



UNIMIN AUSTRALIA LIMITED

NORTH STRADBROKE ISLAND PROJECT

REHABILITATION PLAN FOR DISTURBED AREAS

(EA NO. M2884)

MINING LEASE NO.

ML1124, ML1132 & ML 7064

November 2009

North Stradbroke Island Rehabilitation Plan

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1.0 INTRODUCTION

Unimin Australia Limited (Unimin) and its precursors have been mining on North Stradbroke Island for over 35 years to supply glass grade silica sand to local, interstate, and international glass works. Current operational leases include Mining Leases (ML) 1124, 7064 and 1108 (Figure 1). ACI Operations Pty Ltd (ACI) holds an Environmental Authority (EA M2884) for ML 1124, 1132 & ML 7064 with an approved EMOS (2002) and Plan of Operations (2006). No mining operations have been undertaken on ML1132.

Unimin purchased the assets of ACI Operations in 2001 and has operational control of activities covered by EA M2884. Operations undertaken on ML1108 however, are covered separately by EA MIM900220203 and are not addressed under this rehabilitation program.

The Department of Environment and Resource Management's (formerly the EPA) document Mining Guidelines; 17: *Financial Assurance for Mining Activities* and 18: *Rehabilitation Requirements for Mining Projects* have been used as a reference for the production of this report.

This document has largely brought together existing information from the EMOS and the Plan of Operation documents, but also includes up-to-date mining and rehabilitation practices. It will outline post-mining land use / capability outcomes, proposed rehabilitation methods and general monitoring protocols for establishing landform and revegetation.

This report documents Unimin's rehabilitation program of disturbed areas as a requirement of EA Schedule F – Land Management (F2-2) and will also demonstrate compliance with EA conditions F1-1, F1-2, F2-1 (a-d) and EMOS commitments.

2.0 DISTURBANCE CATEGORIES

To align with its schedule of rehabilitation, the operation categorises its operational areas by disturbance level consistent with the Department of Environment and Resource Management's (DERM) *Guideline 17: Financial assurance for mining activities*. All disturbance categories, which are currently applicable to ML 1124 & ML 7064, are detailed in the following sections. All areas of disturbance are displayed in Figure 2.

2.1 Disturbance Category (D1)

2.1.1 Active Pit

The area of the open pit/s includes areas facilitating access to mining resource. As the resource is not consistent in quality, it is necessary that the operation campaigns various quality resource to suit different customer products. This often requires the operation to utilise a number of pit areas at any one time. These areas may be reclassified when necessary to another category of disturbance such as access road or process pond.

Currently there are no areas upon ML1124 and ML7064 that are classified as Active Pit, although there does remain 0.5 hectares of resource that is suitable for future mining.

2.1.2 Process Ponds

This includes areas of land covered by water holding/recycling dams and sedimentation dams. Water holding/recycling dams supply the process plant with water and are non-dynamic areas of disturbance.

Sedimentation dam areas are established as required utilising Active Pits Areas with depressions inconsistent with the surrounding areas. These will be gradually filled with sediment derived from processing as part of rehabilitation.

2.1.3 Infrastructure

The area of land disturbed by such things as buildings, stockpiles, and transmission lines. There is currently no plan to change the area covered by infrastructure at the operation, however minor non-significant changes will occur over time as necessary.

2.1.4 Access Roads

The area of land designated for vehicle movement. As the mining operation continues the Access Road Area will generally increase.

2.1.5 Contaminated Land Remediation

The area of land that could potentially be affected by routine hydrocarbon chemical usage. These areas are typically surrounding hydrocarbon dispensing units and maintenance activity areas. No significant change in Contaminated Land Remediation Areas is currently planned.

2.2 Rehabilitation Category (D2)

2.2.1 Recontoured

The area of disturbed land that rehabilitation has commenced and the final landform has been established, excluding topsoil. Active Pit and Process Pond areas will require re-contouring, as the first stage of rehabilitation.

2.2.2 Topsoiled

The area of disturbed land where rehabilitation has progressed to the stage where the landform has been established with the provision of topsoil. Active Pit, Recontoured and Process Pond areas will all progress through a topsoil stage as part of rehabilitation.

