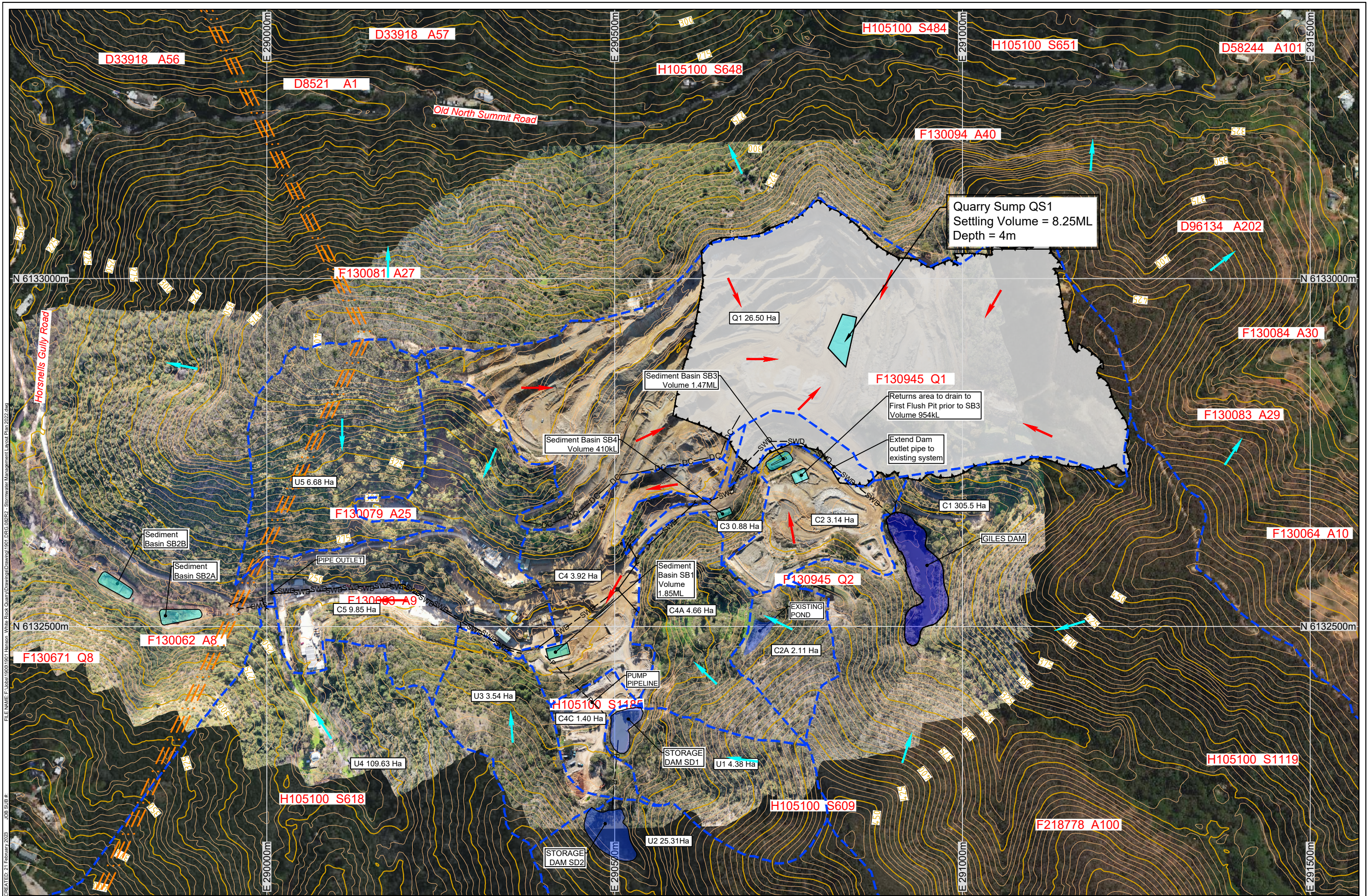
Legend:

- Cadastral
- Private Mine



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Topographic Plan**
 SCALE: 1:5,000
 DRAWING NUMBER: **1901.DRG.081**
 REVISION: **1**
 DATE: 21 December 2022
 DRAWN: MRescar
 CHECKED: JRowe
 DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54



REV	DESCRIPTION	DATE	BY
1	Progressive Rehabilitation Modified to Avoid Road Reserve	10-08-20	JHV
2	Pit and Rehabilitation Modified	04-12-20	JHV

Data Sources:
 Photography: Groundwork Plus Pty Ltd UAV Photogrammetry, 2020-03-26; 2019-11-19
 Topography: LIDAR Survey (By Others), 2019-12-06
 Cadastre: © The Government of South Australia (DPTI) 2020
 Ecosystem: Other:

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Legend:

	Cadastral Boundary		Clean Surface Water Flow		Pumped Stormwater
	High Voltage Transmission Cables		Dirty Surface Water Flow		Underground Pipe
	Plant Location		Diversion Bund		Diversion Channel
	Catchment Boundary				

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

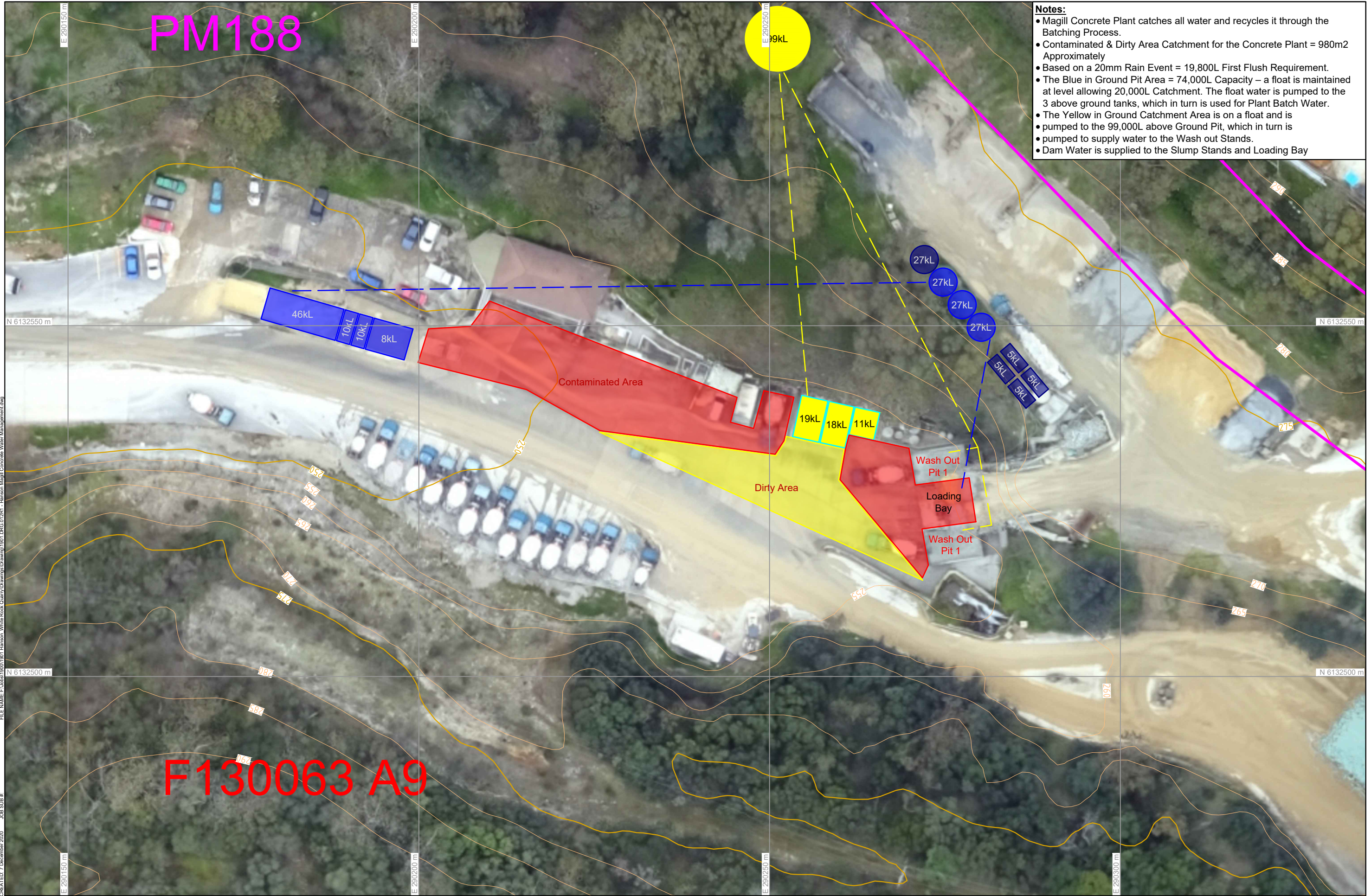
TITLE: **Stormwater Management Plan - 2022**

GROUNDWORK plus
 SCALE: 1:5,000
 DATE: 22 February 2023
 PRINTED: 22 February 2023

DRAWING NUMBER: 1901.DRG.082
 REVISION: 2
 DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54

PM188

- Notes:**
- Magill Concrete Plant catches all water and recycles it through the Batching Process.
 - Contaminated & Dirty Area Catchment for the Concrete Plant = 980m2 Approximately
 - Based on a 20mm Rain Event = 19,800L First Flush Requirement.
 - The Blue in Ground Pit Area = 74,000L Capacity – a float is maintained at level allowing 20,000L Catchment. The float water is pumped to the 3 above ground tanks, which in turn is used for Plant Batch Water.
 - The Yellow in Ground Catchment Area is on a float and is pumped to the 99,000L above Ground Pit, which in turn is pumped to supply water to the Wash out Stands.
 - Dam Water is supplied to the Slump Stands and Loading Bay



F130063 A9

REV	DESCRIPTION	DATE	BY
1	Additional Water Storage Tanks Added	07-12-2020	JHV

Data Sources:
 Photography: Aerial Survey 2016-08-04
 Topography: Aerial Survey 2016-08-04 (GNSS)
 Cadastre:
 Ecosystem:
 Other:

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Legend:
 Private Mine Boundary
 Cadastral Boundary



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Hanson Magill Concrete Water Management Plan**

GROUNDWORK plus

SCALE: 1:500
 When Printed On A3

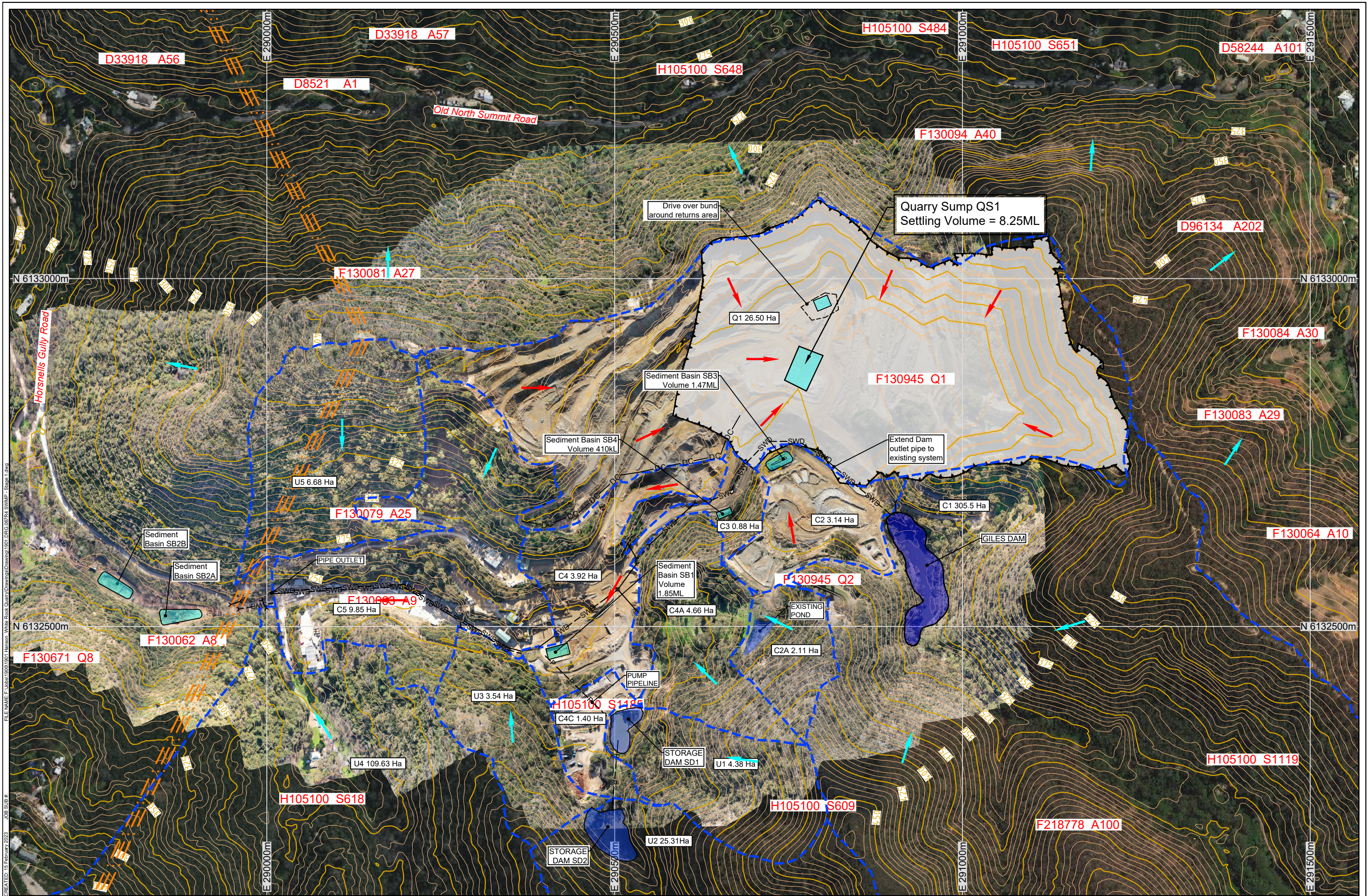
DRAWING NUMBER: 1901.DRG.012
 REVISION: 1

DATE: 7 December 2020
 PRINTED: 7 December 2020

DRAWN: JHV
 CHECKED: MJ

DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54

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



REV	DESCRIPTION	DATE	BY
1	Progressive Rehabilitation Modified to Avoid Road Reserve	10-08-20	JHV
2	Pit and Rehabilitation Modified	04-12-20	JHV

Data Sources:
 Photography: Groundwork Plus Pty Ltd UAV Photogrammetry, 2020-03-26; 2019-11-19
 Topography: LIDAR Survey (By Others), 2019-12-06
 Cadastre: © The Government of South Australia (DPTI) 2020
 Ecosystem: Other:

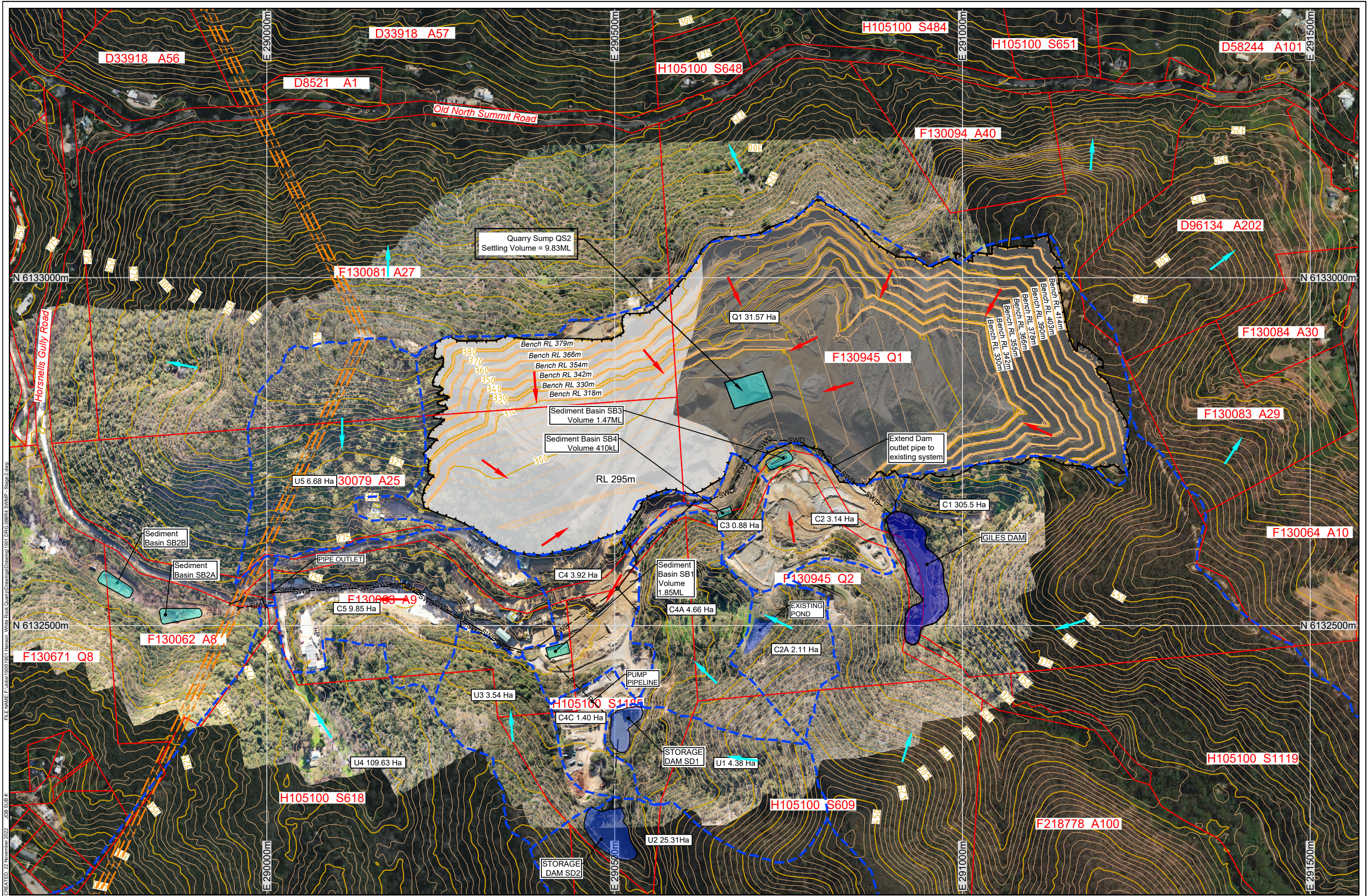
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Legend:

