Background Information Document (BID)

Proposed establishment of four new and one re-used Borrow Pits (for road and concrete construction materials) under Mining Permits in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) to primarily serve the Tsitsikamma Community wind farm project and other related infrastructure projects in the District;
on the Farms:
Clarkson 654 Functional Remainder (Borrow Pit 1)
Moeilikheid 662 (Borrow Pit 2)
Zalverige Valley 660 portion 3 (Borrow Pit 3)
Diep Rivier Mond 358 portion 8 remaining extent (Borrow Pit 4)
Farm 678 portion 2 remaining extent (Borrow Pit 5)
in the Humansdorp Registration Division, Eastern Cape

Prepared By
Site Plan Consulting CC
Contact: Jaques van der Vyver
Stephen van der Westhuizen
Tel: 021 854 4260
Fax: 021 854 4321
Email: jaques@siteplan.co.za

Prepared for:
Great Karoo Prospecting (Pty) Ltd

INDEX

FIGURES

PHOTOS

1.0 Purpose of this BID document

The purpose of this document is to provide Interested and Affected Parties (I&APs) with background information on the proposed project, and to inform the reader of the process of application, its initial environmental assessment and already identified environmental prescriptions, reflecting on where the I&AP can give comment and raise matters which are of concern to the I&AP, as well as indicating any item which the I&AP feels has not been identified or to date not suitably assessed.

As such, this BID document serves an initial scoping function within the process described by the Mineral and Petroleum Resources Development Act (MPRDA) for five Mining Permit Applications, each of which are limited to a maximum 1.5ha extent and a 2-year Lifespan (renewable to a maximum of 5 years)

2.0 Background

In order to provide suitable materials for the construction/maintenance of gravel access roads, and crane platforms and concrete aggregate for the concrete bases to serve the wind energy project, Haw and Inglis (Construction), through its quarrying subsidiary Great Karoo prospecting (Pty) Ltd (GKP) have identified five sites which could meet the materials requirements for the project.

Given the extent of the project, the volume and range of materials required, five gravel pits have been identified for use, with two of these pits to provide gravel and hard rock aggregate, and three of the pits to provide natural gravels, with optional blasting of materials if they are too compact or partly lithified, and with in-pit crushing even of gravels should they be too coarse.

GKP has appointed Site Plan Consulting CC to conduct the Applications on their behalf, which has entailed lodging of the five Applications with the Department Mineral Resources (DMR) Eastern Cape (which has been completed) and now further entails the identification and notification of Interested and Affected Parties (I&APs) in a public participation process, involving the Environmental Impact Assessment (EIA), identification of attenuation measures to limit impacts, and prescribing the environmental management in an Environmental Management Plan (EMP).

3.0 Locality

As shown in Figure 1; General Locality, overleaf, the five Mining Permit Applications are distributed over five farms between Clarkson in the West and the Impofu Dam in the east, namely:

- Clarkson 654 Functional Remainder (Borrow Pit 1)
- Moeilikheid 662 (Borrow Pit 2)
- Zalverige Valley 660 portion 3 (Borrow Pit 3)
- Diep Rivier Mond 358 portion 8 remaining extent (Borrow Pit 4)
- Farm 678 portion 2 remaining extent (Borrow Pit 5)

Figure 1: General Locality

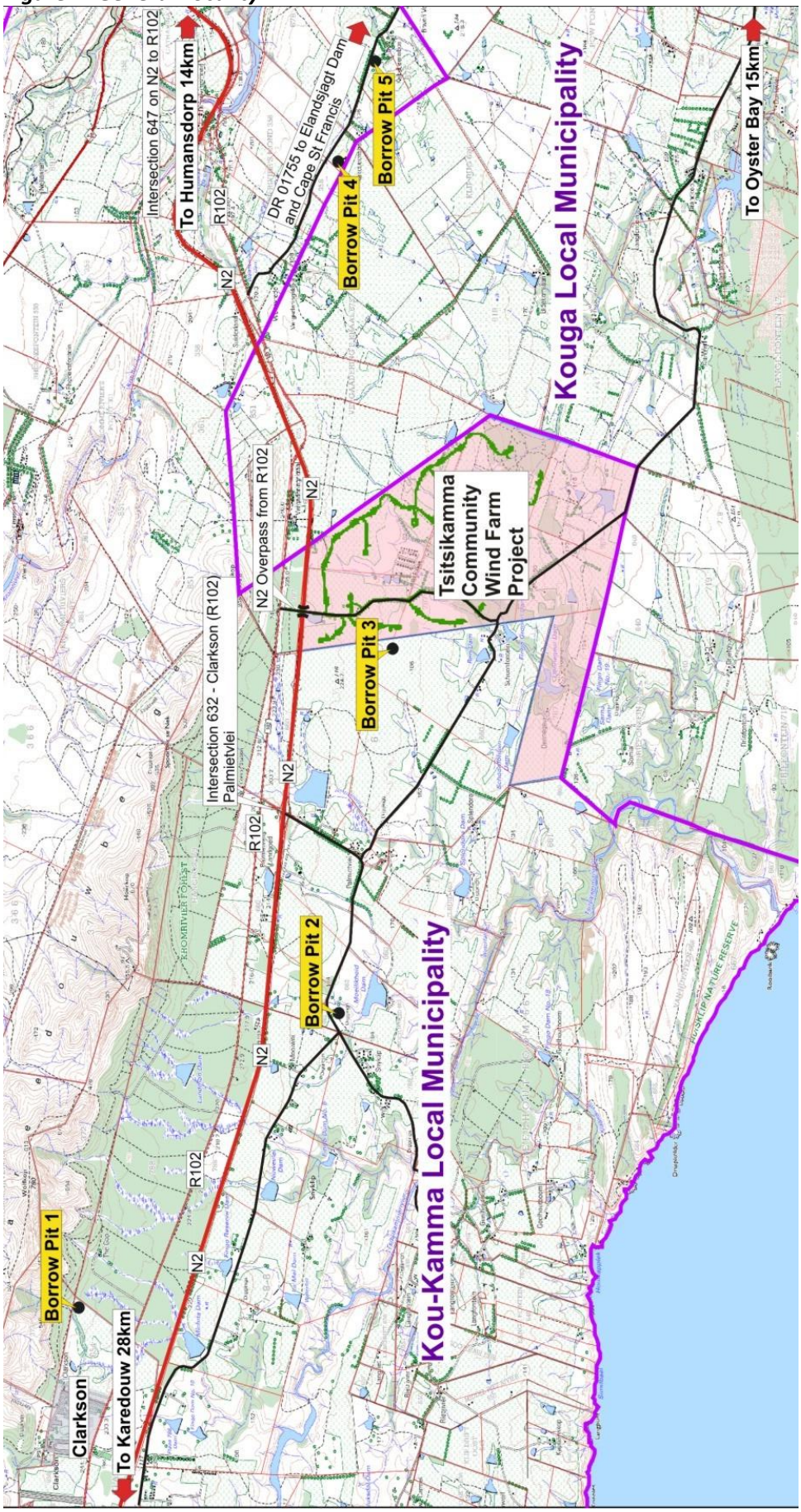
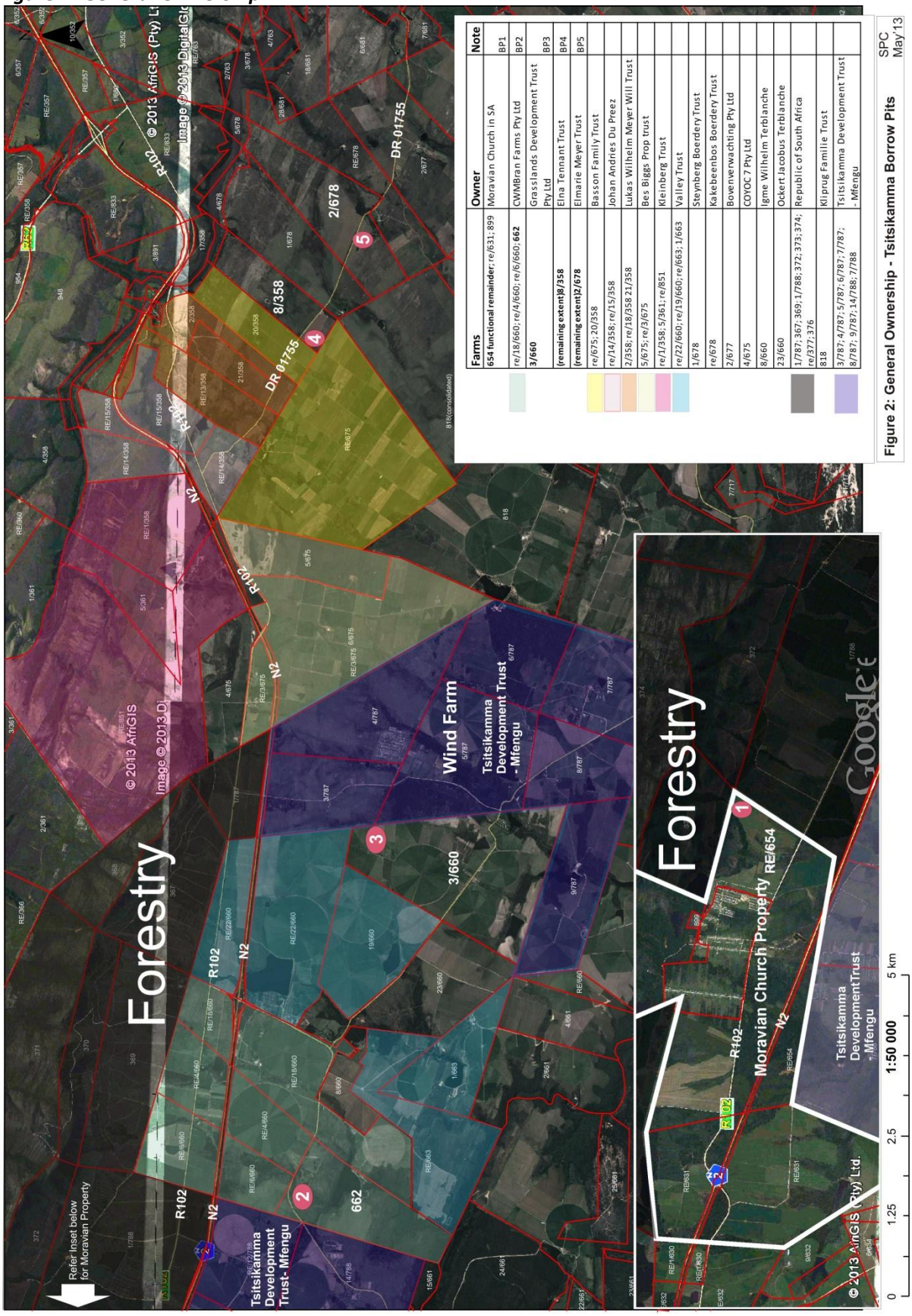