2.2.3 Seeded

The area of disturbed land where rehabilitation has progressed to the stage where seeding has taken place following the establishment of landform with topsoil. All disturbed areas will require seeding during rehabilitation.

2.2.4 Established

The area of disturbed land where rehabilitation has progressed one year beyond seeding and seeding has been deemed to be successful. Areas deemed successfully established remain in this category until they meet the rehabilitation success criteria (see Appendix A).

2.3 Successfully Rehabilitated (D3)

The area of disturbed land that has been rehabilitated to a level that meets the rehabilitation success criteria. Successfully Rehabilitated Areas do not require any further rehabilitation tasks to be undertaken, but are still monitored (in a reduced capacity), and maintained when necessary.

3.0 PROPOSED REHABILITATION METHODS

The rehabilitation techniques proposed for ML 1124 and ML 7064 are based on those that have been used successfully by Unimin on North Stradbroke Island since operations commenced in 1969.

3.1 Land Use Capability

The proposed post-mining land use of ML 1124 and ML 7064 will be to return to native bushland. The objective of rehabilitation will be to establish a self-sustaining native ecosystem with species and distribution similar to analogue sites (see Appendix A).

3.2 Vegetation Clearing

The operation has committed to a no-mining buffer of 100 m for the Cooroon Cooroonpah Creek and Capembah Creek drainage lines (ML 7064 only) to ensure that significant species and surface water quality are not impacted by mining operations.

Vegetation to be cleared for the mining operation will be restricted to the minimum required at any one time. Each clearing event proposed to be undertaken is estimated to be in the order of 30 m of clearing along the mine face (depending on depth of the deposit) in any one event. The length of mine face can vary from 50m to approximately 100m in length.

Clearing will be undertaken predominantly by bulldozer and may be conducted in conjunction with topsoil removal. Cleared shrubby vegetation will be saved to be utilised as brush matting for landform stabilisation in rehabilitation works. Cleared canopy vegetation and large woody debris such as hollow logs and branches will be stored and then reinstated as structures for faunal habitat as part of rehabilitation works.

Clearing of potential Koala habitat trees (species of *Angophora*, *Corymbia*, *Eucalyptus*, *Lophostemon* or *Melaleuca*) will be undertaken in compliance with sequential clearing conditions outlines in section 15 of the Nature Conservation (Koala) Conservation Plan 2006. Unimin's staged approach to clearing noted above aligns to the sequential clearing requirements under the Plan.

It should be noted, that no cleared vegetation shall be intentionally burnt on site.

3.3 Significant Species

Potential habitat for the state conservation listed species *Acacia baueri* subsp *bauri* (Vulnerable under the Nature Conservation (Wildlife) Regulation, 2006) was identified at the north end of ML1124, northwest of East Coast Rd, during a survey carried in September 1996 (*Survey of Flora and Fauna of Mining Lease 1124 near Myora, North Stradbroke Island, Queensland* prepared by Wildthing Environmental Consultants). One specimen of *Acacia baueri* subsp *baueri* was found along the drainage line of Cooroon Cooroonpah Creek on ML 7064 in October 1997 (*Survey of Flora and Fauna over Mining Lease 7064* by Wildthing Environmental Consultants). Both areas are outside of the mining path with no further mining planned for ML1124 and an established 100m mining buffer for the Cooroon Cooroonpah Creek drainage line on ML7064.

Three species have been identified by the Minjerribah Moorgumpin Elders as being of cultural significance to the traditional owners of North Stradbroke Island. These are:

- *Boronia romarinifolia* (forest boronia)
- *Boronia safrolifera* (safrole boronia)
- *Boronia falciflora* (wallum boronia)

3.4 Topsoil

3.4.1 Stripping

On average, the useable topsoil resource is approximately 0.4m thick on the higher dune crestal areas and ridge slopes within the general area subject to mining. The topsoil is stripped using a bulldozer and stockpiled as detailed below. Earthmoving plant operators are trained and/or supervised to ensure that stripping operations are conducted accordingly. This will ensure that all suitable topsoil material resources are secured and that the quality of the stripped topsoil is not reduced through mixing within underlying sands.