Cadastral Boundary	Clean Surface Water Flow	Pumped Stormwater
High Voltage Transmission Cables	Dirty Surface Water Flow	Underground Pipe
Plant Location	Diversion Bund	
Catchment Boundary	Diversion Channel	

PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Stormwater Management Plan - Stage 1**
 SCALE: 1:5,000
 DRAWING NUMBER: **1901.DRG.067**
 REVISION: **4**
 DATE: 15 February 2023
 PRINTED: 15 February 2023
 CHECKED: JRowe



REV	DESCRIPTION	DATE	BY
1	Progressive Rehabilitation Modified to Avoid Road Reserve	10-08-20	JHV
2	Pit and Rehabilitation Modified	04-12-20	JHV

Data Sources:
 Photography: Groundwork Plus Pty Ltd UAV Photogrammetry, 2020-03-26; 2019-11-19
 Topography: LIDAR Survey (By Others), 2019-12-06
 Cadastre: © The Government of South Australia (DPTI) 2020
 Ecosystem: Other:

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Legend:

- Cadastral Boundary
- Clean Surface Water Flow
- Pumped Stormwater
- High Voltage Transmission Cables
- Dirty Surface Water Flow
- Underground Pipe
- Plant Location
- Diversion Bund
- Diversion Channel
- Catchment Boundary

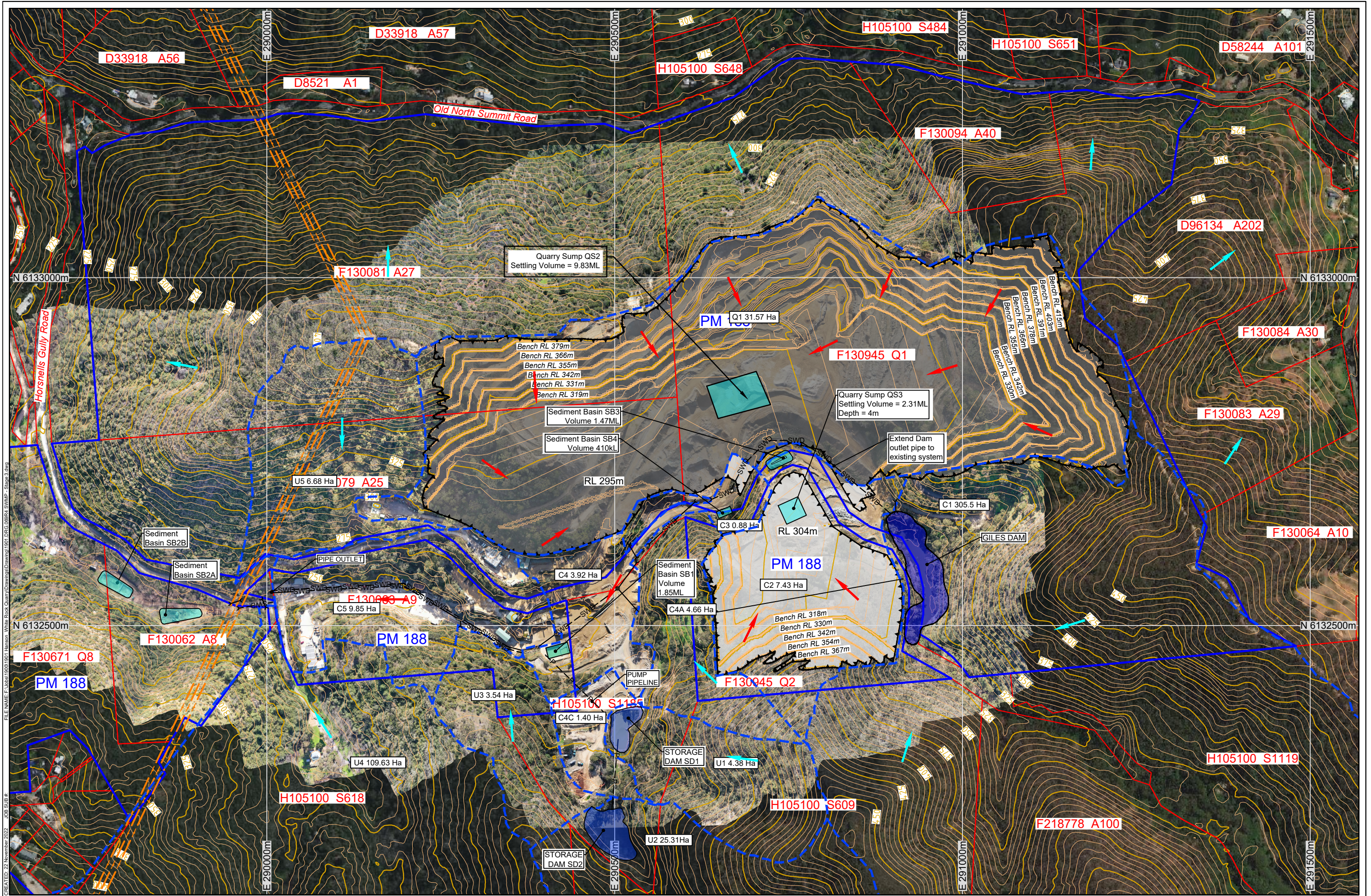
PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Stormwater Management Plan - Stage 2**

GROUNDWORK plus
 SCALE: 1:5,000
 DATE: 22 November 2022
 PRINTED: 15 February 2023

DRAWING NUMBER: 1901.DRG.068
 REVISION: 4
 DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54



REV	DESCRIPTION	DATE	BY
1	Progressive Rehabilitation Modified to Avoid Road Reserve	10-08-20	JHV
2	Pit and Rehabilitation Modified	04-12-20	JHV

Data Sources:
 Photography: Groundwork Plus Pty Ltd UAV Photogrammetry, 2020-03-26; 2019-11-19
 Topography: LIDAR Survey (By Others), 2019-12-06
 Cadastre: © The Government of South Australia (DPTI) 2020
 Ecosystem: Other:

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Legend:

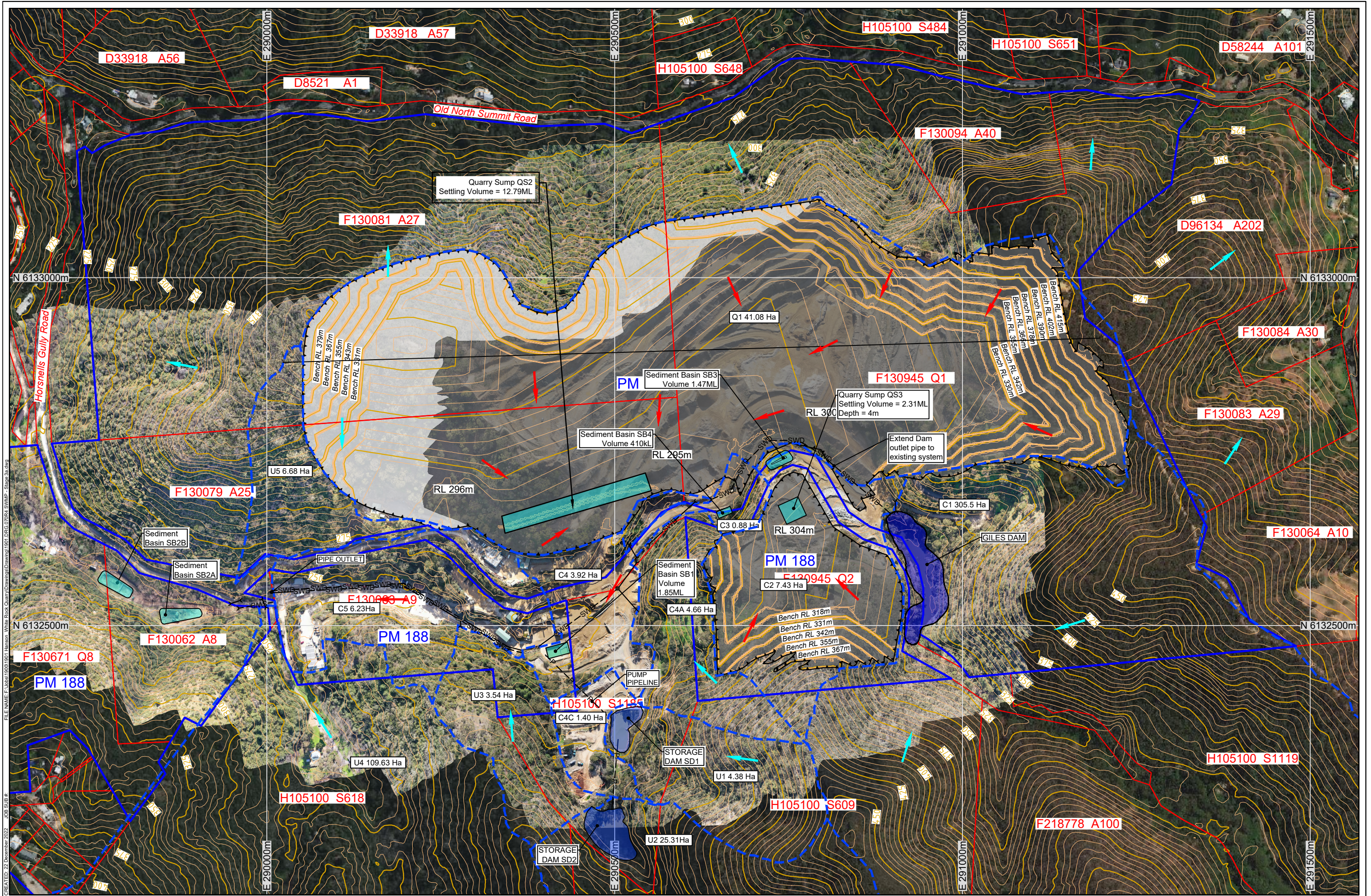
- Cadastral Boundary
- Clean Surface Water Flow
- Pumped Stormwater
- High Voltage Transmission Cables
- Dirty Surface Water Flow
- Underground Pipe
- Plant Location
- Diversion Bund
- Diversion Channel
- Catchment Boundary

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Stormwater Management Plan - Stage 3**

GROUNDWORK plus
 SCALE: 1:5,000
 DATE: 22 November 2022
 PRINTED: 15 February 2023
 DRAWN: MRescar
 CHECKED: JRowe
 DATUM: HORIZONTAL / VERTICAL / ZONE
 DRAWING NUMBER: **1901.DRG.069**
 REVISION: **4**
 MGA / AHD / 54



REV	DESCRIPTION	DATE	BY
1	Progressive Rehabilitation Modified to Avoid Road Reserve	10-08-20	JHV
2	Pit and Rehabilitation Modified	04-12-20	JHV

Data Sources:
 Photography: Groundwork Plus Pty Ltd UAV Photogrammetry, 2020-03-26; 2019-11-19
 Topography: LIDAR Survey (By Others), 2019-12-06
 Cadastre: © The Government of South Australia (DPTI) 2020
 Ecosystem: Other:

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Legend:

- Cadastral Boundary
- Clean Surface Water Flow
- Pumped Stormwater
- Dirty Surface Water Flow
- Underground Pipe
- High Voltage Transmission Cables
- Diversion Bund
- Diversion Channel
- Plant Location
- Catchment Boundary

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Stormwater Management Plan - Stage 3A**

SCALE: 1:5,000
 DATE: 22 December 2022
 PRINTED: 15 February 2023

DRAWING NUMBER: 1901.DRG.070
 REVISION: 4
 DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54

290000E

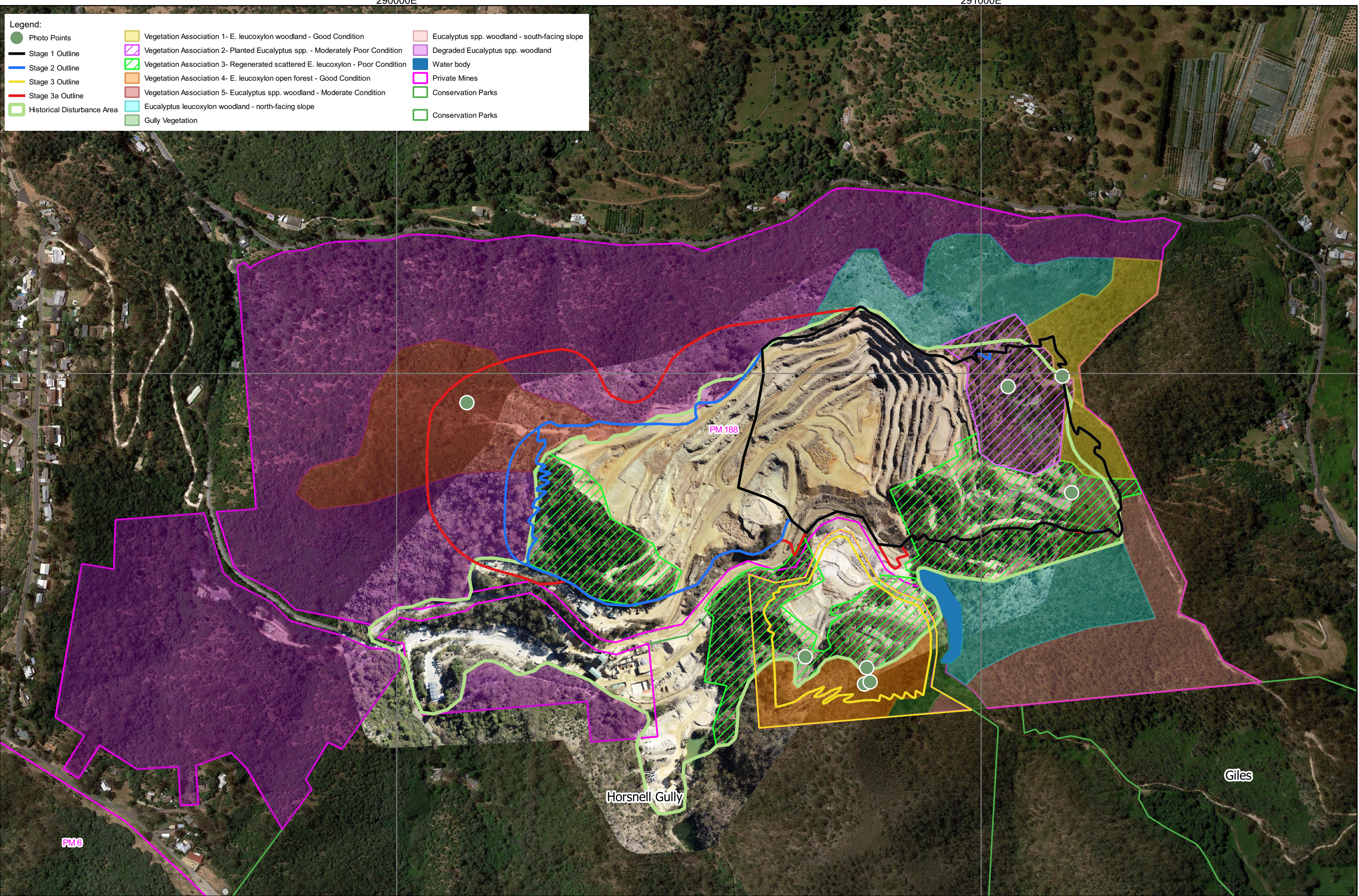
291000E

Legend:

- Photo Points
- Stage 1 Outline
- Stage 2 Outline
- Stage 3 Outline
- Stage 3a Outline
- Historical Disturbance Area
- Vegetation Association 1- E. leucoxylon woodland - Good Condition
- Vegetation Association 2- Planted Eucalyptus spp. - Moderately Poor Condition
- Vegetation Association 3- Regenerated scattered E. leucoxylon - Poor Condition
- Vegetation Association 4- E. leucoxylon open forest - Good Condition
- Vegetation Association 5- Eucalyptus spp. woodland - Moderate Condition
- Eucalyptus leucoxylon woodland - north-facing slope
- Gully Vegetation
- Eucalyptus spp. woodland - south-facing slope
- Degraded Eucalyptus spp. woodland
- Water body
- Private Mines
- Conservation Parks
- Conservation Parks

6133000N

6133000N



290000E

291000E

REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography: Google Satellite Imagery accessed: 09-March-2023
 Cadastre: Data.sa.gov.au/boundaries are indicative only, not all boundaries shown
 Other: SARIG, 2021