Figure 2: General Ownership



Farms	Owner	Note
654 functional remainder; re/631; 899	Moravian Church in SA	BP1
re/18/660; re/4/660; re/6/660; 662	CWMBran Farms Pty Ltd	BP2
3/660	Grasslands Development Trust Pty Ltd	BP3
(remaining extent)8/358	Elna Tennant Trust	BP4
(remaining extent)2/678	Elmarie Meyer Trust	BP5
re/675; 20/358	Basson Family Trust	
re/14/358; re/15/358	Johan Andries Du Preez	
2/358; re/18/358 21/358	Lukas Wilhelm Meyer Will Trust	
5/675; re/3/675	Bes Biggs Prop trust	
re/1/358; 5/361; re/851	Kleinberg Trust	
re/22/660; re/19/660; re/663; 1/663	Valley Trust	
1/678	Steynberg Boerdery Trust	
re/678	Kakebeenbos Boerdery Trust	
2/677	Bovenverwachting Pty Ltd	
4/675	COYOC 7 Pty Ltd	
8/660	Igme Wilhelm Terblanche	
23/660	Ockert Jacobus Terblanche	
1/787; 367; 369; 1/788; 372; 373; 374; re/377; 376	Republic of South Africa	
818	Kliprug Familie Trust	
3/787; 4/787; 5/787; 6/787; 7/787; 8/787; 9/787; 14/788; 7/788	Tsitsikamma Development Trust - Mfengu	

Figure 2: General Ownership - Tsitsikamma Borrow Pits SPC May'13

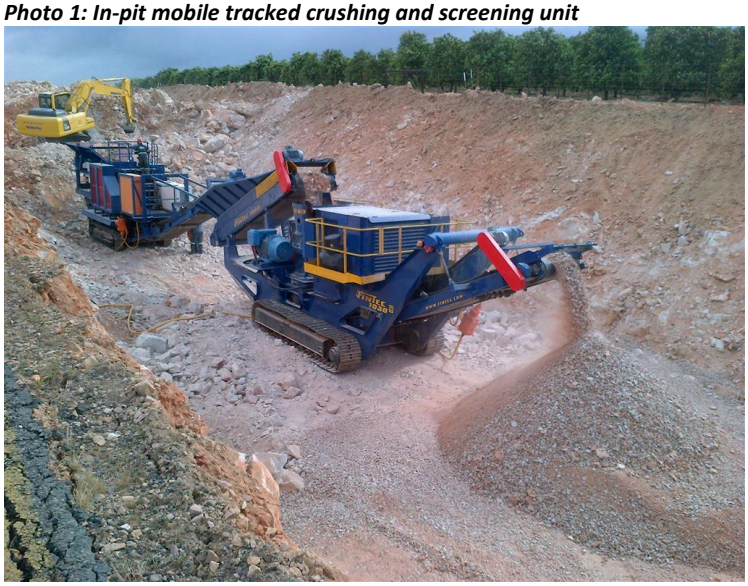
4.0 Legislation

4.1 The Mineral and Petroleum Resources Development Act (MPRDA)

The Application process, including the public participation process and the EIA/EMP compilation, is conducted in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002). In terms of the MPRDA the extent of the Mining Excavation is limited to a 1.5ha area for a Mining Permit.

In the case of the Hard Rock Sites where aggregate production by crushing and screening is required, or in the event of screening being required on oversize gravels, such crushing and screening will be conducted by in-pit, tracked, mobile crushing/screening units (as shown in Photo 1 below), within the 1.5ha Mining Permit Areas

Photo 1: In-pit mobile tracked crushing and screening unit



The environmental assessment and prescriptions of activities ancillary to the mine (including access road) are also dealt with in terms of the MPRDA, and are included in all assessments of impact.

Furthermore, any "Listed Activities" in terms of the National Environmental Management Act (NEMA) are dealt with under the MPRDA process within which context the Department of Mineral Resources is the Competent Authority.

The following activities represent NEMA listed activities which are applicable to the Borrow Pits:

In terms of Listing Notice 1 (i.e. No.R. 544):

Listing #	Description	Comment
20	Any activity requiring a Mining Permit	
23	Transformation of vacant land to... industrial use, outside urban area where total area to be transformed is bigger than 1ha but less than 20ha	

Such listings call for a Basic Assessment be done, which is included in this Mining Permit Application process as the Environmental Impact Assessments (EIAs) and the Environmental Management Programmes (EMPs) of the proposed operations.

As the Minister of the Department of Mineral Resources is identified by NEMA as the Competent Authority, the entire Application process is dealt with i.t.o. the MPRDA guidelines of the listed activities 20 and 23 above.

4.2 National Environmental Management Act (NEMA)

In the alternative event of further area being required for stockpiling or logistical facilities outside the 1.5ha area, the Environmental Authorisation for the use of such external areas will be sought under the NEMA as a separate Application.

4.3 Land Use Planning Ordinance (LUPO)

Additionally, Temporary Change of Land Use permission will be sought from the Kou-Kamma and Kouga Local Municipalities as shown in Figure 1.

5.0 The Application Process

As this is a Mining Permit Application under the MPRDA, the process is as follows:

- Lodging Applications for five Mining Permits (which has been completed).
- Conducting a basic public scoping process (currently being undertaken), calling for the identification of possible I&APs, inclusive of distribution of this BID document to identified I&APs as basis for comment by such I&APs and using this BID Document as Basic Scoping Report.
- Receipt of comments/inputs by I&APs and considerations thereof.
- An Environmental Impact Assessment of the mining activities (to be conducted and reported within the prescribed format of the EIA/EMP Report.
- Conducting of Specialist Studies, where the need for such specialist assessments may be deemed necessary, due to either inputs obtained during the scoping process or by legislative prescriptions (NEMA)(listed activities considered in the MPRDA process).
- Consideration of attenuation measures to reduce impacts, inclusive of specific site recommendations in conjunction with "standard" industry practices (accepted as the norm during mining operations).
- Compilation of an EMP to guide all on-site activities, and the distribution of such draft EMP by Site Plan Consulting to the respective Borrow Pit landowners and Registered I&APs for comment as well as distribution by the DMR for interdepartmental comment.
- Approval of a final EMP by DMR and issuing of the Mining Permits.