3.4.2 Stockpiling

Only 0.5 hectares of land remains to be mined on ML7064. The proposed stockpiles are to be constructed down slope of the operations. Sediment fencing will be constructed down slope of the stockpiles (as required), should evidence of erosion be identified.

If stabilisation of top soil is required, brush matting from cleared vegetation may be utilised. Moreover, an appropriate sterile cover crop will be applied on the stockpiles to help maintain soil stability and microbial activity.

3.4.3 Organic Screenings

Organic material screened off at the mine face trommel contains seeds and nutrients and is valuable in assisting revegetation and erosion control. This material will be retained and spread over rehabilitated areas, with particular attention given to areas that are potentially susceptible to erosion.

4.0 REHABILITATION OF DISTURBED AREAS

All proposed mine operations will be followed by a staged rehabilitation program to be undertaken behind the ongoing mine operation. Proposed rehabilitation will reform disturbed areas to approximate previous contours (excluding where lowered landform meets undisturbed landforms) with replacement of stored topsoil and will employ techniques involving natural regeneration, direct seeding, and / or tube stock to ensure a viable success rate of re-established vegetation. Revegetation will utilise endemic species of local provenance to establish floral assemblages in keeping with vegetation communities presently found on the mining lease.

Rehabilitation will be progressively undertaken on areas that cease to be used for mining or mine-related activities (Disturbance Category D1) within one year of becoming available. This satisfies condition F1-2 of EA M2884.

The amount of disturbed land at any one time will be restricted, ensuring the operation does not exceed its commitment to keep open operational area below 25 ha (Disturbance Category D1) at any one time. Results of progressive rehabilitation will be used to refine rehabilitation methods for future mining operations.

Rehabilitation will be undertaken with the objective to re-establish the pre-disturbance floristic and structural characteristics of the disturbed community in keeping with benchmark data obtained from permanent reference sites and the final landform topography.

4.1 Active Pit

The main components of the operation's progressive rehabilitation which are applied to the disturbance category area Active Pit are as follows:

4.1.1 Re-contouring

A bulldozer shall be used to re-establish slopes (within parameters for stability) throughout the mined area. The final contours will approximate the pre-mining state, but with a reduction in height of generally 5 to 10 metres (the depth of sand extracted). Where the lowered landform meets undisturbed landforms, connecting slopes will be constructed to ensure stability. Table 1 shows the parameters for stable landform design.

Table 1. Landform stability design parameters

Slope Grade (%)	Slope Length (m)
>30	25
20-30	30
10-20	80
5-10	120
<5	170

4.1.2 Topsoil Respreading

Topsoil is recovered from the stockpiles and spread over the surface of the re-contoured ground. The depth of re-spread topsoil approximates the pre-mining condition to give coverage of some 300 to 400mm.

Where practicable, stripped topsoil will be used immediately on existing rehabilitation areas. Otherwise, operations aim to utilise stockpiled topsoil within 12 months of an area becoming available. Timely respreading of the topsoil will assist in the revegetation process by ensuring the seeds contained in the topsoil are still viable.

4.1.3 Seeding

Once re-contouring and topsoiling has been completed, the site will commence direct seeding, which is generally undertaken in the appropriate autumn or spring period each year.

Seed for direct seeding is currently collected by Unimin employees from mature plants located on lease areas (ML's 1124, 1132, 7064 & 1108). In the future, seed may be collected from leases currently held on the Island by Consolidated Rutile Limited (CRL). These seeds will then be treated (if required) and sown with a tractor and seeder. A mixture of cover crop and native seed will be used to reseed the area. The cover crop, which is typically sterile hybrid sorghum, germinates and grows quickly to establish a cover improving soil stability, reducing the likelihood of erosion.

The native species from topsoil seed stock take longer to establish, but become more dominant as the sterile cover dies off. Direct seeding, tube stock and/or transplanting shall be utilised should topsoil seed stock germination be low or dissimilarity between actual and analogue sites is significant.