PROJECT: White Rock Quarry
 CLIENT: Hanson Construction Materials Pty Ltd

TITLE: Bushland Vegetation Assessment Map

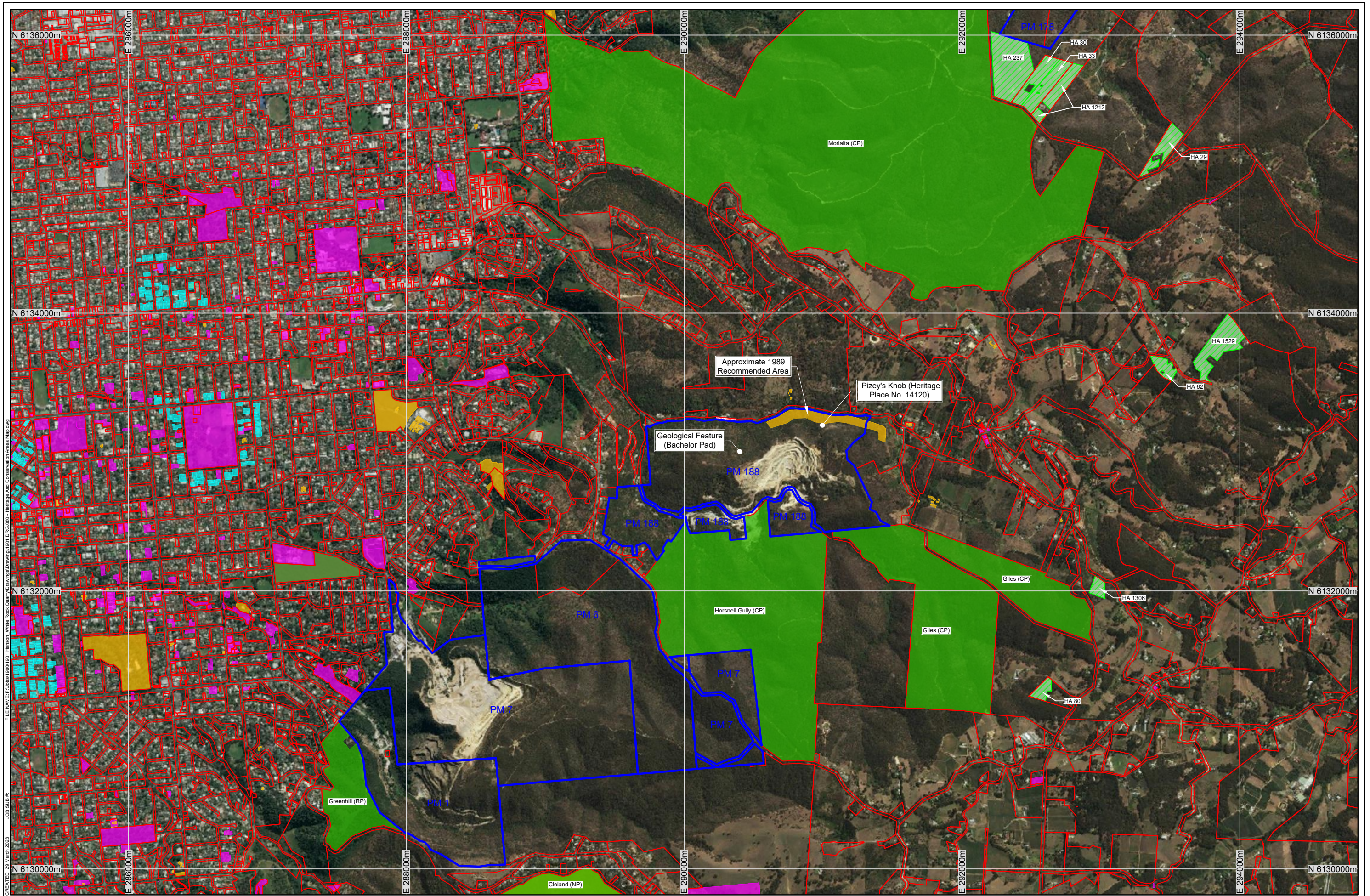
GROUNDWORK plus

SCALE: 1:6,000
(When Printed On A3)

DATE: 09-March-2023
 PRINTED: 09-March-2023

DRAWN: LJ
 CHECKED:

DRAWING NUMBER: 1901.DRG.120
 DATUM: HORIZONTAL / VERTICAL / ZONE: MGA / AHD / 54
 REVISION: EPSG:7854



FILE NAME: F:\Jobs\1901\1901_Hanson White Rock Quarry\Drawings\1901_DRG_080 - Heritage and Conservation Areas Map.dwg
 JOB SUB #
 CREATED: 29 March 2023

REV	DESCRIPTION	DATE	BY

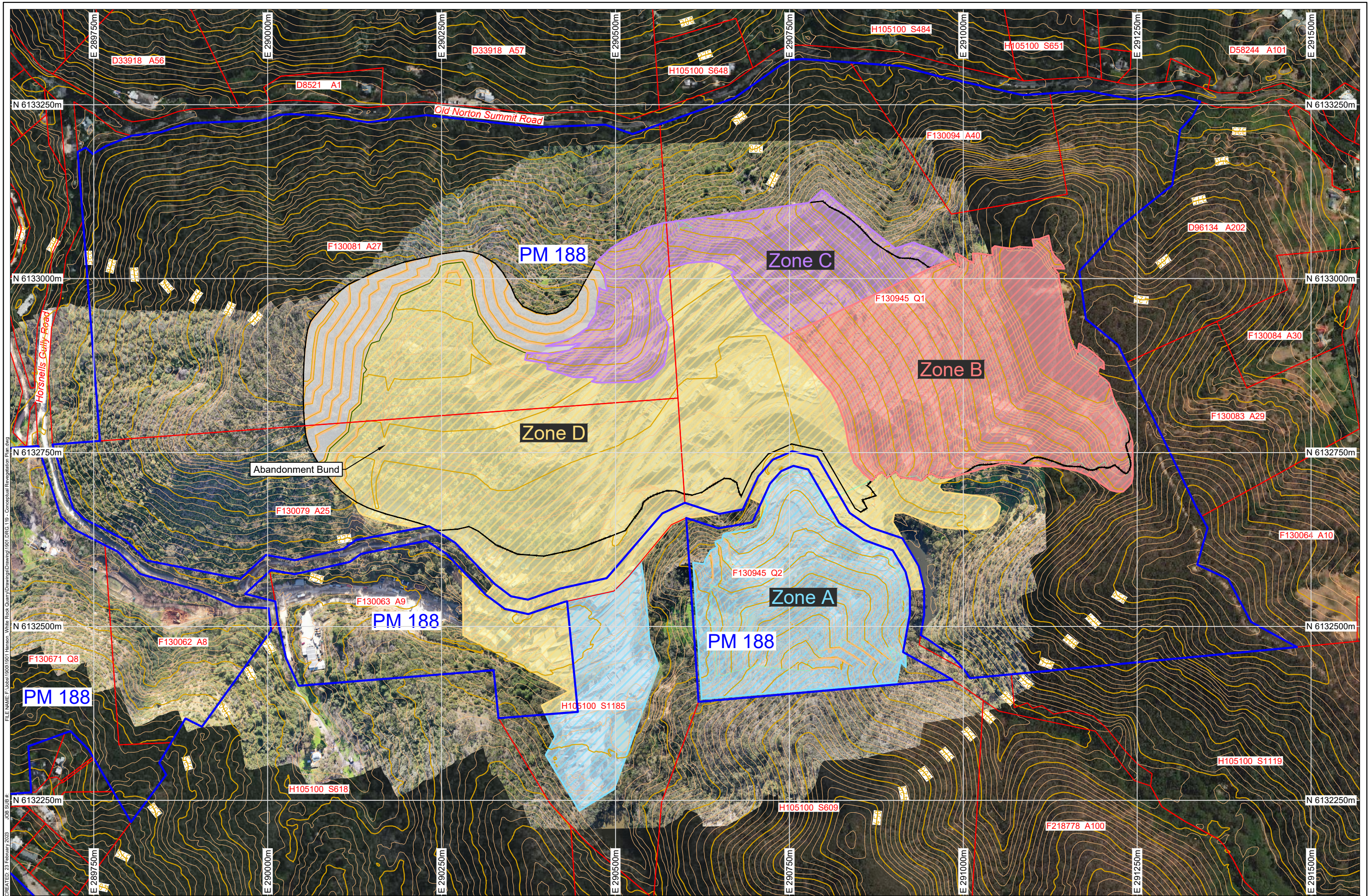
Data Sources:
 Photography: Digital Globe
 Topography: © The Government of South Australia (DIT) 2021. Boundaries are indicative only
 Cadastral: © The Government of South Australia (SARIG) 2023, & (DEW) 2023
 Ecosystem: © The Government of South Australia (SARIG) 2023, & (DEW) 2023
 Other: © The Government of South Australia (SARIG) 2023, & (DEW) 2023
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Legend:

- Cadastral Boundary
- Private Mine
- Conservation Areas (*National Parks and Wildlife Act, Wilderness Protection Act and reserves for conservation purposes under the Crown Land Management Act 2009*)
- State Heritage Places
- Local Heritage Places
- Contributory Heritage Places
- Native Vegetation Heritage Agreements Areas (*Native Vegetation Act 1991*)

PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Heritage and Conservation Areas Map**
GROUNDWORK plus
 SCALE: 1:25,000
 DATE: 29 March 2023
 DRAWN: CPARHAM
 PRINTED: 29 March 2023
 CHECKED: MJONES
 DRAWING NUMBER: **1901.DRG.080**
 REVISION:
 DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54



REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastral: © The Government of South Australia (DIT) 2022
 Ecosystem: © 2022 Microsoft Corporation; © 2022 Maxar; © CNES (2022) Distribution Airbus DS
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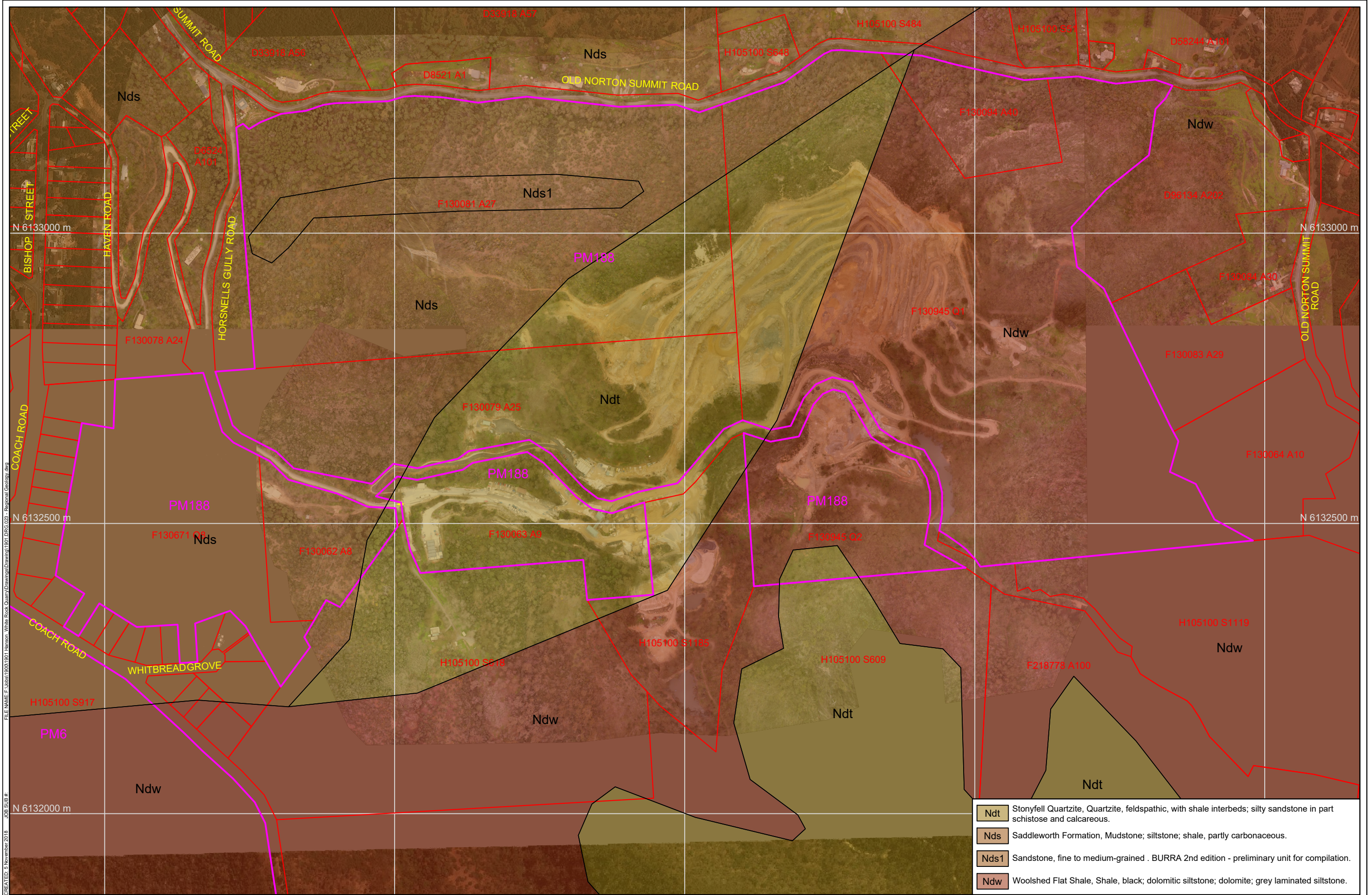
Legend:

- Cadastral
- Private Mine
- Remaining Faces
- Zone A (10.65 Ha)
- Zone B (11.38 Ha)
- Zone C (6.61 Ha)
- Zone D (24.90 Ha)

PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**
 TITLE: **Conceptual Revegetation Plan**

SCALE: 1:5,000
 DATE: 23 February 2023
 DRAWN: CParham
 PRINTED: 23 February 2023
 CHECKED: MJones

DRAWING NUMBER: **1901.DRG.119**
 REVISION: **MGA / AHD / 54**
 DATUM: HORIZONTAL / VERTICAL / ZONE



FILE NAME: F:\Jobs\1901\1901_Hanson_White_Rock_Quarry\Drawings\1901_DRG.023 - Regional Geology.dwg
 CREATED: 5 November 2018 10:00:00 AM
 JOB SUB #

Ndt	Stonyfell Quartzite, Quartzite, feldspathic, with shale interbeds; silty sandstone in part schistose and calcareous.
Nds	Saddleworth Formation, Mudstone; siltstone; shale, partly carbonaceous.
Nds1	Sandstone, fine to medium-grained . BURRA 2nd edition - preliminary unit for compilation.
Ndw	Woolshed Flat Shale, Shale, black; dolomitic siltstone; dolomite; grey laminated siltstone.

REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography: UAV Survey, Captured 28-08-2017.
 Topography: UAV Survey, Captured 28-08-2017.
 Cadastre: SA PLG
 Ecosystem: SA PLG
 Other:

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Legend:

- Private Mine Boundary
- Cadastral Boundary
- Road



White Rock Quarry

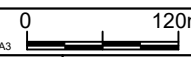
CLIENT: **Hanson Construction Materials Pty Ltd**

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

Regional Geology

SCALE: 1:6,000



DATE: 5 November 2018
 PRINTED: 8 December 2020

DRAWING NUMBER: **1901.DRG.023**

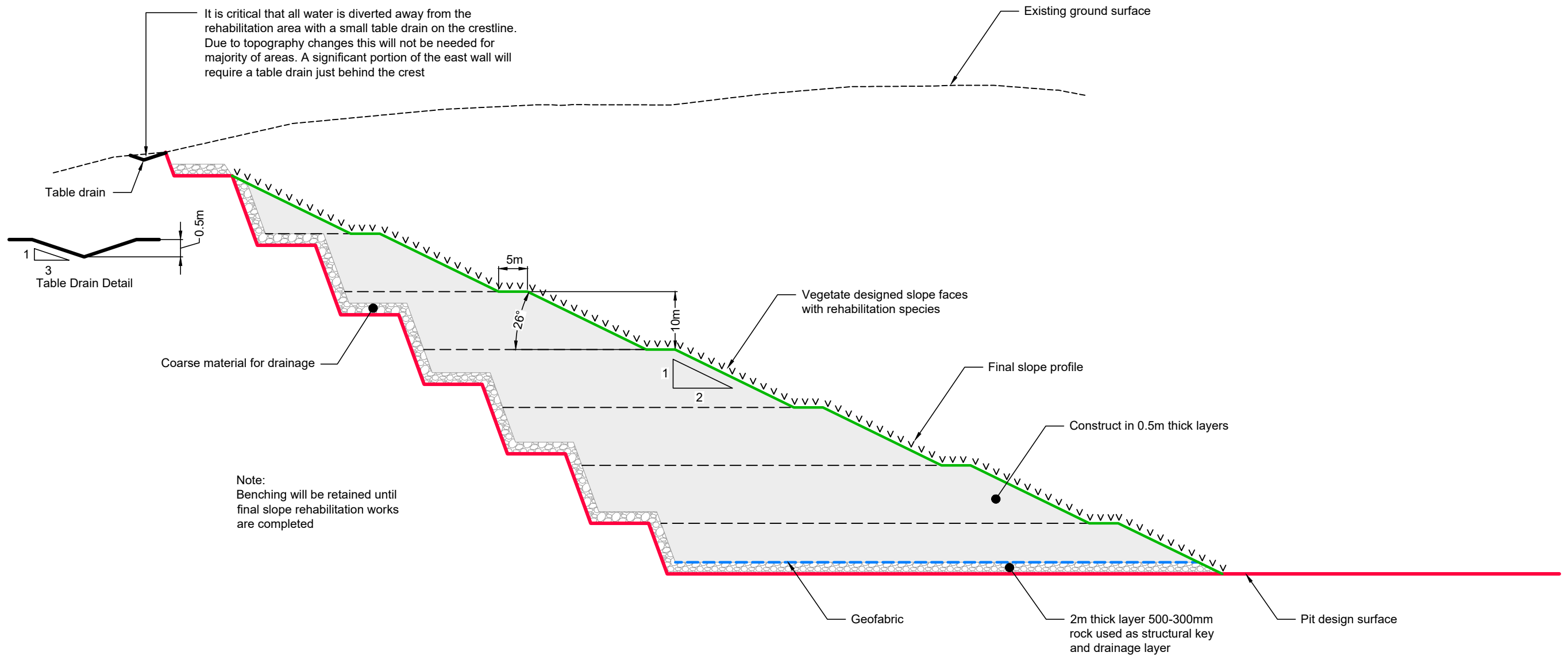
REVISION:

DATE: 5 November 2018
 CHECKED:

DATUM: HORIZONTAL / VERTICAL / ZONE
 MGA / AHD / 54

Fill Placement Criteria

- Fill shall be placed on dry ground and not submerged until the rehabilitated batter is complete.
- Fill shall be placed in line with geometry depicted an approved Rehabilitation Plan. The thickness of each compacted lift (layer) shall be no more than 500-700mm after compaction.
- Fill shall be compacted until the following criteria is achieved - 6 blows / 100 mm with a dynamic cone penetrometer (DCP).
- Testing of Fill Compaction Control (DCP) shall comply with procedure AS1289.6.3.2. A minimum of 2 DCP tests should be completed to a depth of 500 mm, for every 2500 m² of fill placed, to test compaction of each lift.
- DCP tests can be completed onsite by Hanson staff with a record of testing kept on file.
- If compaction cannot be achieved, Hanson should consult a suitably qualified geotechnical engineer to review the onsite compaction and testing regime.
- The client should undertake all excavation related activities in line with specific safe operating procedures (SOP's) to ensure slope stability is maintained during quarrying.
- Visual monitoring of the working batters conducted by suitably experienced site personnel, terminal and rehabilitated slopes conducted by suitably experienced site personnel should be at a maximum four-week interval and continue for at least six months following closure.
- If any visual signs of cracking, slumping, increased seepage, or other geotechnical issues are observed, a geotechnical engineer should be contacted in order to implement the necessary engineering controls (where required).
- Surficial erosion needs to be managed once the final landform concept is developed and should be assessed against appropriate industry guidelines.
- Surface water should be suitably managed (i.e., using suitable systems) to prevent uncontrolled water flows and minimise the potential for soil erosion.
- Management of surface water and groundwater is a key component of geotechnical risk management, as excess build-up of pore water pressures as a result of uncontrolled / excessive surface water ingress can trigger instability in otherwise stable batters. Where changes in ground and groundwater conditions are encountered, a geotechnical engineer should be contacted.