As described by the MPRDA, the **scheduling** of the process is as follows:

i) Submit 5x Applications (conducted 26 April 2013)
ii) DMR acceptance of Applications (13-24 May 2013)
iii) Applicant to make contact and consult with Borrow Pit landowner and identify and consult with I&APs (through this BID document distribution) and report on such notification and consultation within 30days (deadline set by DMR of 12 June 2013)
iv) Applicant to conduct EIA assessments and compile EIA /EMP Reports and submit within a further 30 Days (deadline set by DMR of 12 July 2013)
v) Following submission of the above, the DMR Regional office has 120days to either Approve or reject the Applications (ie, expected Approval +-mid-November 2013)

6.0 Borrow Pit Site Descriptions and Layout Plans

6.1 Choosing sites

While all existing Borrow Pits were assessed with Google^{tm} imagery, and most were visited to assess their possible suitability for extension/re-use in preference to developing new virgin sites, only Borrow Pit 2 has been identified as the re-use of an existing pit, offering sufficient development area and materials quality to meet the project requirements. All other borrow pits are virgin sites, as the project calls for road materials with high load-bearing capacities.

Wherever possibly necessary, areas outside of the 1.5ha Mining Permit required for ancillary activities (stockpiling or other logistical requirements) will preferably be identified within the wind farm project areas already demarcated for disturbance.

The choice of sites was made following a comprehensive desktop assessment of the Regional geology, the Geomorphological relationship between gravel deposits, weathering depth and topographical features (scree gravels at the foot of slopes, laterite gravels on the coastal plain remnants , etc), Google^{tm} imagery of existing pits, and then combining geological target areas with ecological factor input, with particular preference to existing disturbed areas and cultivated areas over natural areas, surrounding land use compatibility, and further matters such as access to delivery roads and delivery distance.

6.2 Generic Mining Process and Methods

6.2.1 Primarily natural gravel pits (without targeted hard rock)

Such pits which target unconsolidated scree gravels include Borrow Pits 1, 4 and 5, where the development of such pits primarily entails:

- Removal of topsoil by dozing to topsoil wind-rows for later use in rehabilitation (replacement of growing medium)
- the direct loading of the target unconsolidated gravels by excavator to waiting delivery trucks for direct despatch to the contract
- on completion of removal of the gravel horizon, while retaining a lower 250mm of gravel as a drainage layer, the excavation perimeter will be sloped to a maximum 1:3 gradient, whereupon topsoil will be returned by dozer after which the topsoil together with lower drainage layer will be lightly ripped/scarified, to be followed by seeding with a preferred seed mix chosen by the landowner.

While no drilling and blasting, nor crushing and screening are contemplated:

i. Crushing and screening may be required for areas in the pit where good quality oversize material may require size reduction to meet the specification for material quality, or where it may be advantageous to beneficiate the material quality; and

ii. Should the gravels be slightly consolidated or partly-weathered sandstones protrude into the gravel pit, limited well-controlled blasting may be contemplated to loosen such material prior to crushing and screening, but given the low selling price of the product sought from the scree gravel pits, blasting, crushing and screening will preferably be avoided.

In the event of such drilling, blasting and in-pit crushing being required, the photograph below illustrates the nature of a borrow pit where this eventuality has been applied by the contractor under a different contract in the Western Cape, directly adjacent to export- orange orchards.

Photo 1: In-pit mobile tracked crushing and screening unit

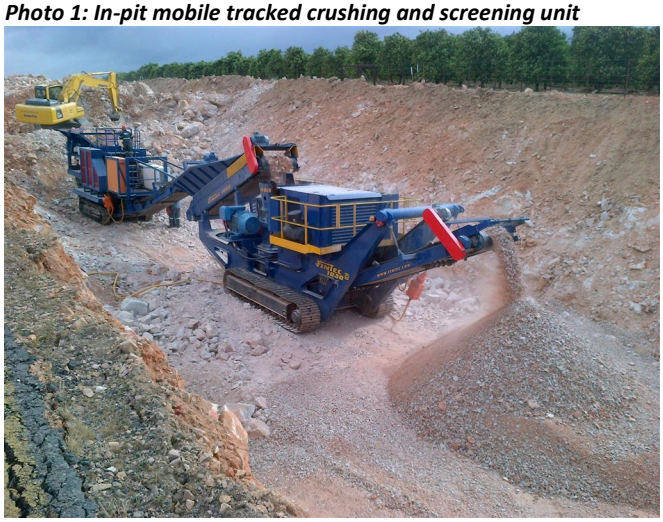


Photo 2: Typical Borrow Pit rehabilitation with full topsoil replacement and revegetation by pasture seeding on the floor of the excavation, and scarification of 1:3 side slope ready for hand seeding.

6.2.2 Primarily hard rock sites for aggregate production

These pits will primarily produce hard rock aggregate through drilling and blasting, with in-pit crushing and screening to produce both aggregate for concrete (to serve turbine bases and culverts) as well as a crushed G4 for high quality gravel surfaces and for blending into lower grade natural gravels from the other pits to improve the bearing capacity of the roads and crane platforms.

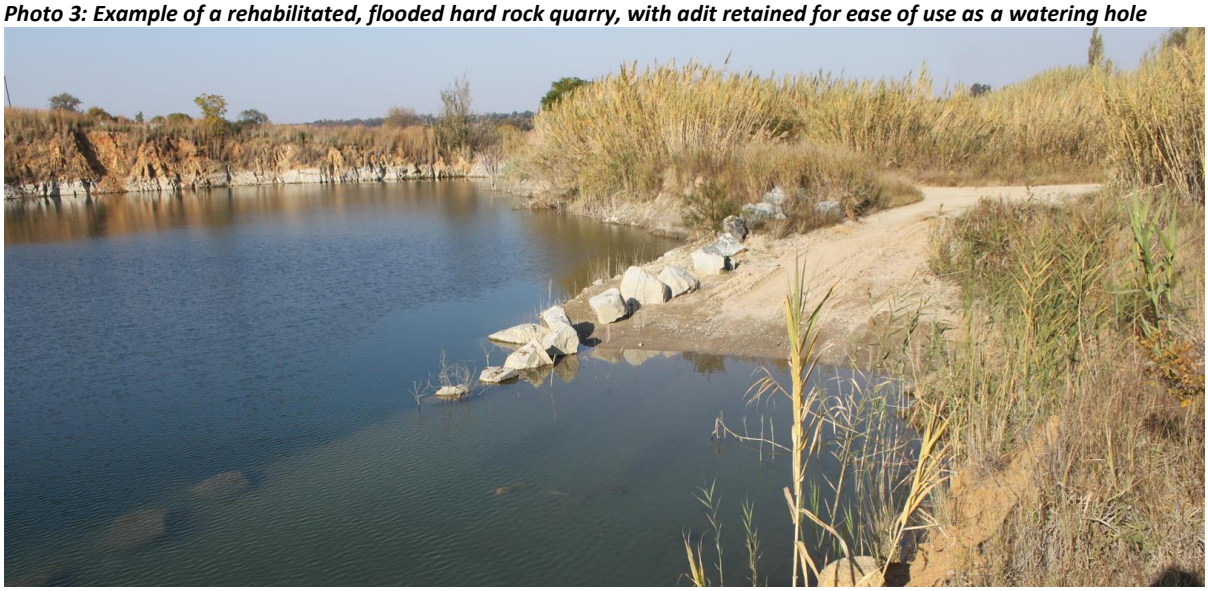
The development of Borrow Pits 2 and 3 will therefore entail:

- removal of topsoil by dozing to topsoil perimeter berms for later use in rehabilitation (replacement of growing medium on safety benches)
- the direct loading of any available unconsolidated surface gravels by excavator to waiting delivery trucks for direct despatch to the contract (note that in the case of Borrow Pit 2 which is an old unrehabilitated gravel pit, that 80% of these gravels have been previously removed)
- on completion of removal of the gravel horizon, the exposed hard rock will be drilled to a depth of 9-10m, and blasted, in progressive blasts at one blast every 21 days, with intermittent loading and crushing. A total depth of some 14m is planned.
- the blasted rock on the “muck pile” will then be loaded by excavator, directly into the intake hopper of the tracked mobile crushing and screening plant, from which the product will be loaded to delivery vehicles for delivery to the project (refer Photo 1 for example of operating procedure)
- final perimeter blasting will be designed to yield a split-face, with an upper perimeter safety bench at maximum 3m below ground level, and a lower bench of 6-11m
- post mining rehabilitation will include:
    - Return of the stored topsoil to any surrounding area of the pit where either gravels or rock have been exposed
    - Placing of topsoil on the upper safety bench to serve as growing medium for shrub regrowth
    - Construction of a low (0.7m-high) safety berm with 300mm outer perimeter safety trench
    - Livestock fencing of the excavation, with provision of a gate to the decline adit
    - The excavation floor will be allowed to flood by seepage and rainwater to form a shallow reed-bed for water-fowl nesting

While in the primary gravel pits the shaping of the pit and topsoiling with ripping will permit the re-establishment of the site as at minimum a grazing area, the agricultural potential of the hard rock pit will be totally lost, and at best serve as a watering hole for livestock, which would be able to access the floor via the gate and retained decline adit.