4.1.4 Transplanting

Where accessible by excavation machinery, selected specimens of *Xanthorrhoea johnsonii* species (forest grass trees) and *Boronia* species will be retrieved from the mine path during clearing and transplanted into rehabilitated areas. Grass trees will be excavated, retaining as much soil around the roots as possible and replanted in areas to be rehabilitated. If a grass tree exhibits signs of stress it will be directly burnt, to stimulate new growth and flowering.

4.1.5 Erosion Prevention

Vegetation cleared during stripping shall be placed on top of top soil to protect it from erosion from wind and water. The vegetation will also provide future habitat to assist fauna recolonise the area.

Based on previous experience and trials, windguard fencing will be used to assist reduce the effects of wind erosion. Early placement of fencing is beneficial, hence early installation of fencing in areas identified as highly subject to the effects of wind will be undertaken as standard practice.

4.1.6 Weed Prevention

Due to the low edaphic nutrient cycling typical of dune vegetation communities, the risk of weed infestation in rehabilitation areas is considered low. However, this could potentially be an issue on topsoil stockpiles.

To assist in stopping infestation of weeds and weed movement, there will be dedicated machinery operating on site. Before any non designated machinery or vehicles enter the site, it must be free of adhering soil and plant material. A wash down bay to clean equipment is located on ML 1124.

4.2 Process Ponds and Sedimentation Dams

Water holding/recycling dams (process water ponds) will be rehabilitated as the process plant is decommissioned. Prior to rehabilitation, water will be pumped from dams to be used on rehabilitated areas. The ponds will be recontoured by pushing the walls into the void and if necessary moving some material from other disturbed areas. Pond bases shall be ripped to ensure infiltration of water is not impeded. Once recontoured, areas can be topsoiled and routine rehabilitation can progress.

Sedimentation dam areas are generally rehabilitated once depressions have been filled and the area is no longer suitable for the deposition of sediment. Only minor contouring is required, usually around the perimeters of the dams and dam bases are ripped as above. The dam areas are then topsoiled and routine rehabilitation can progress.

4.3 Infrastructure

Infrastructure areas will be rehabilitated once the infrastructure ceases to be of use to the operation. Small areas will become available from time to time for rehabilitation but the majority of the Infrastructure area will commence rehabilitation when the site ceases to be utilised by the operation.

Where possible, infrastructure will be utilised at other operations or sold. Where this is not possible, infrastructure will be demolished and transported to an appropriate waste disposal facility. The rehabilitation methods used for areas disturbed by infrastructure will vary according to the form of infrastructure, but it is generally expected that for the majority of areas, seeding will be the first step in the rehabilitation progress.

4.4 Access Roads

Any tracks that are no longer required by the operation will be rehabilitated within 12 months of becoming available. Once the site ceases all operations, all tracks that are not required by the local authority/land owner or for rehabilitation monitoring, will likewise be rehabilitated within 12 months of becoming available.

Access tracks will be ripped to reduce compaction, followed by seeding. Rehabilitation can progress routinely from this point.

4.5 Contaminated Land Remediation

Once operations have ceased, testing will be carried out in infrastructure areas that may have the potential to have been contaminated by site activities (e.g. fuel storage or workshop areas) to determine the extent of any residual contamination. Where material requires removal, it will be transported to an appropriate waste disposal facility. Remediated areas will then be validated and rehabilitated thereafter as per routine rehabilitation methods.

5.0 MONITORING

Monitoring of disturbed areas will occur with reference to the proposed criteria for successful rehabilitation in Appendix A. Annual monitoring will be undertaken during the vegetation establishment period, to demonstrate whether the rehabilitation objectives are being achieved.

In addition to rehabilitated areas, benchmark reference sites will also be monitored to allow for a meaningful comparison of the development and success of the rehabilitation against a control. Parameters to be monitored include:

- Landform and soil stability;
- Comparison of floristic characteristics with data taken from reference sites (e.g. index of similarity and species percent comparison); and
- Fauna observations and surveys.