FILE NAME: F:\Jobs\190011901_Hanson_White Rock Quarry\Drawings\1901.DRG.114 - Typical Quarry Rehabilitation Detail.dwg
 CREATED: 23 February 2023
 JOB SUB #

REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography:
 Topography:
 Cadastre:
 Ecosystem:
 LIBAR

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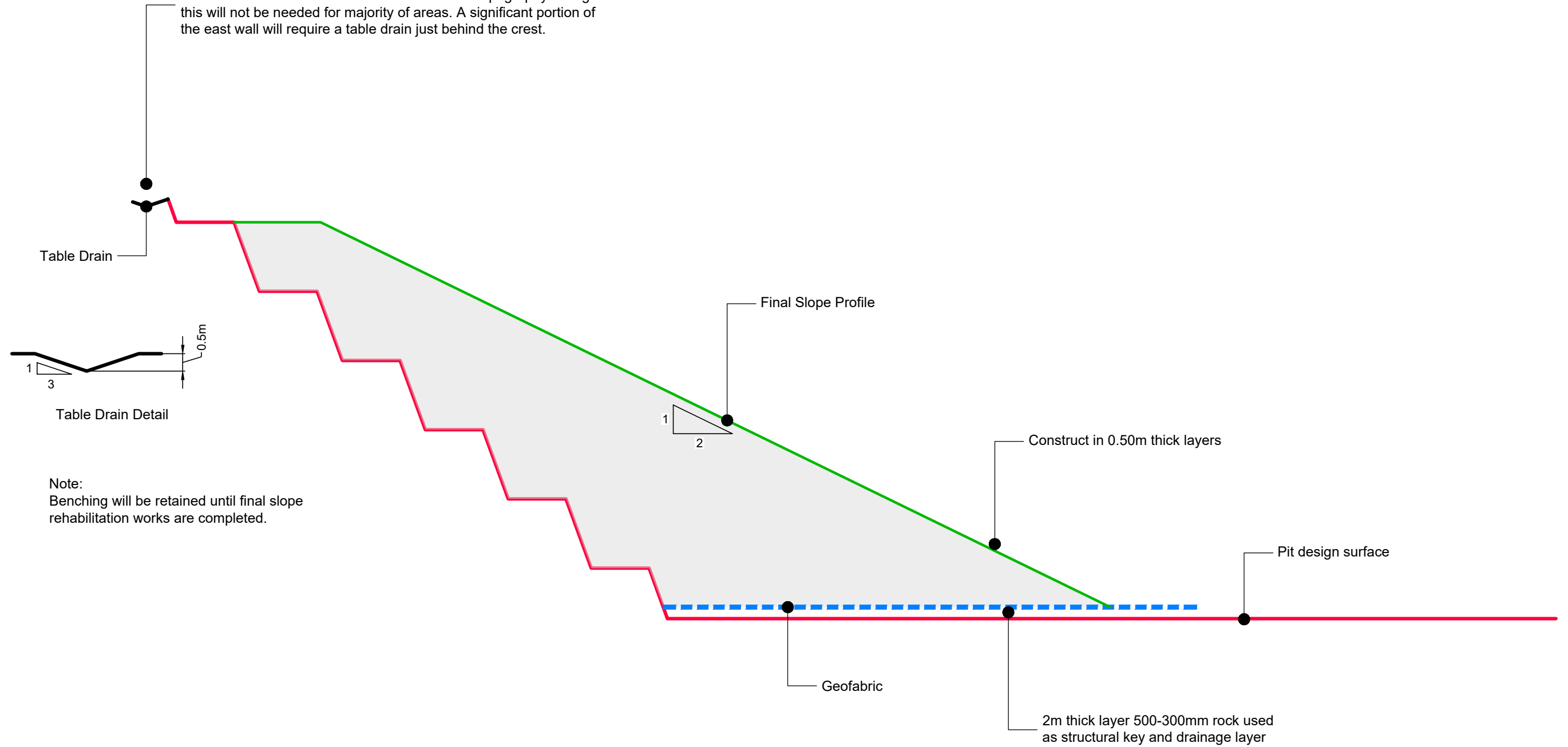
Legend:

- Existing Ground Surface
- Pit Design Surface
- Rehabilitation Surface
- Geofabric

PROJECT:	White Rock Quarry
CLIENT:	Hanson Construction Materials Pty Ltd

TITLE:	Typical Quarry Rehabilitation Detail	
SCALE:	1:750	0 15m
DATE:	23 February 2023	DRAWN: JHV
PRINTED:	23 February 2023	CHECKED: RH
DRAWING NUMBER:	1901.DRG.114	REVISION:
DATUM: HORIZONTAL / VERTICAL / ZONE		
GDA94 / MGA / AHD / 54		

It is critical that all water is diverted away from the rehabilitation area with a small table drain on the crestline. Due to topography changes this will not be needed for majority of areas. A significant portion of the east wall will require a table drain just behind the crest.



FILE NAME: F:\Jobs\190011901_Hanson_White Rock Quarry\Drawings\1901.DRG.121 - Interim South Wall Stockpile Design.dwg
CREATED: 23 February 2023
JOB SUB #

REV	DESCRIPTION	DATE	BY

Data Sources:
 Photography:
 Topography:
 Cadastre:
 Ecosystem:
 LIDAR

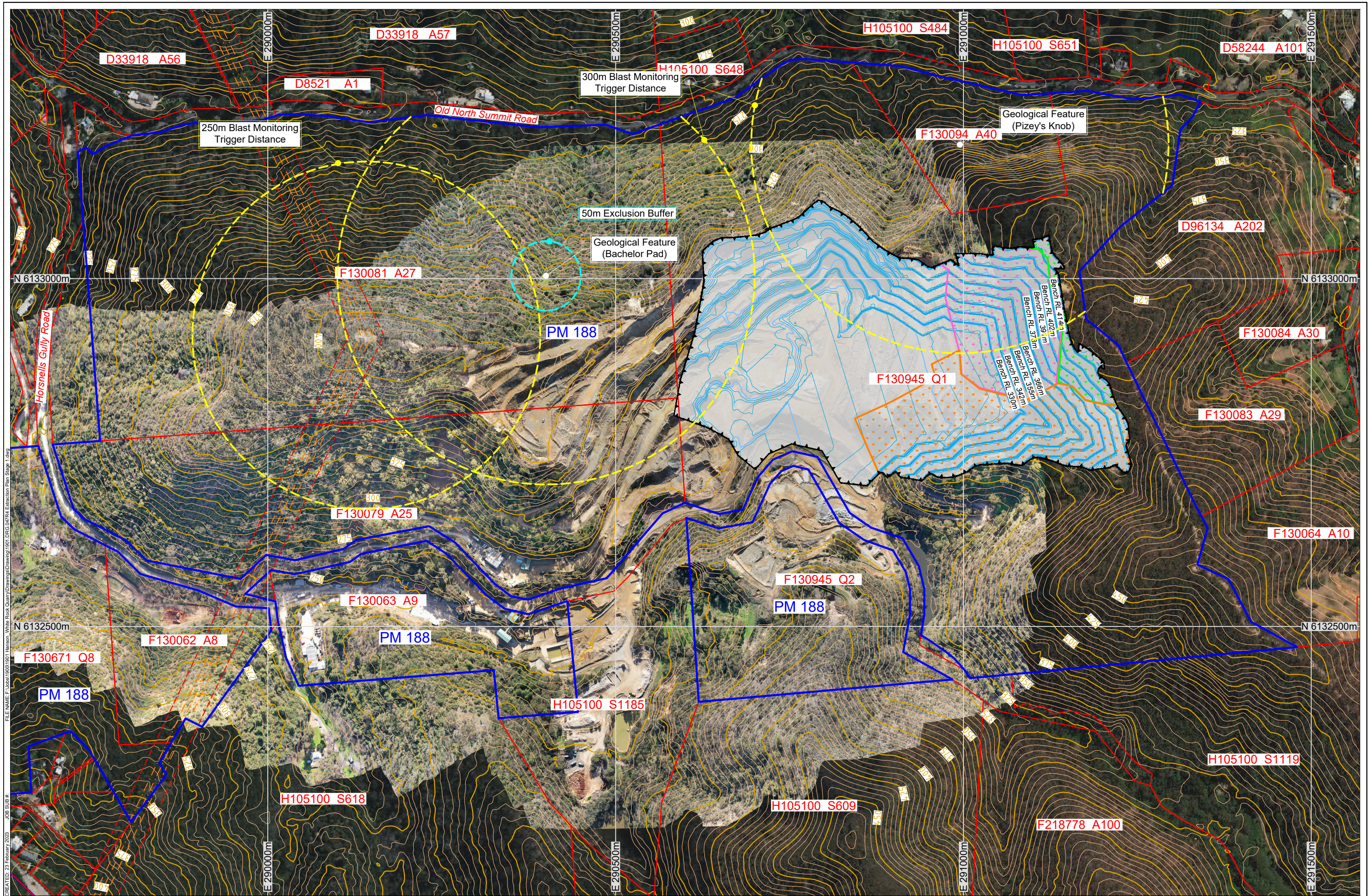
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Legend:

- Pit Design Surface
- Rehabilitation Surface
- Geofabric

PROJECT:	White Rock Quarry
CLIENT:	Hanson Construction Materials Pty Ltd

TITLE:	Interim South Wall Stockpile Design	
SCALE:	1:750	0 15m
DATE:	23 February 2023	DRAWN: MR
PRINTED:	23 February 2023	CHECKED: RH
DRAWING NUMBER:	1901.DRG.121	REVISION:
DATUM: HORIZONTAL / VERTICAL / ZONE		GDA94 / MGA / AHD / 54



REV	DESCRIPTION	DATE	BY
2	Groundwater level added	04/07/22	MR
3	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
4	QCIP Revised & Groundwater Level updated	26/10/22	MR

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral Boundary
- Private Mine
- - - High voltage transmission cables
- - - Easement Boundary

Vegetation:

- ▾ ▾ ▾ Good Condition
- ▾ ▾ ▾ Moderate Condition
- ▾ ▾ ▾ Moderate-Poor Condition
- ▾ ▾ ▾ Poor Condition

Extraction Area

XXXX Extraction Area

PM 188

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Extraction Plan - Stage 1**

SCALE: 1:5,000

DRAWING NUMBER: **1901.DRG.047**

REVISION: **4**

DATE: 23 February 2023

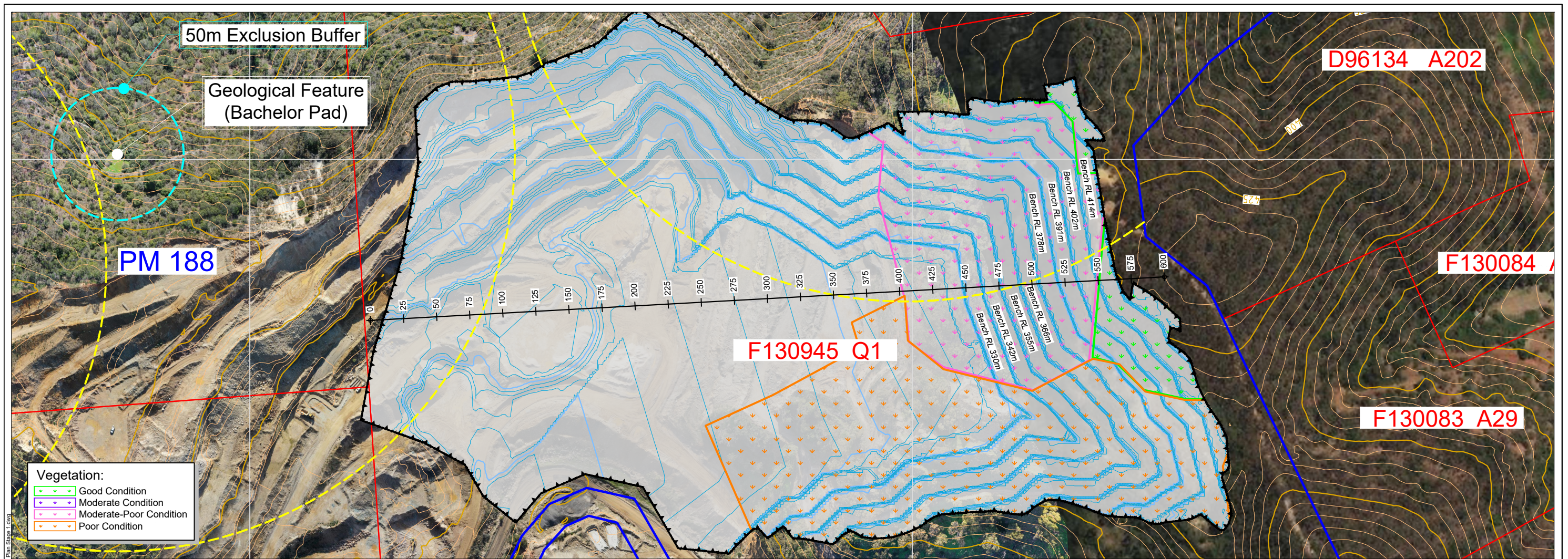
PRINTED: 23 February 2023

DRAWN: MRescar

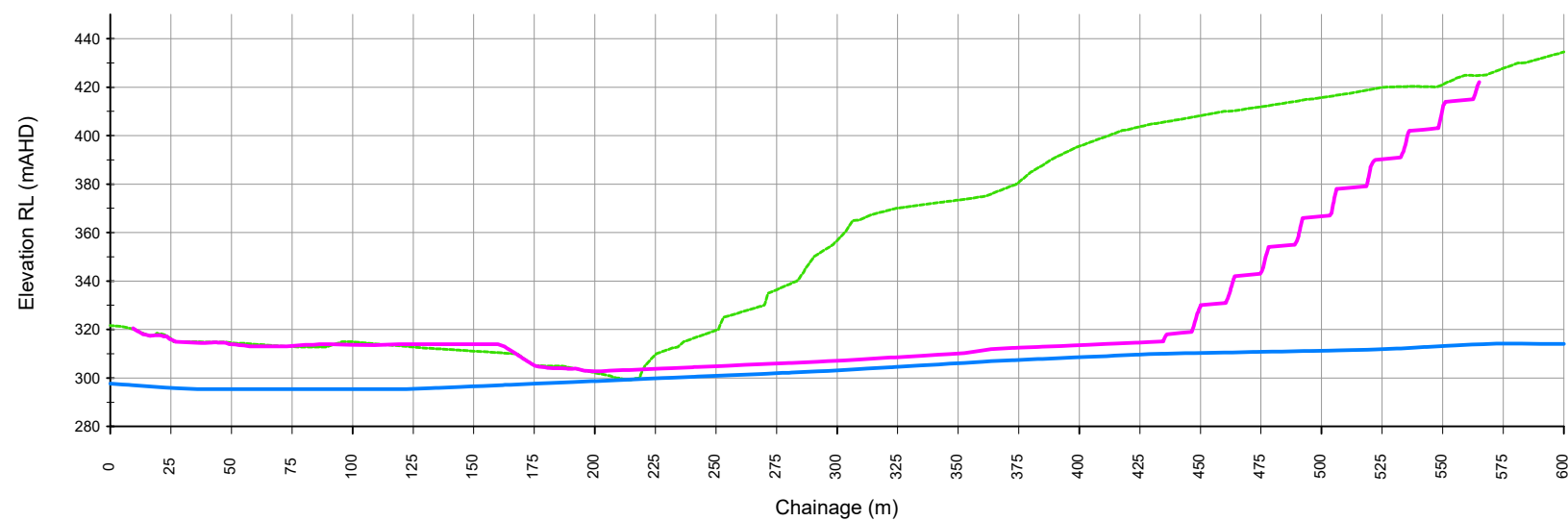
CHECKED: MDupree

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Section 1
 SCALES: HORIZONTAL 1:3000 VERTICAL 1:3000