The mining activities will be limited to a maximum 24 month "life of mine". Possible further lifespan/renewals of the Mining Permits may be sought should additional materials be required or the construction contract be delayed, for periods of 1 year, up to a maximum of 3 additional years.

Photo 3: Example of a rehabilitated, flooded hard rock quarry, with adit retained for ease of use as a watering hole



6.3 Description of each Borrow Pit Site.

6.3.1 Borrow Pit 1

i) Use of the site

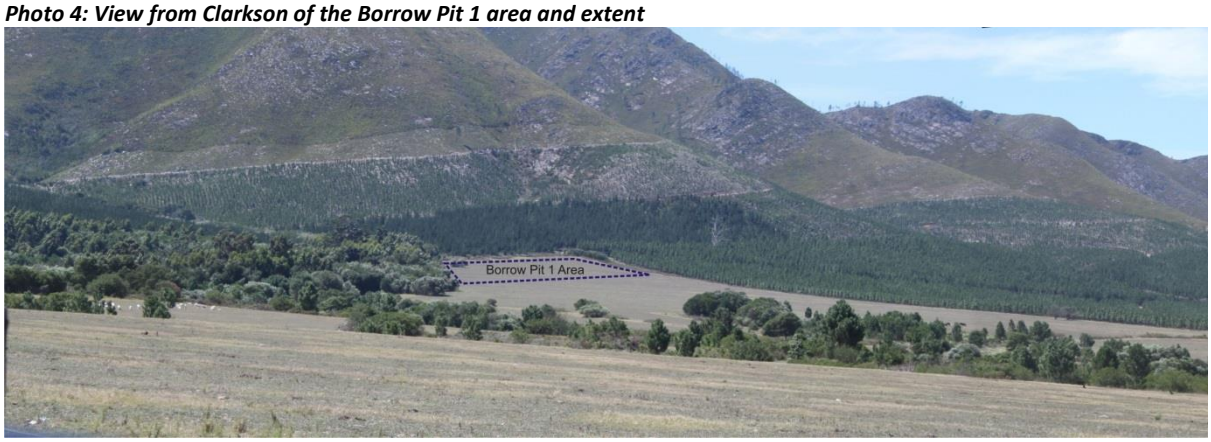
Borrow Pit 1 is a primarily unconsolidated scree gravel site, with no expected hard rock, where the soft material will be removed directly via excavator to delivery trucks, and with only a small chance that any in-pit crushing may be required if coarse gravels are encountered in the deposit.

Being soft material, the pit development will facilitate final perimeter sloping to maximum 1:3, with replacement of perimeter-berm stored topsoil to reinstate the grazing capacity of the full 1.5ha area.

ii) General locality and description

In order to target the best scree gravels, the pit is of necessity located as close to the hard rock slope of the mountain toe as possible. While this location presents visual exposure, the materials and approach to borrow pit development and rehabilitation will only cause a temporary visual impact, following which the retained and re-used topsoil together with pasture-mix seeding and favourable Tsitsikamma climate will facilitate visual rehabilitation of the site within a 3-year period.

Photo 4: View from Clarkson of the Borrow Pit 1 area and extent



iii) On-site considerations

Given the high visual exposure of the site, strip-mining process from east to west will be applied, thereby permitting the shortest possible exposure of the smallest possible area at a time.

The site currently has no indigenous vegetation present as it is a livestock paddock.

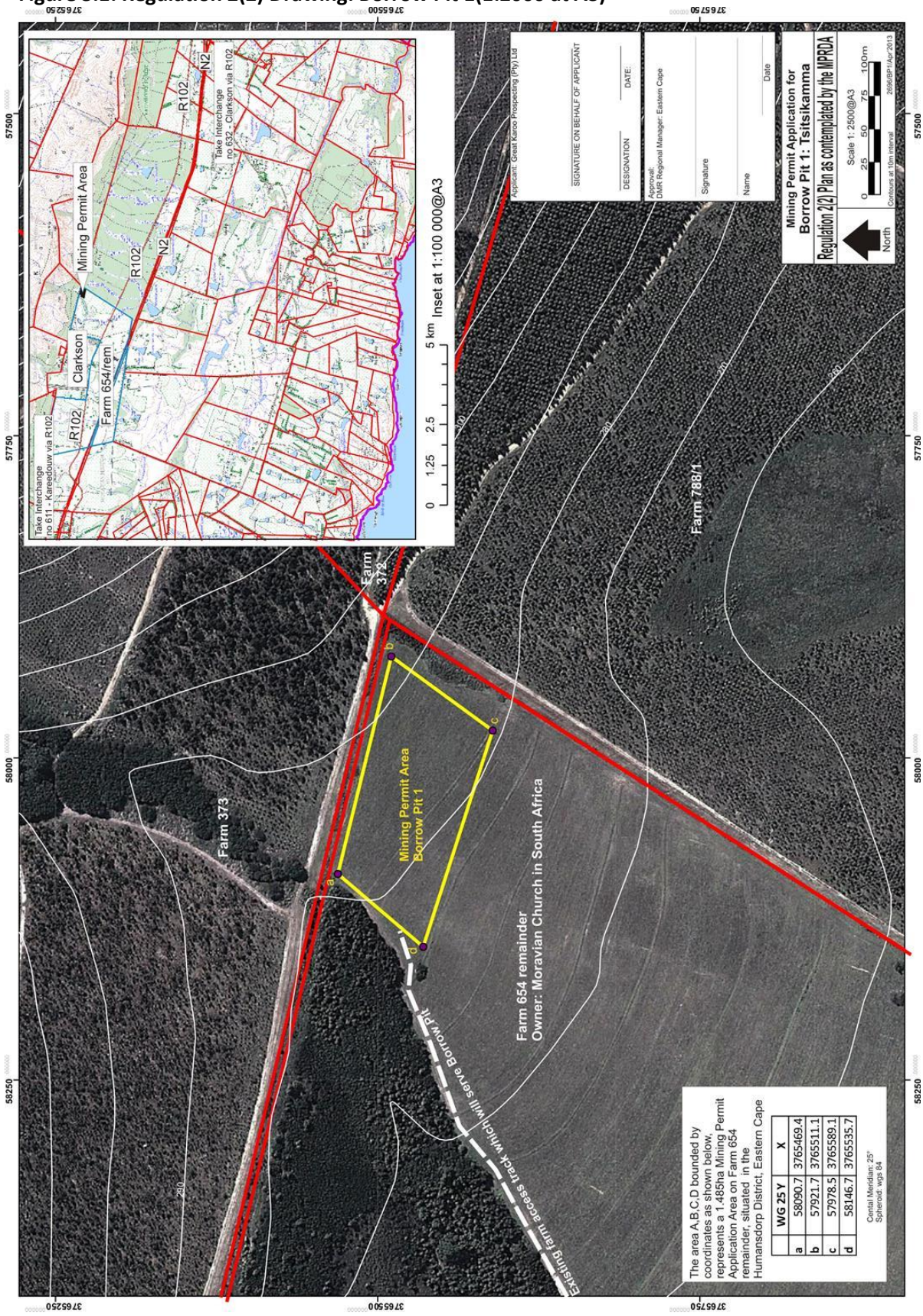
Access will be via the existing farm gate to the R102, using the existing farm track down the western edge of the paddock, for delivery to the project via the R102.

As the site is surrounded by either livestock paddocks or pine plantation, with distance of 1.2km to the nearest residence in the urban area of Clarkson, surrounding land use will impose no restrictions on the site development, and conversely will not be impacted by such site use.
A minimum 20m buffer will be maintained to the perimeter boundary with the plantations.

The floor will be sloped to allow drainage.

iv) Regulation 2(2) Drawing showing the detailed locality and extent of the borrow Pit

Figure 3.1: Regulation 2(2) Drawing: Borrow Pit 1(1:2000 at A3)



6.3.2 Borrow Pit 2

i) Use of the site

Borrow Pit 2 is primarily a hard rock aggregate production site, by means of drilling, blasting, crushing and screening.

ii) General locality and description

The site to be positioned as shown in Figure 3.2 overleaf, to be located in an abandoned unrehabilitated gravel pit, where the hard rock is exposed in the floor, and with the site currently overgrown with dense alien vegetation.

There are two existing earlier borrow pit access roads with gates allowing access from the gravel public road.

iii) On-site considerations

In light of the above, the permanent loss of agricultural potential on the site is not significantly increased by this choice of location.

There is no risk of impact on natural vegetation, and an alien vegetation eradication programme will form part of the post-mining rehabilitation plan.

As the site is located between 50-130m from the gravel public road, blasting will require temporary road closure for 20 minutes during blasting, which will be scheduled to take place once every three weeks.

The access point onto the public road will be clearly signposted with heavy vehicle movement danger signposting , and if necessary provided with flagmen.

Given the extent and density of alien vegetation, there will be no visual exposure of the activities to surrounding land users or to the road, and such screening will further serve to limit dust dispersion.

Given that the nearest residences are located beyond the 500m general maximum blasting safety zone, no evacuation of any dwellings would be required during blasting.

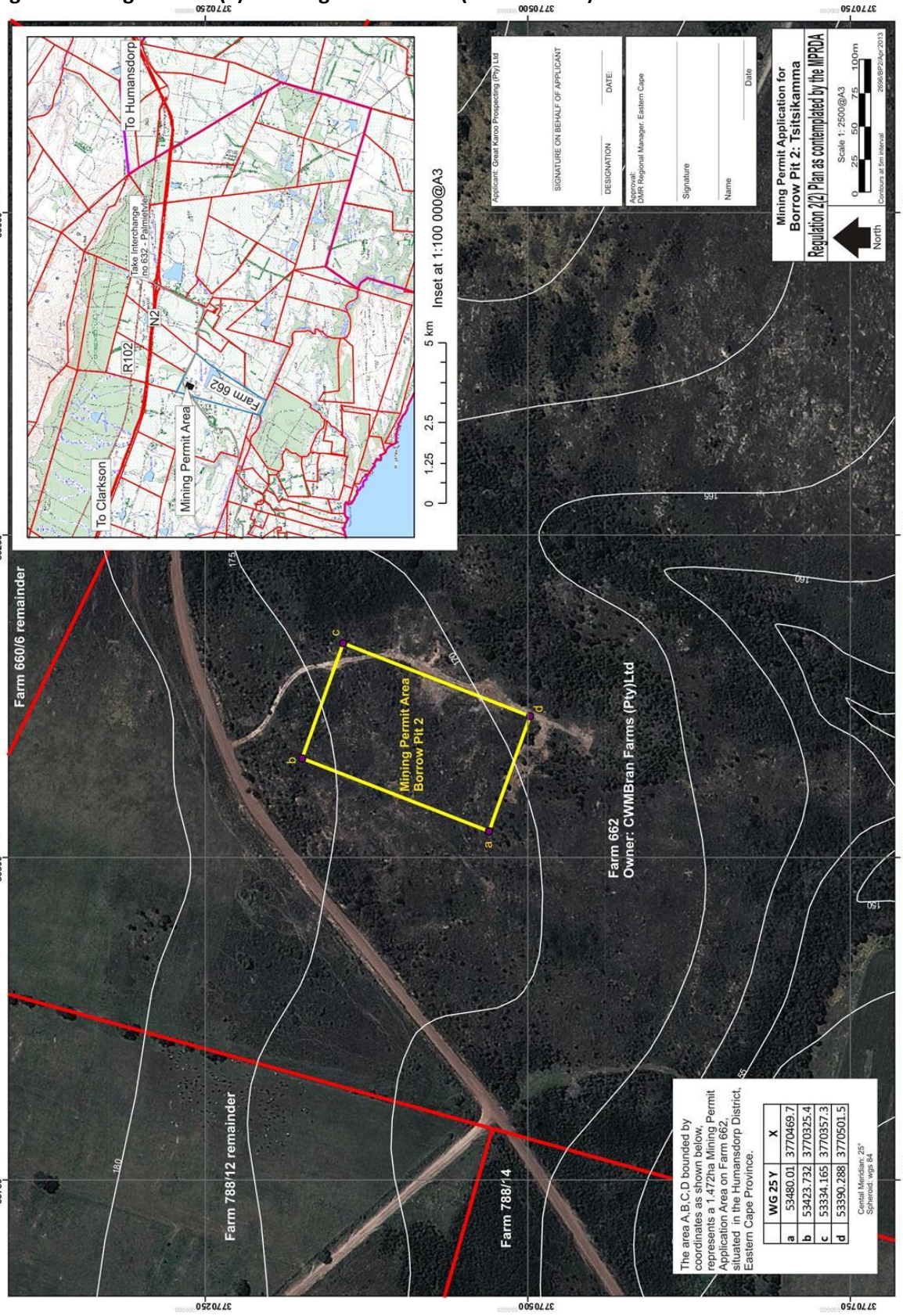
The blasting will be conducted by a professional team utilising the latest blasting technology and the blaster will ensure that there are no persons or livestock within the fly-rock danger zone at time of blasting.
Given the 600m distance to the nearest dwelling and the Application of appropriate delays within the blast design, structural damage to dwellings or to the dam wall at 900m will be avoided.
The ground vibration at the nearest residence and the dam wall will be monitored at every blast.

The blast noise level outside of the 500m radius will pose no health threat, but in order to reduce the startling effect of the blast noise, all surrounding landowners will be timeously notified of the dates and time of scheduled blasts and the prescribed siren warning of a pending blast will be sounded.

Rehabilitation:
While the excavation will remain as a “box-cut” of which the floor will be allowed to flood, the rehabilitation of the upper perimeter will take place in general accordance with the specifications in para. 6.2.2 above.

iv) Regulation 2(2) Drawing showing the detailed locality and extent of the borrow Pit

Figure 3.2: Regulation 2(2) Drawing: Borrow Pit 2(1:2000 at A3)



6.3.3 Borrow Pit 3

i) Use of the site

Borrow Pit 3 is primarily a hard rock aggregate production site, by means of drilling, blasting, crushing and screening.

ii) General locality and description

The site has been chosen on the strike of good rock adjacent to the project area for direct delivery onto the project property without the use of a public road, using an access off of the planned western turbine access road.

The site is located in a fallow land previously tilled for grazing.

iii) On-site considerations

A permanent loss of agricultural potential on the site will occur, but the rehabilitated pit will offer the opportunity of water storage, or alternatively a reed-bed and livestock drinking point.

There is no risk of impact on natural vegetation given the previously tilled status of the site.

The site is extremely isolated topographically and by alien vegetation screening on the wind farm property, with the closest surrounding uses being as follows:

- 500m-700m from the closest edge of existing centre-pivots
- 300m to a livestock watering point to the west
- 1200m to the nearest residence of the Tsitsikamma Village to the East
- In excess of 1200m from the closest earth-walled dam

Given the above distances, the only use requiring protection from possible fly rock is the livestock watering point to the west, and being located at 300m distance the risk of damage to the physical point is low, but the blasting technician shall coordinate with the landowner regarding the herding of livestock to ensure that all livestock are outside of a 500m radius at the time of blasting, which will occur once every three weeks during the period of activity.