REV	DESCRIPTION	DATE	BY
2	Groundwater level added	04/07/22	MR
3	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
4	QCP Revised & Groundwater Level updated	26/10/22	MR

Data Sources:

Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LiDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral
- Private Mine
- Extraction Area
- Existing Ground
- Design Surface
- Groundwater Contour Map

PROJECT: White Rock Quarry

CLIENT: Hanson Construction Materials Pty Ltd

TITLE: Extraction Plan Cross Section - Stage 1

SCALE: 1:3,000

DRAWING NUMBER: 1901.DRG.047A

REVISION: 4

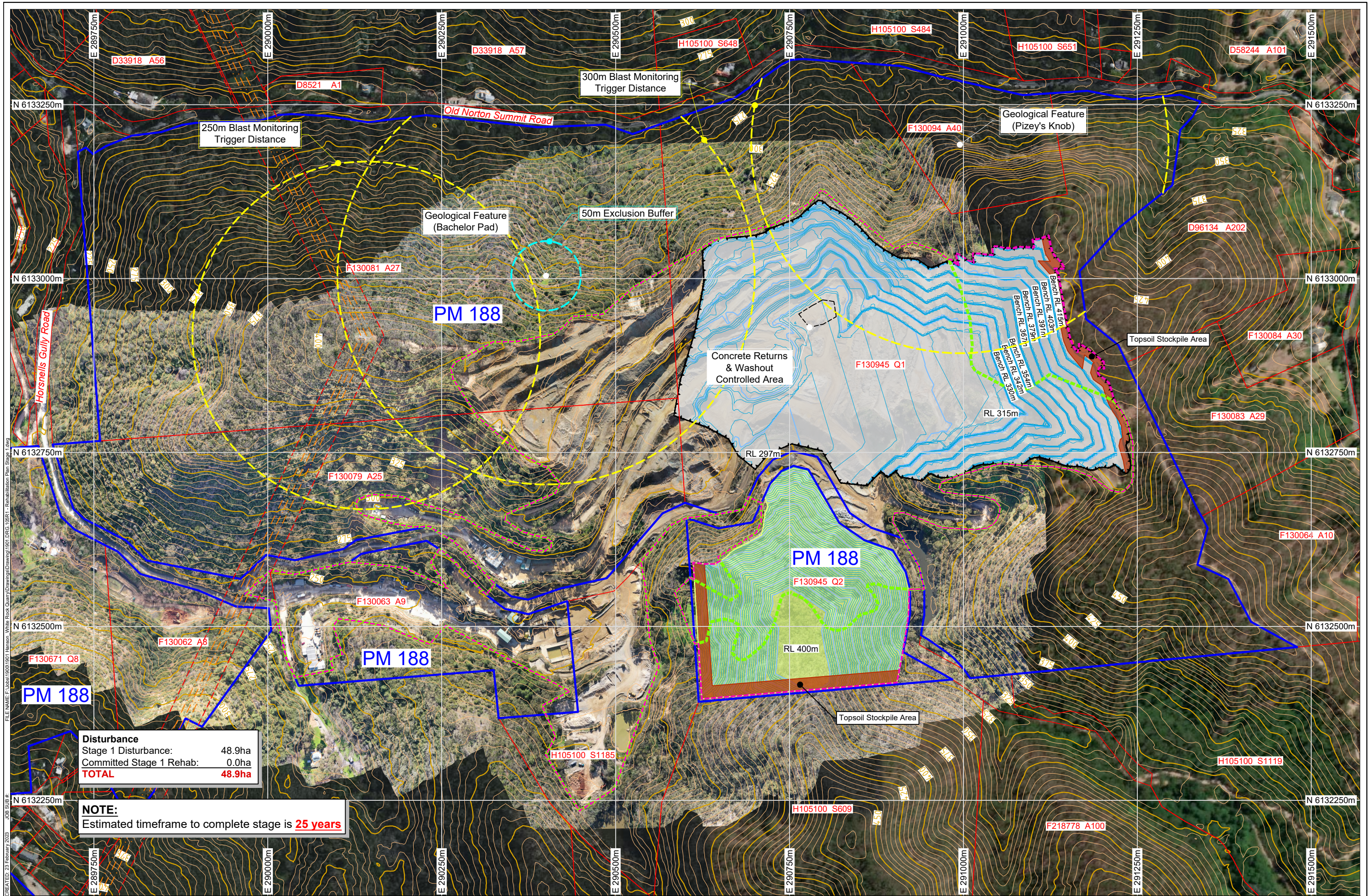
DATE: 23 February 2023

PRINTED: 23 February 2023

CHECKED: MDupres

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Disturbance	
Stage 1 Disturbance:	48.9ha
Committed Stage 1 Rehab:	0.0ha
TOTAL	48.9ha

NOTE:
Estimated timeframe to complete stage is **25 years**

REV	DESCRIPTION	DATE	BY
1	QDP Revised	22/12/22	CP

Data Sources:
Photography: © Hanson UAV Survey, Captured 2022-07-06
Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
Cadastral: © The Government of South Australia (DIT) 2022
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Legend:

	Cadastral Boundary		Stage 1 Disturbance (48.88 Ha)
	Private Mine		Extraction Area
	High Voltage Transmission Cable		Overburden Stockpile Area
	Existing Site Disturbance (42.58 Ha)		Topsoil Stockpile Area
	Easement Boundary		



PROJECT: **White Rock Quarry**
CLIENT: **Hanson Construction Materials Pty Ltd**

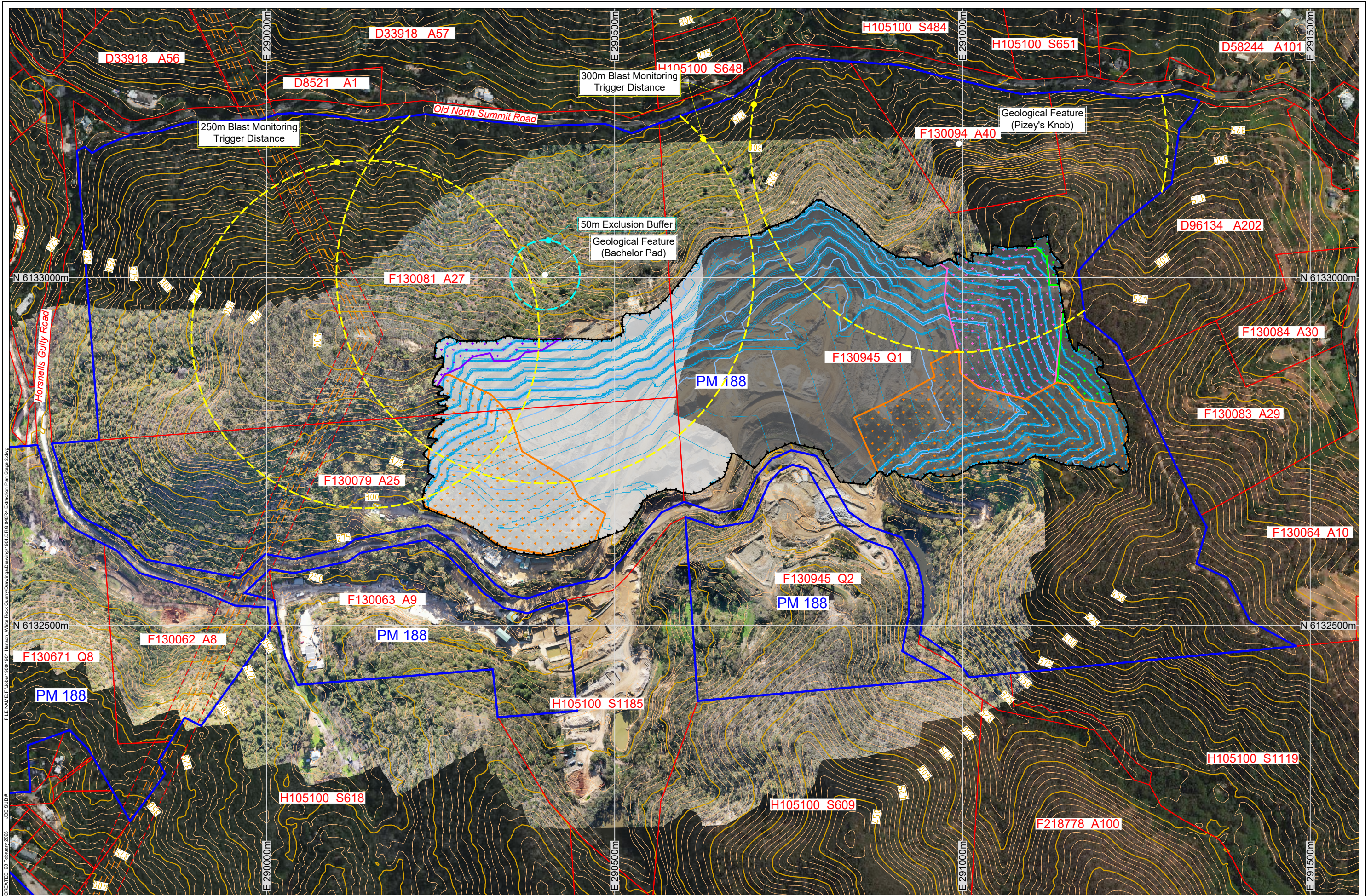
TITLE: **Quarry Development and Rehabilitation Plan - Stage 1**

GROUNDWORK plus

SCALE: 1:5,000

DRAWING NUMBER: **1901.DRG.105** REVISION: **1**

DATE: 23 February 2023 DRAWN: CParham DATUM: HORIZONTAL / VERTICAL / ZONE
PRINTED: 23 February 2023 CHECKED: MDupree MGA / AHD / 54



REV	DESCRIPTION	DATE	BY
2	Groundwater level added	04/07/22	MR
3	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
4	ICDP Revised & Groundwater Level updated	26/10/22	MR

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral
- Private Mine
- High voltage transmission cables
- - - Easement Boundary

Vegetation:

- Good Condition
- Moderate Condition
- Moderate-Poor Condition
- Poor Condition

Extraction Area
 Previous Stage Extraction Area

PROJECT: White Rock Quarry
 CLIENT: Hanson Construction Materials Pty Ltd

DRAWING NUMBER: 1901.DRG.048
 REVISION: 4

SCALE: 1:5,000
 DATE: 23 February 2023
 PRINTED: 23 February 2023

PROJECT: White Rock Quarry
 CLIENT: Hanson Construction Materials Pty Ltd

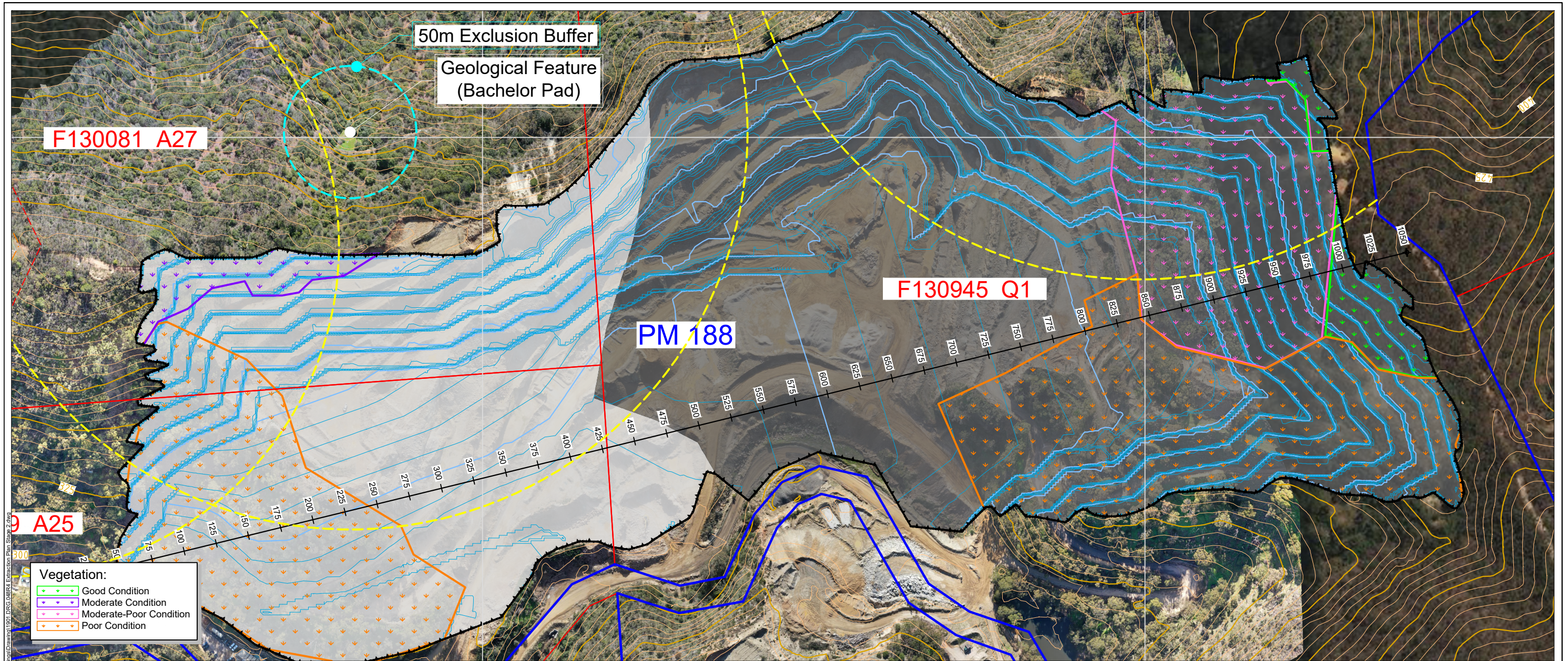
DRAWING NUMBER: 1901.DRG.048
 REVISION: 4

SCALE: 1:5,000
 DATE: 23 February 2023
 PRINTED: 23 February 2023

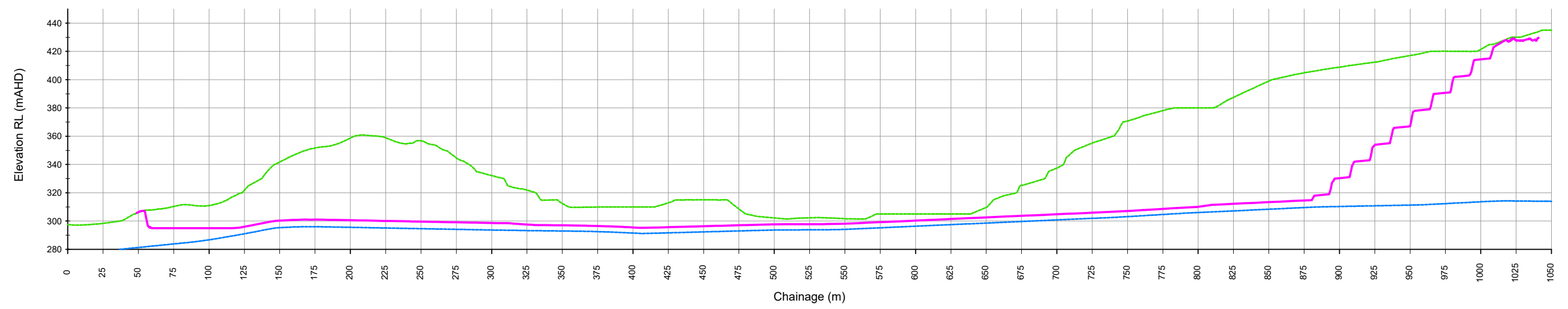
PROJECT: White Rock Quarry
 CLIENT: Hanson Construction Materials Pty Ltd

DRAWING NUMBER: 1901.DRG.048
 REVISION: 4

SCALE: 1:5,000
 DATE: 23 February 2023
 PRINTED: 23 February 2023



Section 1
 SCALES: HORIZONTAL 1:3000 VERTICAL 1:3000



REV	DESCRIPTION	DATE	BY
2	Groundwater level added	04/07/22	MR
3	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
4	QCP Revised & Groundwater Level updated	26/10/22	MR

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral
- Private Mine
- - - High voltage transmission cables
- - - Easement Boundary
- Existing Ground
- Design Surface
- Groundwater Contour Map
- Extraction Area
- Previous Stage Extraction Area

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Extraction Plan Cross Section - Stage 2**