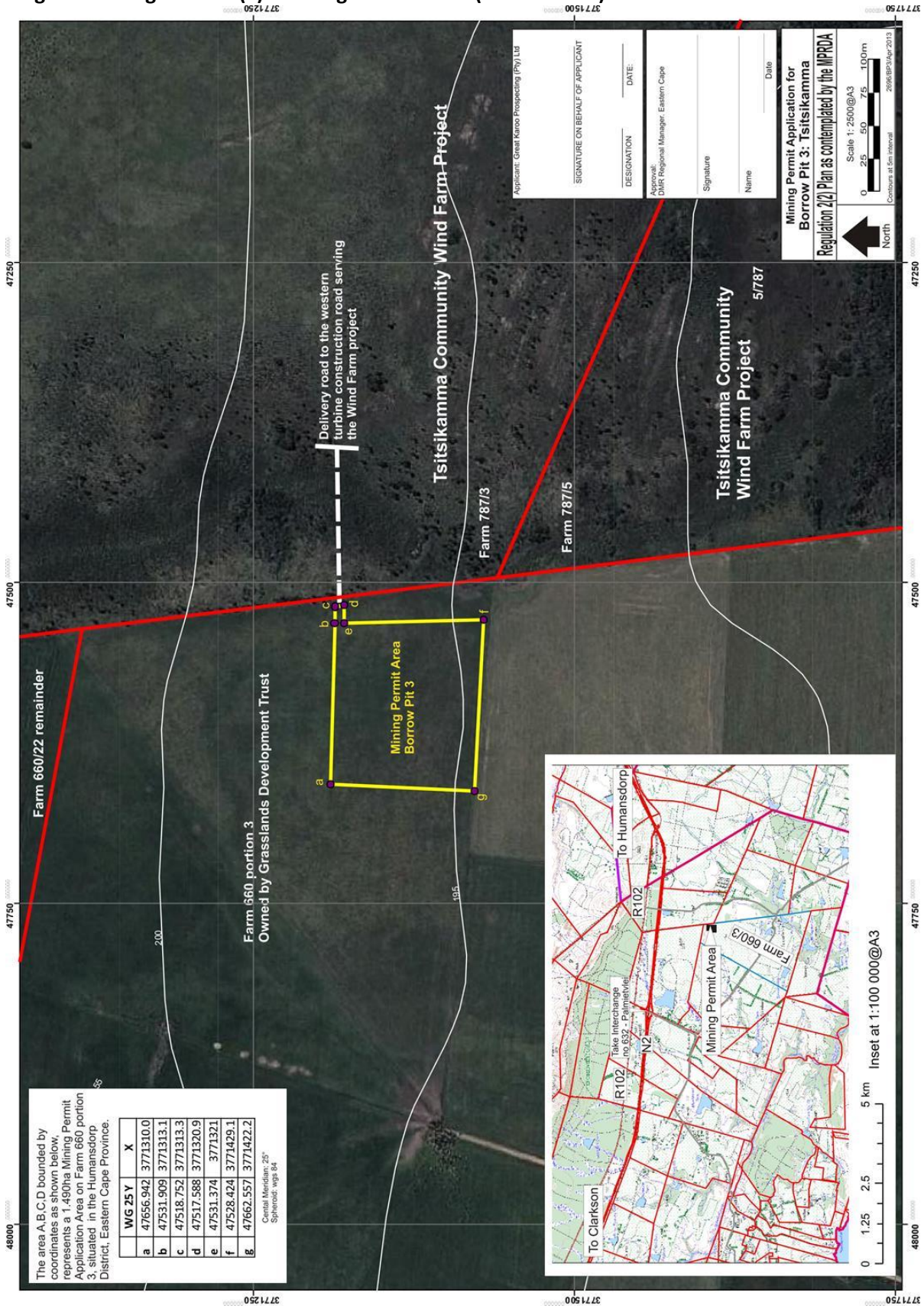
Given that the nearest residences are located beyond the 500m general maximum blasting safety zone, no evacuation of any dwellings would be required during blasting.

Regarding expected ground vibration's possible impact on underground pipelines feeding the centre-pivots, the blaster will liaise with the landowner regarding the distance to such pipes and a blast expert will be employed to design the detonation sequence and charge per delay (blast design) to ensure that blast vibration at the determined distance will not endanger the pipelines. The ground vibration at the nearest vulnerable points will be monitored and recorded at every blast.
The blast noise level outside of the 500m radius will pose no health threat, but in order to reduce the startling effect of the blast noise, all surrounding landowners will be timeously notified of the dates and time of scheduled blasts and the prescribed siren warning of a pending blast will be sounded.

Rehabilitation:
While the excavation will remain as a "box-cut" of which the floor will be allowed to flood, the rehabilitation of the upper perimeter will take place in general accordance with the specifications in para. 6.2.2 above.

iv) Regulation 2(2) Drawing showing the detailed locality and extent of the borrow Pit

Figure 3.3: Regulation 2(2) Drawing: Borrow Pit 3(1:2000 at A3)



6.3.4 Borrow Pit 4

i) Use of the site

Borrow Pit 4 is a primarily unconsolidated scree gravel site, where the soft material will be removed directly via excavator to delivery trucks, and with only a small chance that any in-pit crushing may be required if coarse gravels or hard rock ridges are encountered in the deposit.

Targeting soft material, the pit development will generally facilitate final perimeter sloping to maximum 1:3, with replacement of perimeter-berm stored topsoil to reinstate the grazing capacity of much of the 1.5ha area.

Should coarse gravels or hard rock be encountered within the pit, in-pit crushing and screening of such material may be required, and localised ad-hoc blasting may facilitate smoothing of the excavation floor or perimeter slope where such rock is encountered, but such blasting will not be the norm and would be conducted in full liaison with the landowner should it be required.

ii) General locality and description

In order to target the best scree gravels, the pit is of necessity located as close to the hard rock slope of the low ridge as possible. While this location presents visual exposure, the materials and approach to borrow pit development and rehabilitation will only cause a temporary visual impact, following which the retained and re-used topsoil, together with seed-mix of the landowners choice and favourable climate will facilitate visual rehabilitation of the site within a 3-year period.

Photo 5: View from theDR01755 gravel road (to St Francis Bay) showing the Borrow Pit 4 area and extent

iii) On-site considerations

Given the high visual exposure of the site, strip-mining process from West to East will be applied, thereby permitting the shortest possible exposure of the smallest possible area at a time, and will also initiate disturbance at maximum distance from the farmstead.

The site was previously tilled, and shows sparse regrowth of indigenous vegetation. While a Specialist botanist has been identified to conduct a botanical assessment of all the sites, such impact is expected to be low, but should any specific species warranting preservation be identified, the botanist will conduct a Search and Rescue programme for transplant to adjacent suitable habitat.

A western boundary access to the DR01755 using the existing perimeter field track will be discussed with the landowner, as this will facilitate delivery at maximum distance from the farmstead.

Regarding dust generated by the loading activity and the delivery road use to the public road, the contractor will provide for wetting of the road by water cart when necessary, to avoid such dust impact on the farmstead and adjacent crops in the adjacent cultivated portion.

The floor will be sloped to allow drainage.

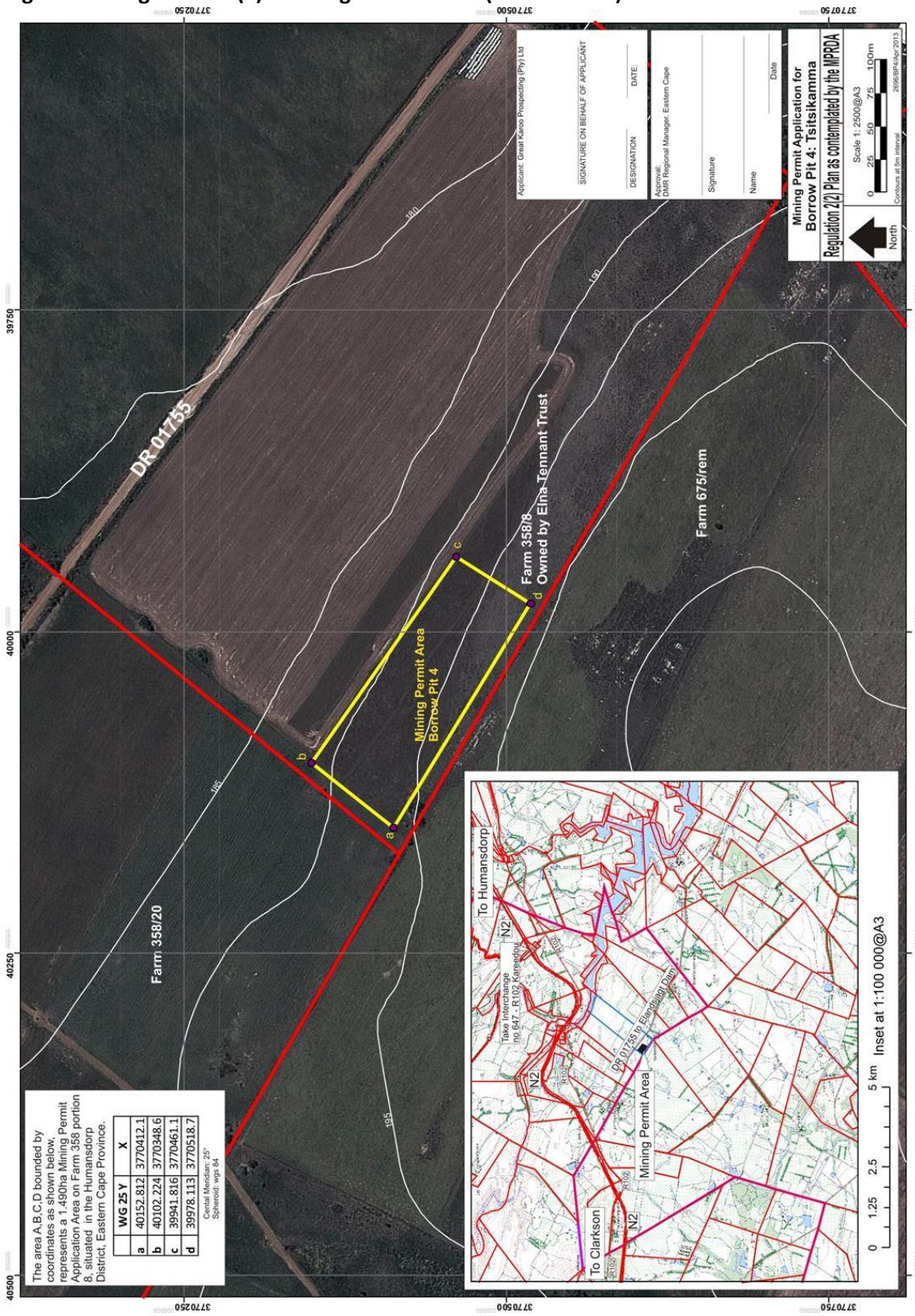
Regarding surrounding use, it is of note that the closest residences are located between 480-670m east of the site, with the site being at closest 230m to the northern public road. As such any possible blasting would require temporary (20minute) closure of the road, which road closure would be conducted by the contractor who is au fait with construction traffic control, and who would liaise with the relevant traffic authorities in respect of all borrow pit access/traffic control.

Any blasting would only be conducted subject to the findings of a blasting risk assessment in respect of both fly rock and ground vibration.

Should blasting be deemed necessary, all prescriptions and monitoring as per site 2 and 3 will be followed (Para 6.6.3.2 and 6.3.3), in respect of fly rock and ground vibration, impact on site activities, residences and agricultural structures, and the nearby public road.

iv) Regulation 2(2) Drawing showing the detailed locality and extent of the borrow Pit

Figure 3.4: Regulation 2(2) Drawing: Borrow Pit 4(1:2000 at A3)



6.3.5 Borrow Pit 5

i) Use of the site Use of the site

Borrow Pit 5 is a primarily unconsolidated scree gravel site, where the soft material will be removed directly via excavator to delivery trucks, and with only a small chance that any in-pit crushing may be required if coarse gravels or hard rock ridges are encountered in the deposit.

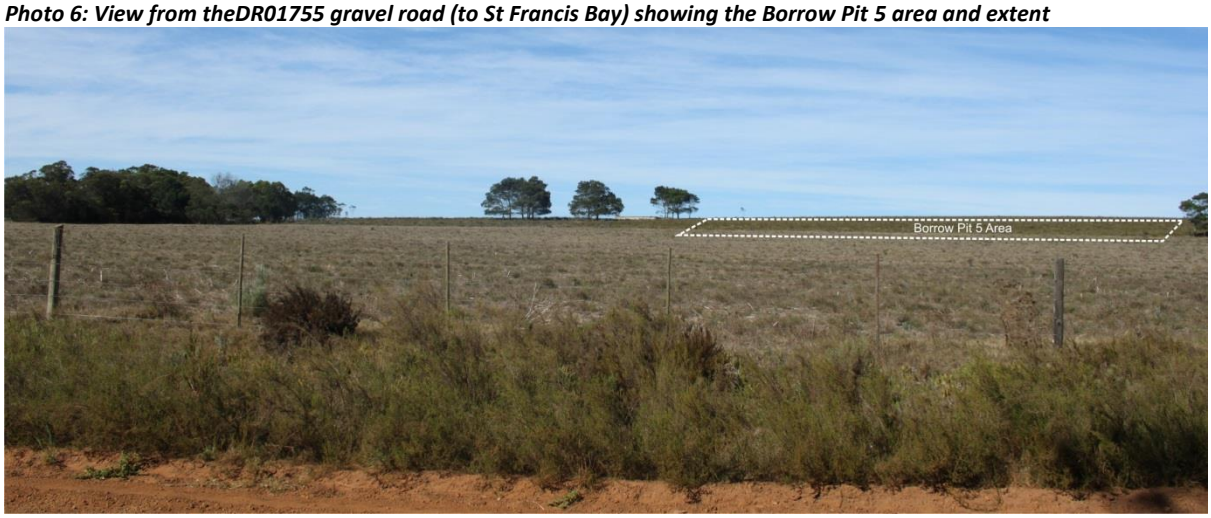
Targeting soft material, the pit development will generally facilitate final perimeter sloping to maximum 1:3, with replacement of perimeter-berm stored topsoil to reinstate the grazing capacity of much of the 1.5ha area.

Should coarse gravels or hard rock be encountered within the pit, in-pit crushing and screening of such material may be required, and localised ad-hoc blasting may facilitate smoothing of the excavation floor or perimeter slope where such rock is encountered, but such blasting will not be the norm and would be conducted in full liaison with the landowner should it be required.

ii) General locality and description

In order to target the best scree gravels, the pit is of necessity located as close to the hard rock slope of the low ridge as possible. While this location presents visual exposure, the materials and approach to borrow pit development and rehabilitation will only cause a temporary visual impact, following which the retained and re-used topsoil, together with seed-mix of the landowner's choice, and favourable climate will facilitate visual rehabilitation of the site within a 3-year period.

Photo 6: View from theDR01755 gravel road (to St Francis Bay) showing the Borrow Pit 5 area and extent



iii) On-site considerations

Given the high visual exposure of the site, strip-mining process from West to East will be applied, thereby permitting the shortest possible exposure of the smallest possible area at a time, and this will also initiate disturbance at maximum distance from the farmstead.

The site was previously tilled, and shows sparse regrowth of indigenous vegetation in the upper 2/3rds, while the lower third is in recently cultivated land. While a Specialist botanist has been identified to conduct a botanical assessment of all the sites, such impact is expected to be low, but should any specific species warranting preservation be identified, the botanist will conduct a Search and Rescue programme for transplant to adjacent suitable habitat.

Regarding the impact on the cultivated portion, following the detailed findings of specific trial pits, it is intended that this shallowest portion of the pit be shaped in such a way (and provided with sufficiently deep returned soil profile) to facilitate reintegration into the cultivated area, with minimal impact on post-rehabilitation crop production.

Use of the existing farm access road immediately east of the site to the DR01755 be discussed with the landowner.
Regarding dust generated by the loading activity and the delivery road used to the public road, the contractor will provide for wetting of the road by water cart when necessary, to avoid such dust impact on the farmstead and crops in the adjacent cultivated portion.

The floor will be sloped to allow drainage.