GROUNDWORK plus

SCALE: 1:3,000

DRAWING NUMBER: **1901.DRG.048A**

REVISION: **4**

DATE: 23 February 2023

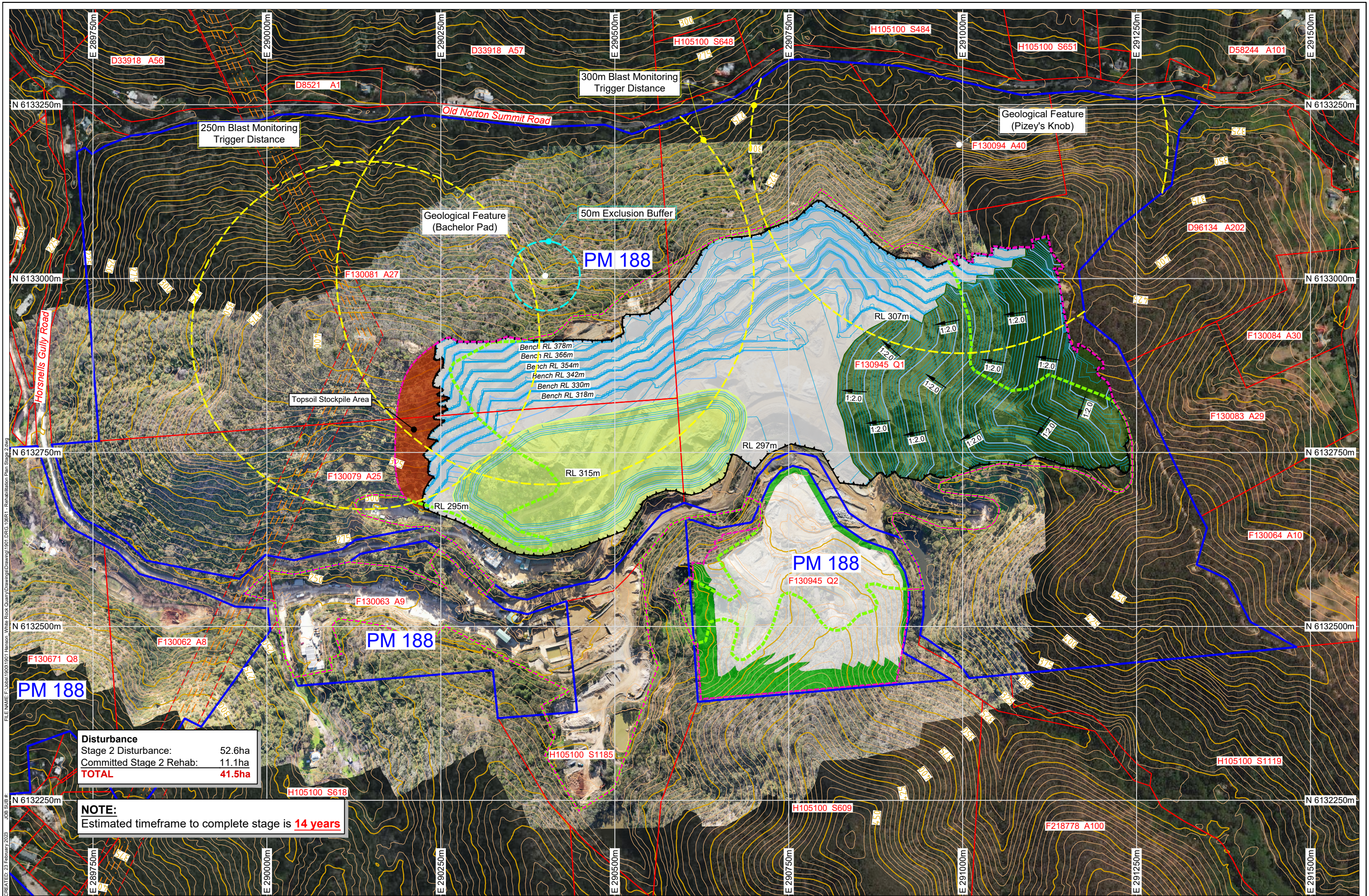
PRINTED: 23 February 2023

DRAWN: MRescar

CHECKED: MDupres

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Disturbance
 Stage 2 Disturbance: 52.6ha
 Committed Stage 2 Rehab: 11.1ha
TOTAL 41.5ha

NOTE:
 Estimated timeframe to complete stage is **14 years**

REV	DESCRIPTION	DATE	BY
1	QDP Revised	22/12/22	CP

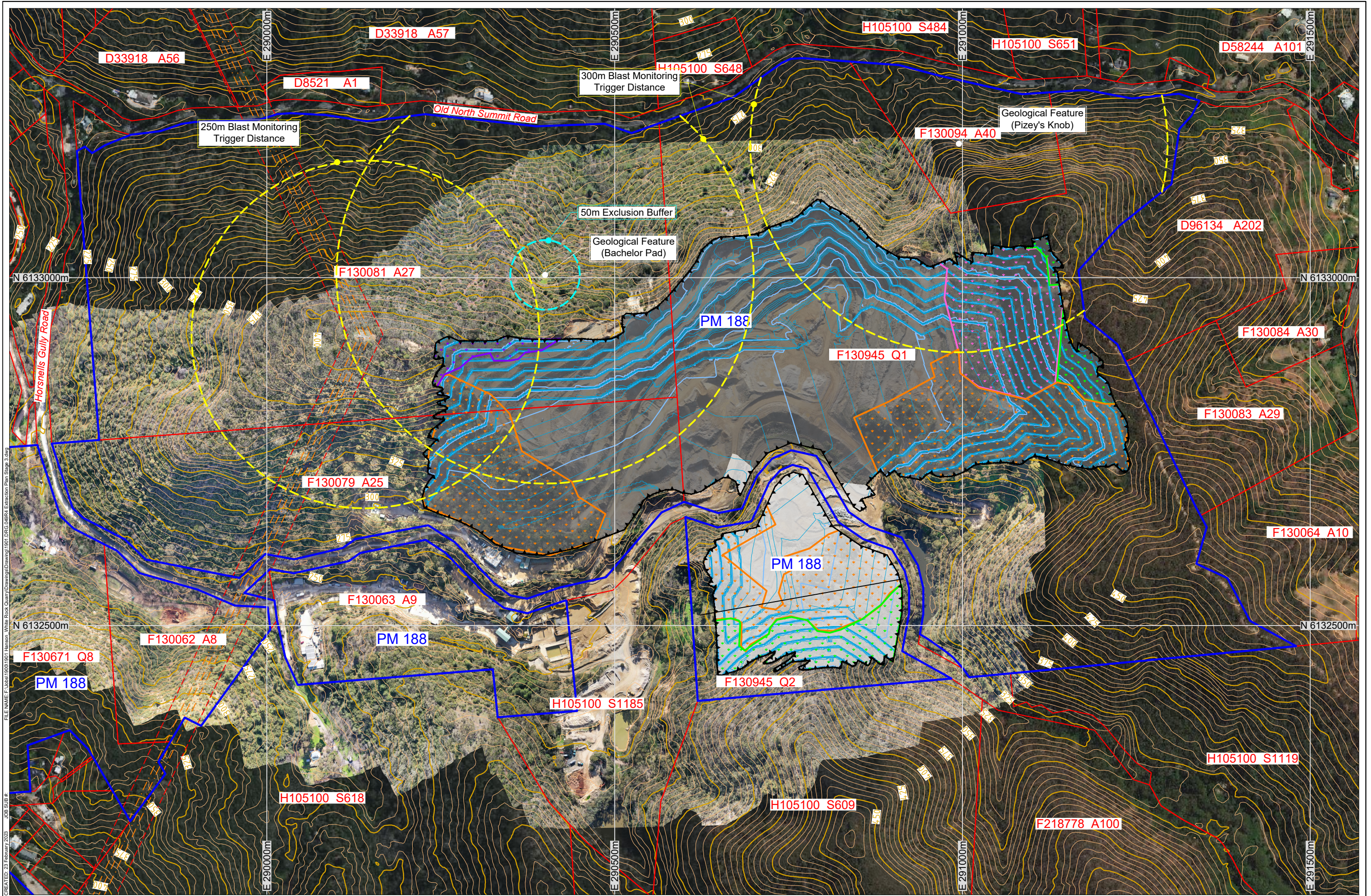
Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral Boundary
- Private Mine
- High Voltage Transmission Cable
- Existing Site Disturbance (42.58 Ha)
- Stage 2 Disturbance (52.64 Ha)
- - - Easement Boundary
- Topsoil Stockpile Area
- Extraction Area
- Overburden Stockpile Area
- Rehabilitation Area
- Overburden Stockpile Rehabilitation Area
- Future Extraction Area



PROJECT: White Rock Quarry CLIENT: Hanson Construction Materials Pty Ltd	TITLE: Quarry Development and Rehabilitation Plan - Stage 2 SCALE: 1:5,000 DRAWING NUMBER: 1901.DRG.106 REVISION: 1	DATE: 23 February 2023 PRINTED: 23 February 2023 DRAWN: CParham CHECKED: MDupree DATUM: HORIZONTAL / VERTICAL / ZONE MGA / AHD / 54
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REV	DESCRIPTION	DATE	BY
2	Groundwater level added	04/07/22	MR
3	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
4	QCPR Revised & Groundwater Level updated	26/10/22	MR

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral
- Private Mine
- High voltage transmission cables
- Easement Boundary

Vegetation:

- ▾ Good Condition
- ▾ Moderate Condition
- ▾ Moderate-Poor Condition
- ▾ Poor Condition

- Extraction Area
- Previous Stage Extraction Areas

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Extraction Plan - Stage 3**

SCALE: 1:5,000

DRAWING NUMBER: **1901.DRG.049**

REVISION: **4**

DATE: 23 February 2023

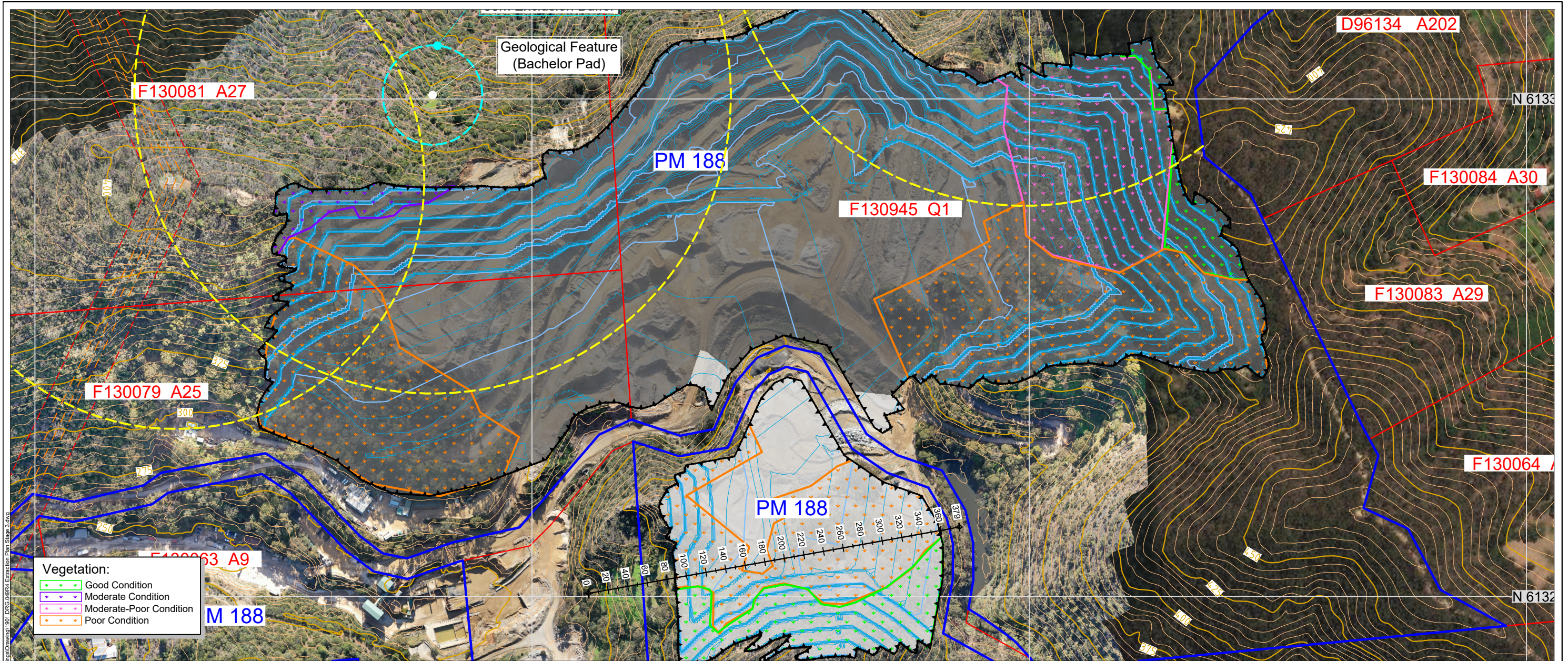
PRINTED: 23 February 2023

DRAWN: MRescar

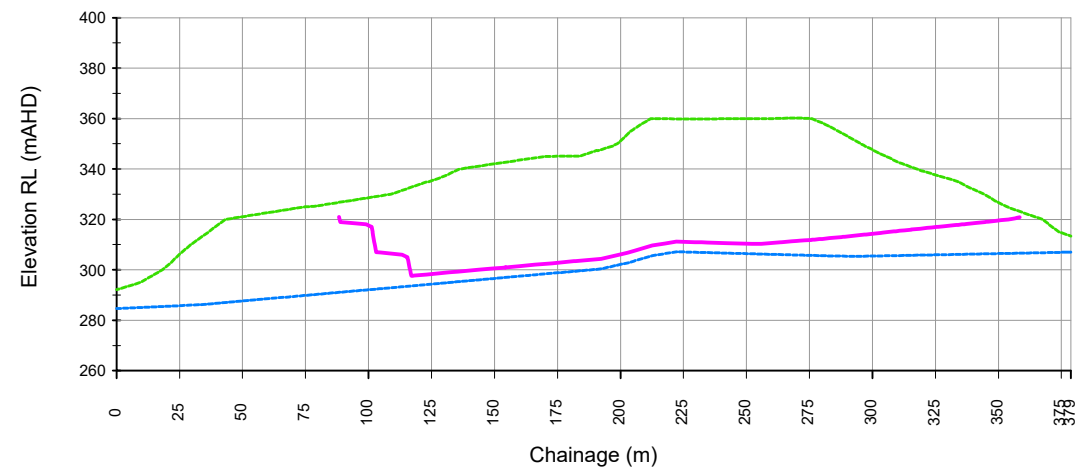
CHECKED: MDupree

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Section 1
 SCALES: HORIZONTAL 1:3000 VERTICAL 1:3000



REV	DESCRIPTION	DATE	BY
2	Groundwater level added	04/07/22	MR
3	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
4	QCP Revised & Groundwater Level updated	26/10/22	MR

Data Sources:

Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral
- Existing Ground
- Extraction Area
- Private Mine
- Design Surface
- Previous Stage Extraction Areas
- - - High voltage transmission cables
- Groundwater Contour Map
- - - Easement Boundary

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Extraction Plan Cross Section - Stage 3**

SCALE: 1:3,000

DRAWING NUMBER: **1901.DRG.049A**

REVISION: **4**

DATE: 23 February 2023

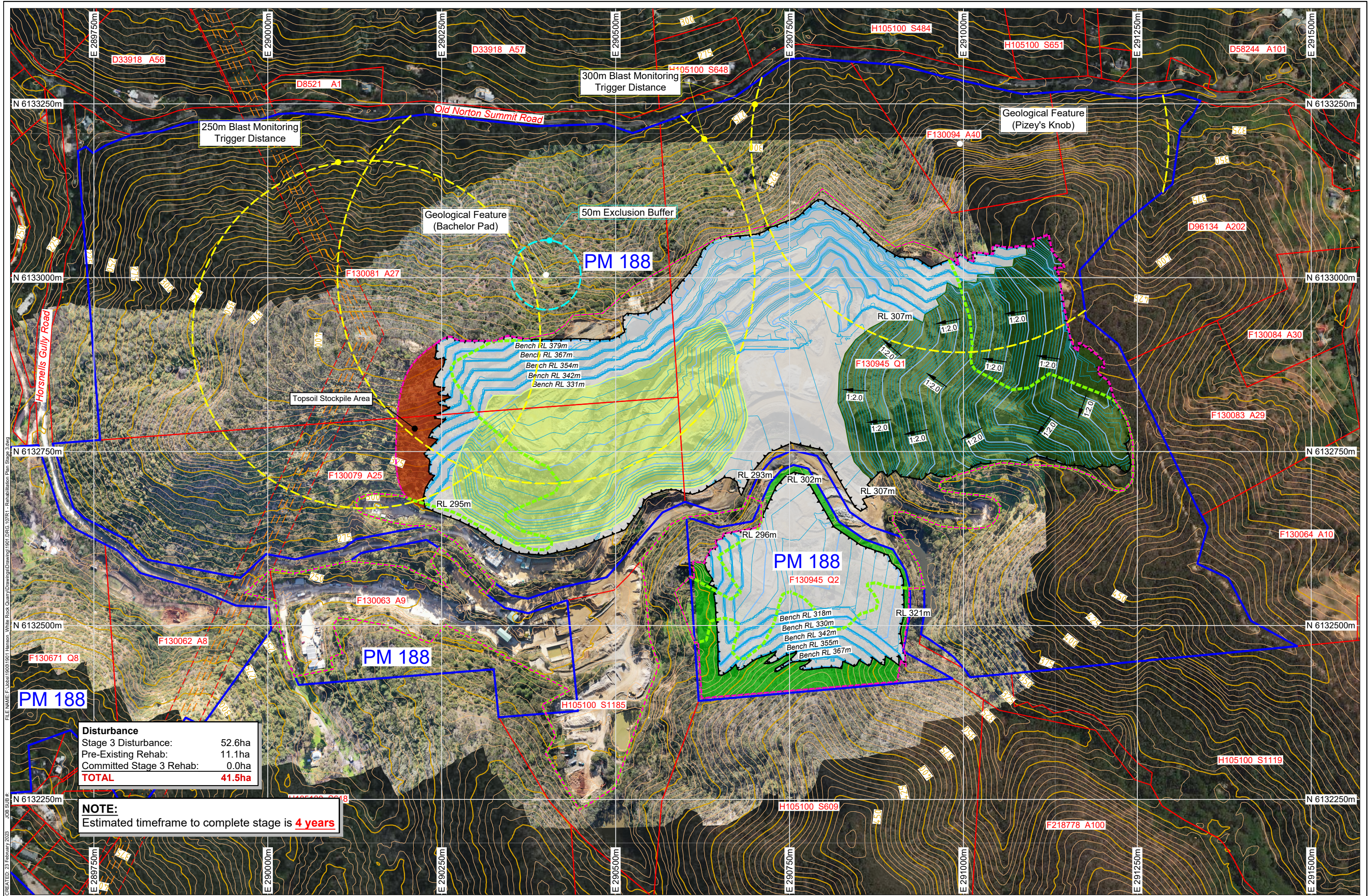
PRINTED: 23 February 2023

DRAWN: MRescar

CHECKED: MDupres

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Disturbance	
Stage 3 Disturbance:	52.6ha
Pre-Existing Rehab:	11.1ha
Committed Stage 3 Rehab:	0.0ha
TOTAL	41.5ha

NOTE:
Estimated timeframe to complete stage is **4 years**

REV	DESCRIPTION	DATE	BY
1	QDP Revised	22/12/22	CP

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastral: © The Government of South Australia (DIT) 2022
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Legend:

- Easement Boundary
- Cadastral Boundary
- Private Mine
- High Voltage Transmission Cable
- Existing Site Disturbance (42.58 Ha)
- Stage 3 Disturbance (52.64 Ha)
- Extraction Area
- Overburden Stockpile Area
- Rehabilitation Area
- Overburden Stockpile Rehabilitation Area
- Topsoil Stockpile Area

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Quarry Development and Rehabilitation Plan - Stage 3**

SCALE: 1:5,000

DRAWING NUMBER: **1901.DRG.107**

REVISION: **1**

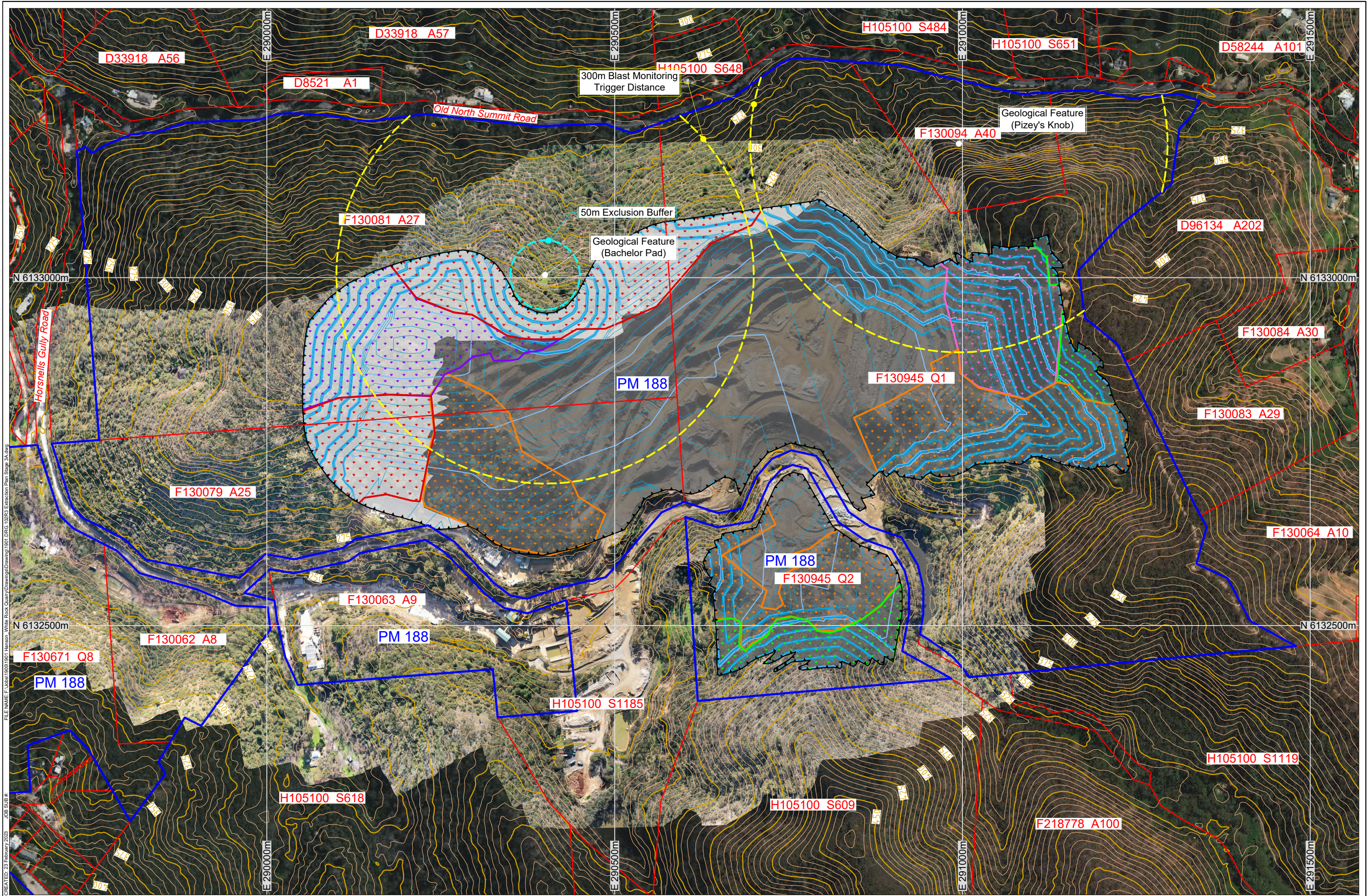
DATE: 23 February 2023

PRINTED: 23 February 2023

CHECKED: MDupree

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



REV	DESCRIPTION	DATE	BY
1	Groundwater level added	04/07/22	MR
2	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
3	QCPI Revised & Groundwater Level updated	26/10/22	MR

Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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 GROUNDWORK PLUS PTY LTD. ABN: 13 609 422 791

Legend:

- Cadastral
- Private Mine
- ▨ Extraction Area
- ▨ Previous Stage Extraction Areas

Vegetation:

- ▨ Good Condition
- ▨ Moderate Condition
- ▨ Moderate-Poor Condition
- ▨ Poor Condition
- ▨ Degraded

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Extraction Plan - Stage 3A**

SCALE: 1:5,000

DRAWING NUMBER: 1901.DRG.102

REVISION: 3

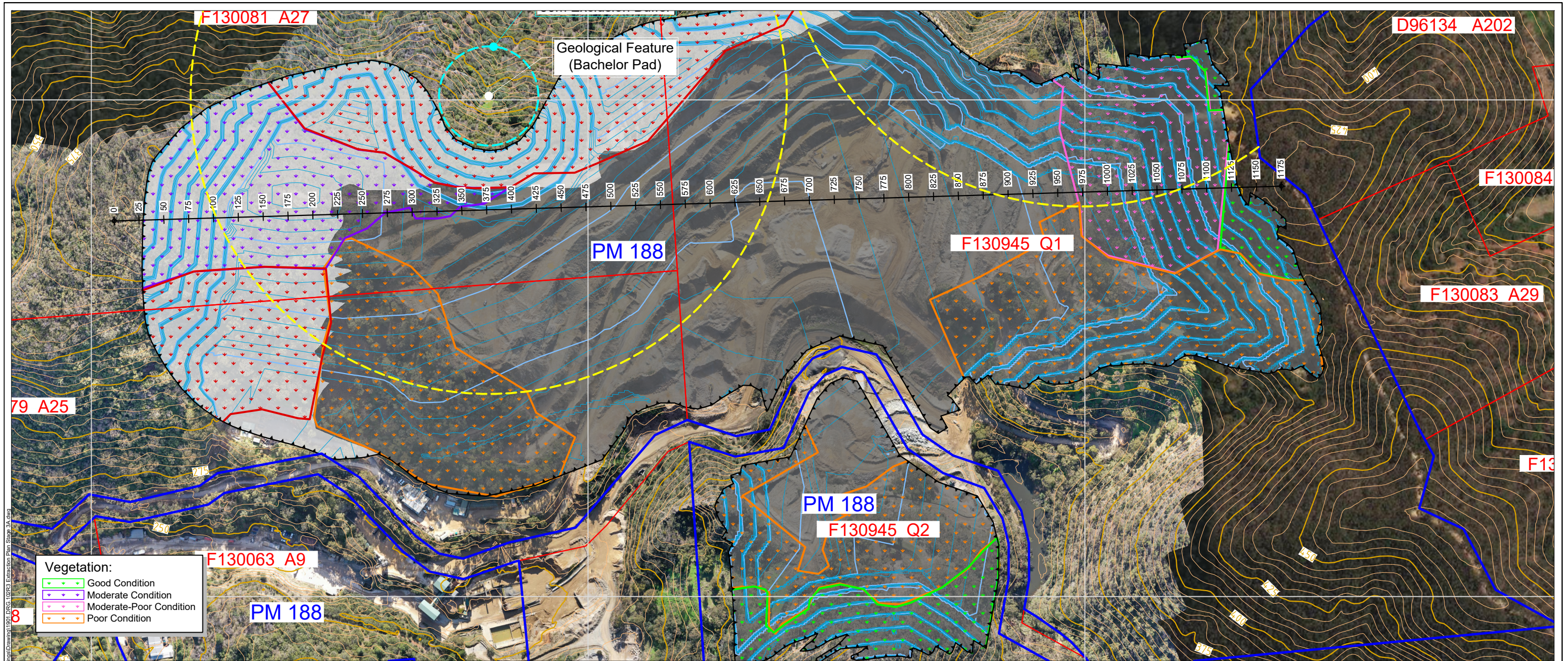
DATE: 23 February 2023

PRINTED: 23 February 2023

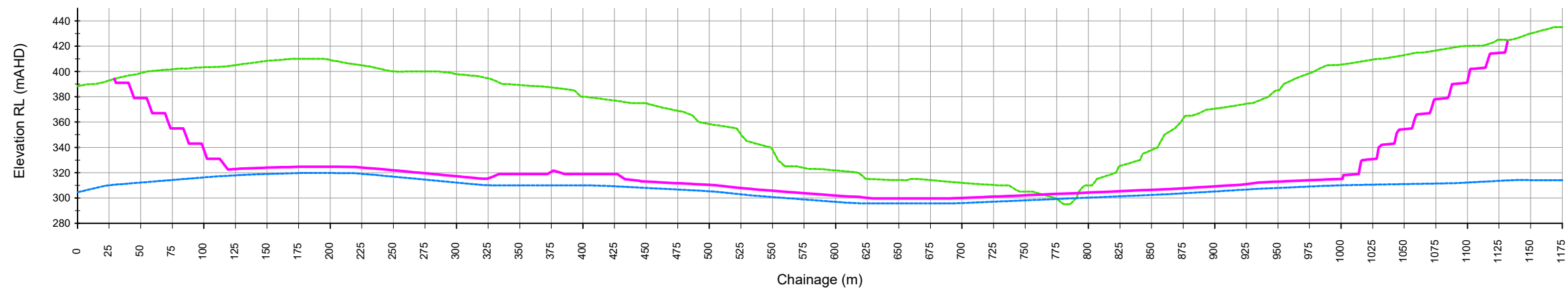
CHECKED: MDupree

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Section 1
 SCALES: HORIZONTAL 1:4000 VERTICAL 1:4000



REV	DESCRIPTION	DATE	BY
1	Groundwater level added	04/07/22	MR
2	Modified to match Quarry Development & Rehabilitation Plans	27/09/22	CP
3	QCP Revised & Groundwater Level updated	26/10/22	MR

Data Sources:

Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
 Cadastre: © The Government of South Australia (DIT) 2022
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Legend:

- Cadastral
- Private Mine
- Existing Ground
- Design Surface
- Groundwater Contour Map
- Extraction Area
- Previous Stage Extraction Areas

PROJECT: White Rock Quarry

CLIENT: Hanson Construction Materials Pty Ltd

TITLE: Extraction Plan Cross Section - Stage 3A

GROUNDWORK plus

SCALE: 1:4,000

0 80m

DRAWING NUMBER: 1901.DRG.102A

REVISION: 3

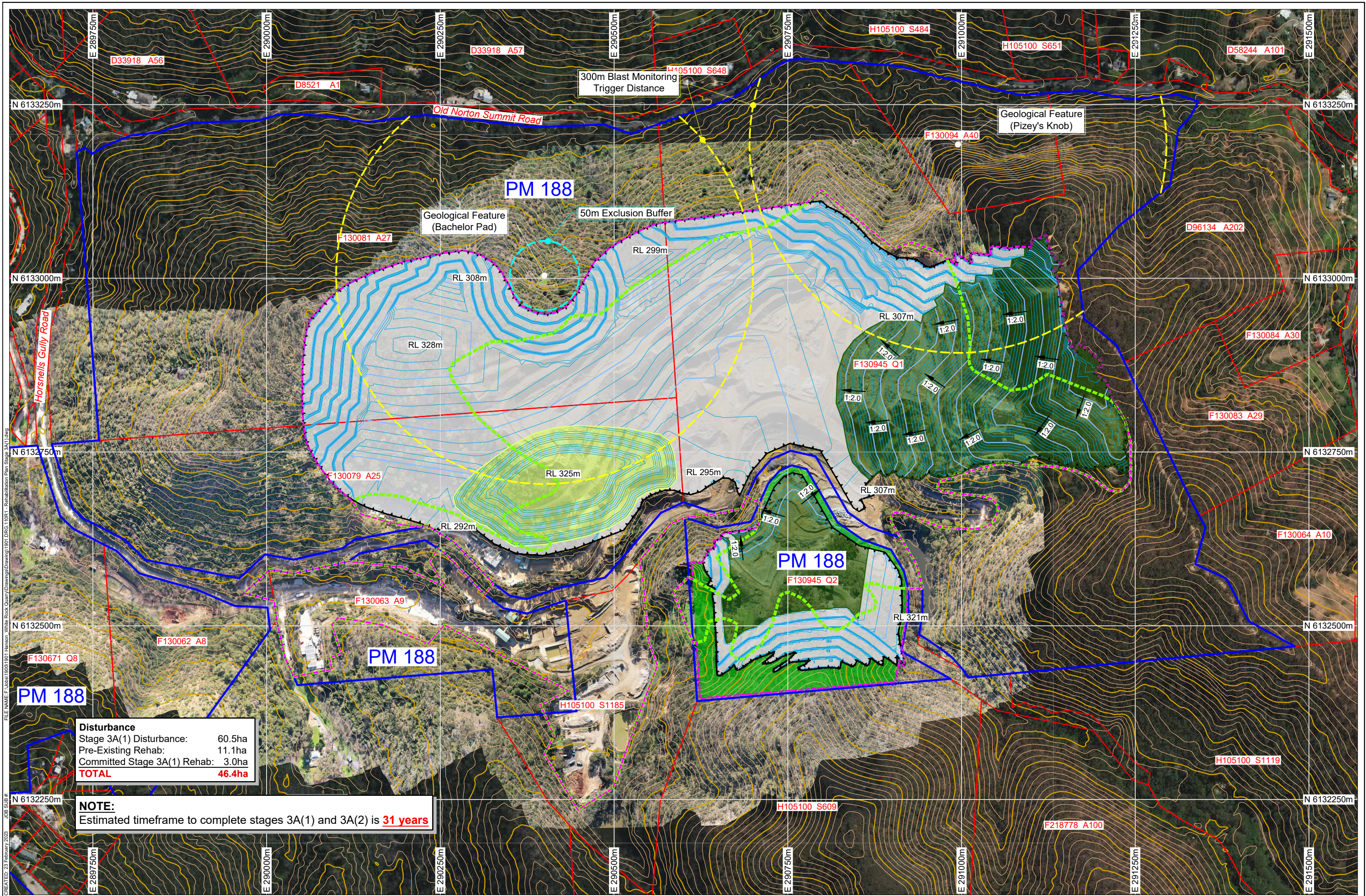
DATE: 23 February 2023

PRINTED: 23 February 2023

CHECKED: MDupres

DATUM: HORIZONTAL / VERTICAL / ZONE

MGA / AHD / 54



Disturbance	
Stage 3A(1) Disturbance:	60.5ha
Pre-Existing Rehab:	11.1ha
Committed Stage 3A(1) Rehab:	3.0ha
TOTAL	46.4ha