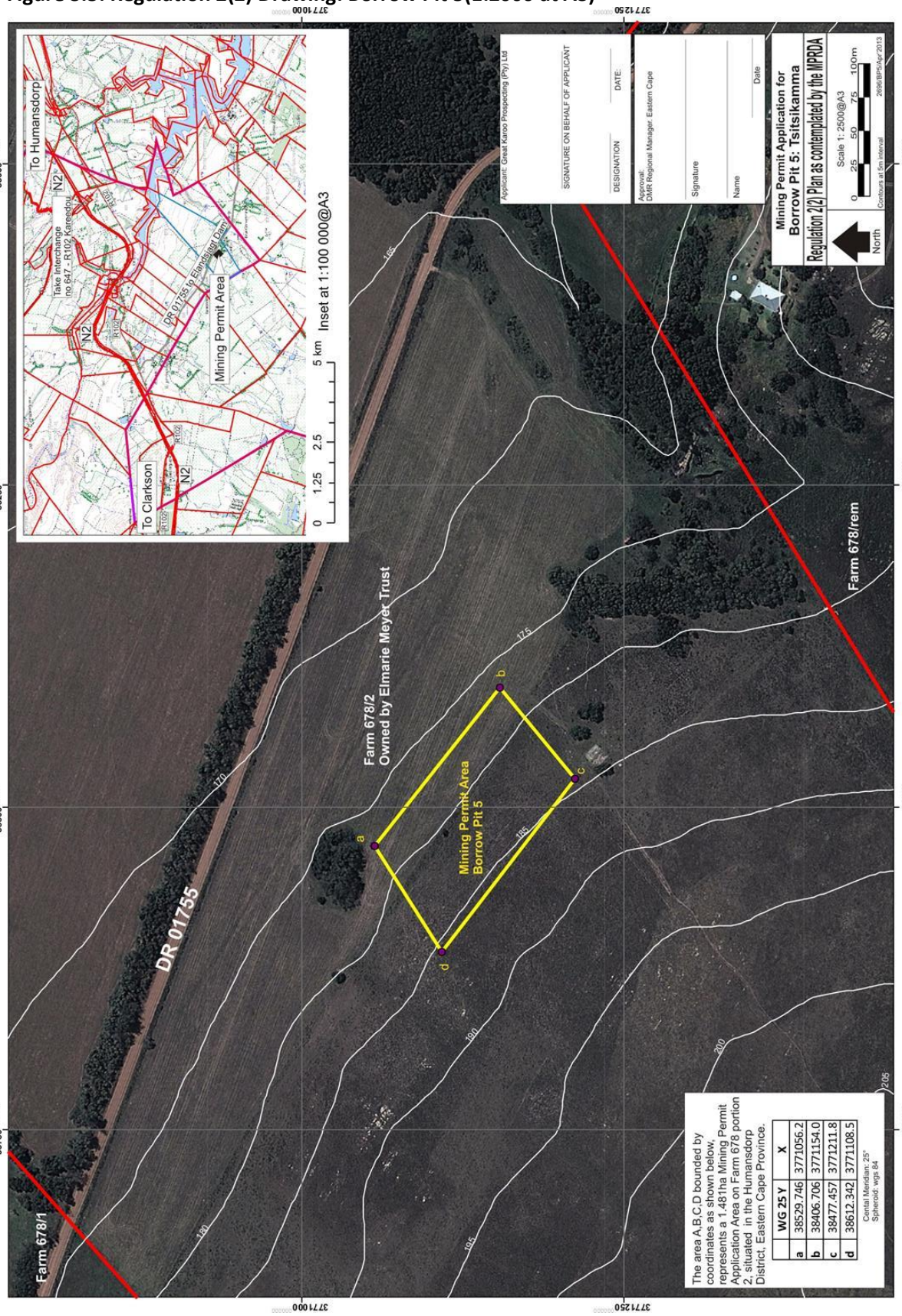
Regarding surrounding use, it is of note that the closest residences are located between 370-530m east of the site, with the site being at closest 120m to the northern public road. As such any possible blasting would require temporary (20minute) closure of the road, which road closure would be conducted by the contractor who is *au fait* with construction traffic control, and who would liaise with the relevant traffic authorities in respect of all borrow pit access/traffic control.

Any blasting would only be conducted subject to the findings of a blasting risk assessment in respect of both fly rock and ground vibration.

Should blasting be deemed necessary, all prescriptions and monitoring as per site 2 and 3 will be followed (Para 6.6.3.2 and 6.3.3), in respect of fly rock and ground vibration, impact on site activities, residences and agricultural structures, and the nearby public road.

iv) Regulation 2(2) Drawing showing the detailed locality and extent of the borrow Pit

Figure 3.5: Regulation 2(2) Drawing: Borrow Pit 5(1:2000 at A3)



7.0 Consideration of Potential Impacts

During the EIA Phase, full consideration will be given to the following environmental elements per site, within the context of such elements listed below, and reflecting the nature of such consideration applied during the site identifications. These will be expanded on in the EIA/EMP.

The potential environmental impacts considered in respect of the mining activities are as follows:

1: Soil

Permanent loss of topsoil is always considered a significant negative impact. As such, standard mining practise calls for removal and storage of upper soils/gravels wherever possible prior to disturbance.

Such topsoils, inclusive of the seedbank secured within them, are to be removed and stockpiled in either wind-rows or perimeter berms, and then used during post-mining rehabilitation to rehabilitate all disturbance footprints, with the replaced seedbank and additional seeding acting to rejuvenate the natural or paddock vegetation cover over these areas.

2: Topography

The borrow pit excavations will by necessity impact on topography, but in the event of "soft"(gravel) borrow pits this will be negligible.

3: Visual Impact

As stated per Borrow Pit under 6.3 above, full cognisance is being taken of the visual impact of Borrow Pits 1-5, especially in respect of Borrow Pits 1, 4 and 5. Fortunately these are soft rock sites, where soft shaping to low gradient slopes can be easily achieved and rehabilitated to integrate such pits with the surrounding visual envelope.

4: Animal life

Vast expanses of the similar habitat surround the sites, which provide a habitat suitable for species typical of the area. These include buck, rodents (mice, shrews etc), reptiles (snakes and tortoises), birds and insects.

The large scale of the surrounding habitat type when compared to the extent of the proposed activities negates any significance of impact in this regard.

As is standard practice, an animal search and rescue will be undertaken prior to any activity on site.

5: Land Capability

As the scree gravel excavations will take place in gravel soils, with reasonable topsoil profiles, their agricultural potential will largely be returned through planned growing medium reconstitution.

In the case of the hard rock sites, the area encumbered by the excavations will lose their agricultural land capability, and at best will serve a wilderness function, providing habitat for water- fowl and other bird nesting.

6: Surface Water

No surface water resources occur within the Mining Permit Areas, and as such this will not be impacted in any significant way.

7: Ground Water

As the maximum planned depths of even the blasting sites will be +-14m, the proposed excavations of 1.5ha are highly unlikely to encounter the groundwater table, but local seepage through the jointed quartzite will no doubt occur at the hard rock sites, and will result in the post-mining floor partly-flooding.

8: Natural Vegetation

While only borrow pits 4 and 5 will extent into partly re-vegetating historically-tilled areas where natural vegetation is relevant, a specialist botanist/horticulturist is being appointed to conduct a botanical assessment of all sites, with a view to assessing vegetation status, conducting search and rescue where required, and considering the post-mining revegetation with either seeding with indigenous species seed, or fodder mix selected by the landowner in relation to each site's soil characteristics.

9: Air quality (Dust)

The following sources of dust will arise due to quarrying activity

- Excavation activities (excavator).
- Crushing and screening.
- Product loading.
- Delivery vehicles to the public road.

At Borrow Pits 4 and 5 the farmsteads are located on the east-west axis of the borrow pits, placing them downwind under westerly wind conditions.

Despite their locations in excess of 370m from the closest activity, the matter of duct impact will be specifically assessed during the EIA/EMP phase and appropriate established attenuation measures will be put in place, such as water cart wetting, termination of crushing under high dust risk wind conditions, and general implementation of good housekeeping practice on-site.

10: Noise

The following noise sources will occur during the envisaged life-of-mine:

- Loading of material to delivery vehicles or screening plant hopper
- Crushing and screening plant, which activity will be limited to daytime hours, Monday to Friday.
- Product loading and delivery vehicle generated noise

Loading, screening, hauling, and vehicle noise will be limited to the vicinity of the mine and activities will be limited to the hours between 07h00 and 18h00, weekdays only.

- Blasting; at a maximum once every three weeks and generally limited to borrow pits 2 and 3

8.0 Your involvement as an I&AP

This BID document serves as the basis of the initial discussion between the Applicant and the respective landowner's regarding the envisaged activities on their properties, and further, with regard to I&APs, to give such readers basic background information based on which the reader can decide whether or not they wish to register as an I&AP in the environmental process of these Applications and to give initial comment.

You are therefore hereby given the opportunity to:

1) Gain an understanding of the project from the BID document, and from telephonic enquiry to Site Plan Consulting on any matter of which you would seek further clarity;
2) Register as an I&AP, in order to remain informed during the further process of the Application; and
3) To give comment in writing on any matter you feel should receive specific attention or to raise any matter which you feel has not been identified in this initial documentation.

In order to register as an I&AP and/or to provide comment on the BID, you are invited to submit your name, contact information, and interest in the matter, in writing, to reach the address below no later than 10 June 2013:

Site Plan Consulting
PO Box 28
Strand
7139

Email: Jaques@siteplan.co.za
Fax: 021 854 4321
Tel: 021 854 4260
Contact person: Jaques van der Vyver or Stephen van der Westhuizen