NOTE:
Estimated timeframe to complete stages 3A(1) and 3A(2) is **31 years**

REV	DESCRIPTION	DATE	BY
1	QDP Revised	22/12/22	CP

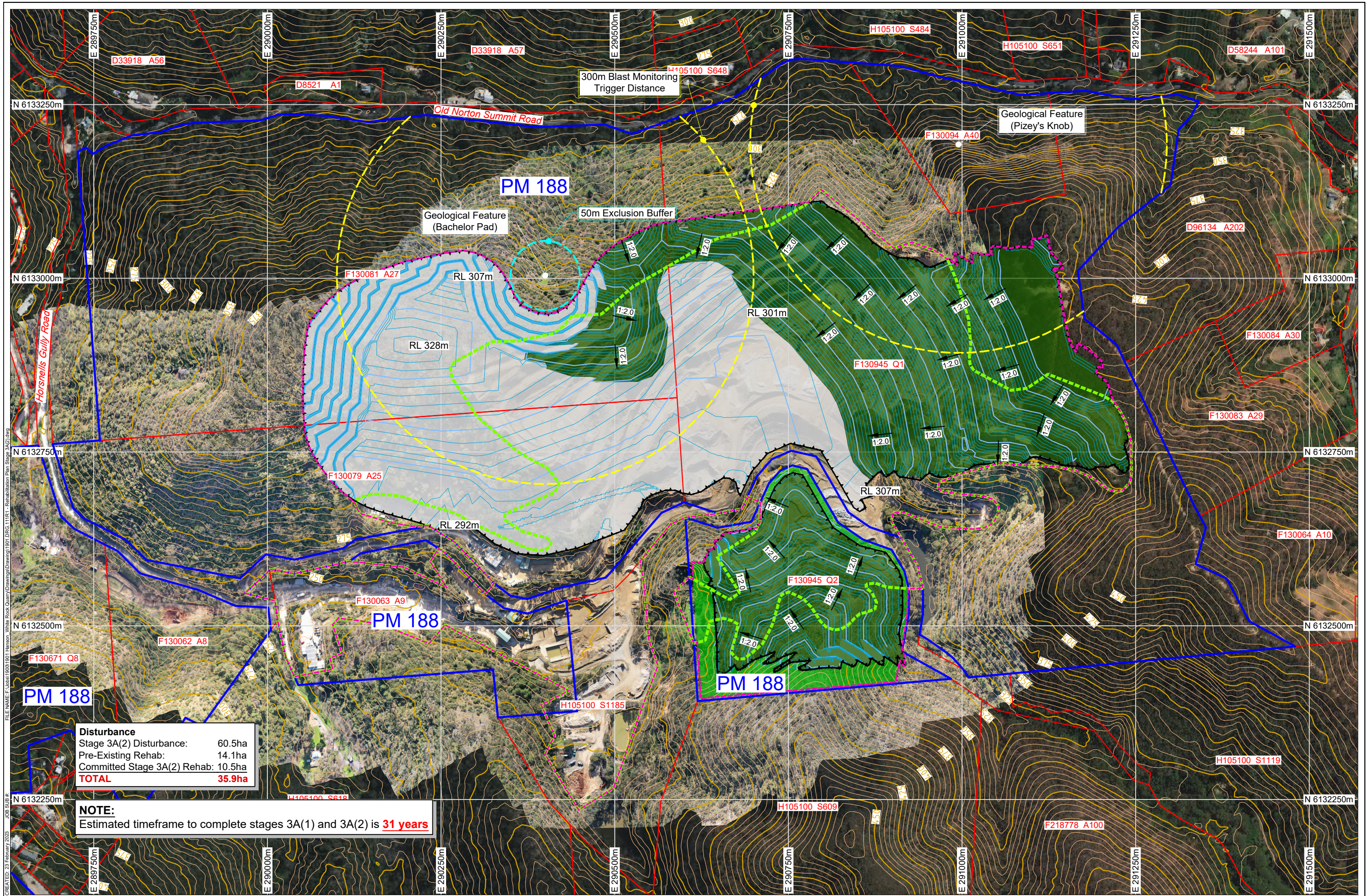
Data Sources:
 Photography: © Hanson UAV Survey, Captured 2022-07-06
 Topography: © Commonwealth of Australia (Geoscience Australia) 2019-12-06, LIDAR 5m
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Legend:

- Cadastral
- Private Mine
- - - Existing Site Disturbance (42.58 Ha)
- - - Stage 3A(1) Disturbance (60.46 Ha)
- Extraction Area
- Overburden Stockpile Area
- Rehabilitation Area
- Overburden Stockpile Rehabilitation Area



PROJECT: White Rock Quarry CLIENT: Hanson Construction Materials Pty Ltd	TITLE: Quarry Development and Rehabilitation Plan - Stage 3A (progressive)	SCALE: 1:5,000 DATE: 23 February 2023 PRINTED: 7 March 2023	DRAWING NUMBER: 1901.DRG.110 REVISION: 1 DATUM: HORIZONTAL / VERTICAL / ZONE MGA / AHD / 54
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Disturbance	
Stage 3A(2) Disturbance:	60.5ha
Pre-Existing Rehab:	14.1ha
Committed Stage 3A(2) Rehab:	10.5ha
TOTAL	35.9ha

NOTE:
Estimated timeframe to complete stages 3A(1) and 3A(2) is **31 years**

REV	DESCRIPTION	DATE	BY
1	QDP Revised	22/12/22	CP

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Legend:

- Cadastral
- Private Mine
- - - High voltage transmission cables
- - - Existing Site Disturbance (42.58 Ha)
- - - Stage 3A(2) Disturbance (60.46 Ha)
- ▨ Extraction Area
- ▨ Rehabilitation Area
- ▨ Overburden Stockpile Rehabilitation Area

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Quarry Development and Rehabilitation Plan - Stage 3A**

SCALE: 1:5,000

DRAWING NUMBER: **1901.DRG.111**

REVISION: **1**

DATE: 23 February 2023

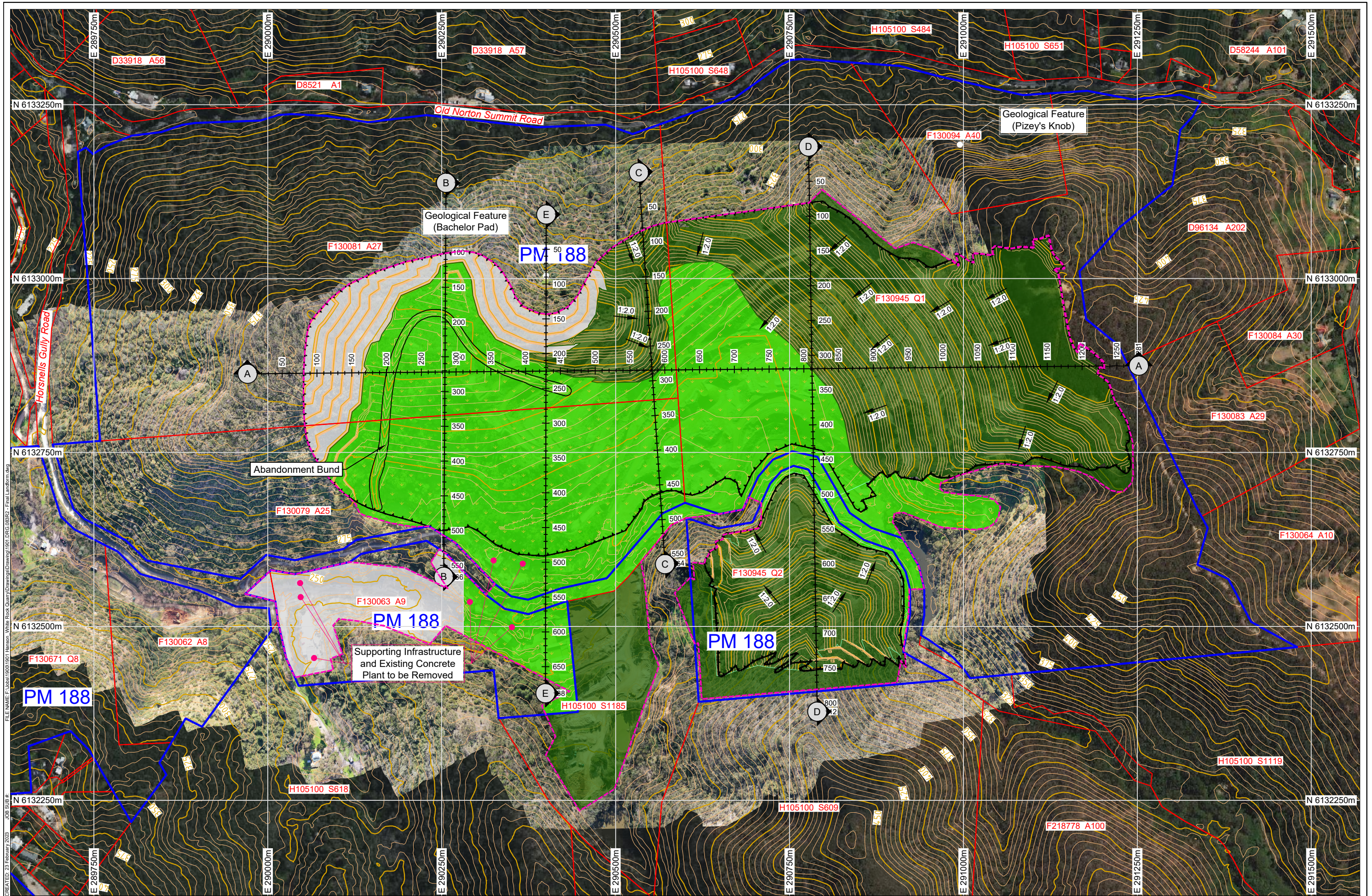
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Legend:

	Cadastral
	Private Mine
	Remaining Areas
	Rehabilitated Area
	Grassed Area

PROJECT: **White Rock Quarry**

CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Conceptual Final Landform Plan**

SCALE: 1:5,000

DRAWING NUMBER: **1901.DRG.083**

REVISION: **2**

DATE: 23 February 2023

PRINTED: 23 February 2023

CHECKED: MDupres

DATUM: HORIZONTAL / VERTICAL / ZONE

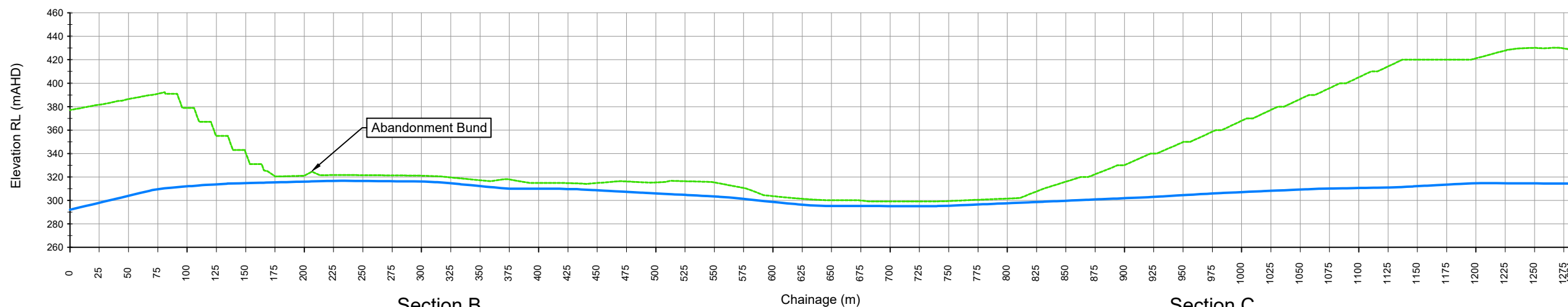
MGA / AHD / 54

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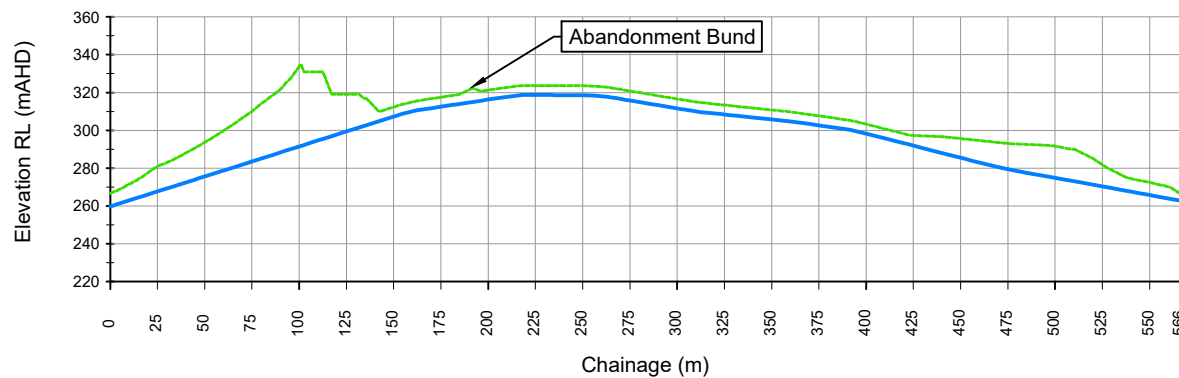
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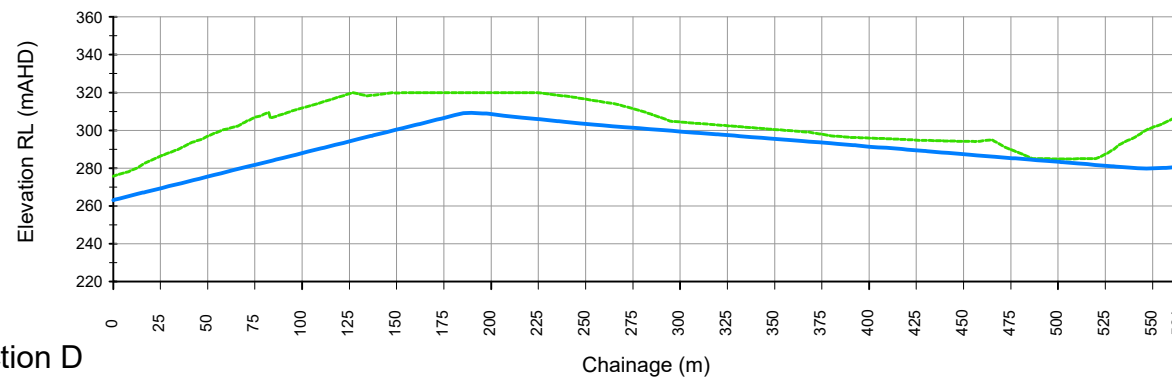
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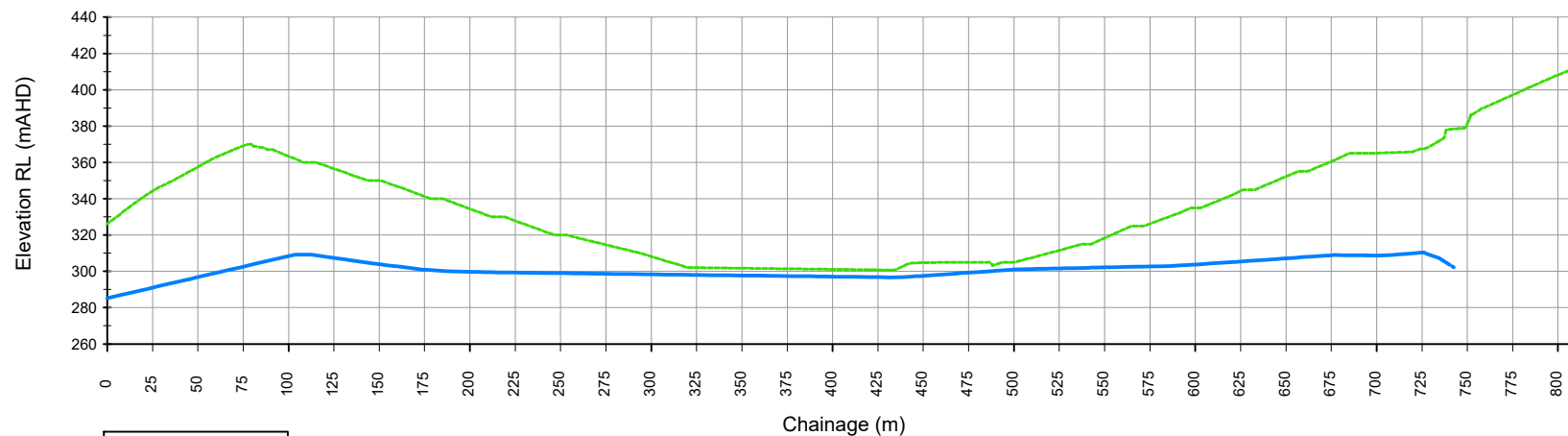
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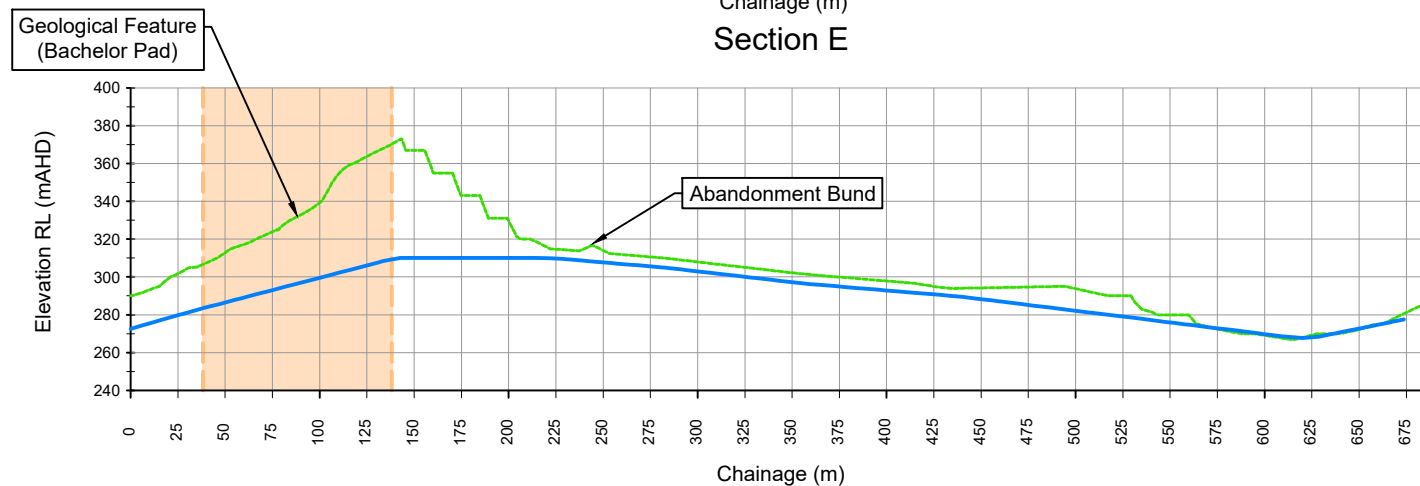
Section C



Section D



Section E



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REV	DESCRIPTION	DATE	BY

Data Sources:
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- Legend:**
- Conceptual Final Landform Surface
 - Groundwater Contour Map
 - 50m Exclusion Zone



PROJECT: **White Rock Quarry**
 CLIENT: **Hanson Construction Materials Pty Ltd**

TITLE: **Conceptual Final Landform Cross Sections A-A to E-E**

SCALE: 1:4,000 When Printed On A3	0 80m	DRAWING NUMBER: 1901.DRG.083A	REVISION: 2
DATE: 23 February 2023	DRAWN: CParham	DATUM: HORIZONTAL / VERTICAL / ZONE	
PRINTED: 23 February 2023	CHECKED: MDupres	MGA / AHD / 54	