5.1 Landform and Soil Stability

5.1.1 Landform

In areas within the mine footprint, the operation will utilise contour mapping of the pre-mining landform as a reference when planning recontouring activity. With the support of this information, disturbed landforms will be recontoured to approximate the pre-mining landform, but lowered typically to about 5 to 10 metres. Where the lowered landform meets undisturbed landforms, operators will use a clinometer (or other survey equipment) to ensure that connecting slopes are consistent with stability design parameters detailed in Table 1.

A pre and post-mining contour map, including cross sections, will be maintained as a record of performance for landform re-establishment. This will be included in the operation's Annual Monitoring Report, and will illustrate the operation's performance in regards to conditions F2-1 (b) and (d) of EA 2884.

Example cross-sections for lease areas already reinstated are presented in Appendix B. It must be noted, however, that as the only data available of pre-mining contours was a hardcopy plan produced from high level aerial photography in 1967, that there is a significant error factor in this form of mapping. This can be mainly attributed to

photogrammetry used on high level photography (photos taken at high altitude) of an area which has a thick canopy of trees where the raw ground is hard to see. To a lesser extent the transformation of data from one system to another (AMG – MGA) can account for errors, as can there be errors in digitizing data. Keeping this error factor in mind, the cross sections can still be used as a measure of the general shape of the pre-mining landform.

Cross section A demonstrates the inherent variability of historical and current survey data, as this area of the lease has never been mined.

5.1.2 Annual Erosion

Soil erosion measurement monitoring will be undertaken in the rehabilitation areas in an attempt to quantify erosion rates. Monitoring will be undertaken through monitoring stakes placed in the rehabilitation and reference areas (which will be located adjacent to the rehabilitation area). This formal measurement will be undertaken every 12 months and photographic records shall be collected and presented in the Annual Monitoring Report to demonstrate compliance with condition F2-1 (c).

5.1.3 Erosion Gullies (Washouts)

Inspections for signs of erosion within the rehabilitation areas will be undertaken on a routine basis. This will allow any soil erosion areas (e.g. washouts) to be detected and management actions to be undertaken.

Once a significant erosion area has been detected, it will be photographed. The site will continue to be photographed until the management actions taken demonstrate that it has been stabilised.

5.2 Revegetation

Observational inspections will be undertaken of all designated rehabilitation sites. Information collected through the inspections (e.g. presence of weeds, health of vegetation, propagation success etc), will assist in providing future rehabilitation direction and document any rehabilitation actions that need to be completed.

Annual vegetation monitoring will be undertaken between May and July each year. This will involve monitoring rehabilitation and reference vegetation transects. Reference transects will be monitored each year and rehabilitation transects will be

monitored on a three year cycle. Within transects, all flora species will be identified and number of individuals counted. This will allow Index of Similarity and Species Percent Comparison analyses to be conducted (detailed below) and demonstrate the operation's compliance with condition F2-1 (a) of EA 2884.

Photographs of transects will be undertaken, with the same direction/orientation maintained for each recording period. GPS points for these locations shall be recorded. The locations of active reference transects, as determined by EA M2884, are displayed in Figure 3, and photographs are shown in Appendix C.

All data will be recorded and presented in the Annual Monitoring Report.

5.2.1 Index of Similarity

To assess species diversity, a comparison of rehabilitation and reference transects using the Sorenson Index of Similarity method will be undertaken. The value ranges from 0 (no similarity) to 1 (complete similarity).

It is defined as:

$$\text{Index of Similarity} = 2c/(a + b)$$

where: "a" is the number of species in community 1,

"b" is the number of species in community 2, and

"c" represents the species occurring in both communities.

5.2.2 Species Percent Comparison

To assess the proportions of individuals of each species present in rehabilitation transects, a percentage comparison will be made for all species above 15% of the reference transect. Any species within a rehabilitation area that is deemed to be significantly lower in proportion to its proportion in a reference site will be increased through planting activities. Conversely, any species which exists in significantly greater proportion in a rehabilitation area than in a reference area will be managed by planting greater numbers of other species to reduce its dominance or shall be thinned as appropriate.

5.3 Fauna

Inspections of rehabilitation sites will be undertaken and general information of fauna present will be recorded. This monitoring will involve documenting any fauna species in the area based on visual observations, tracts and/or scats. This information will be included in the Annual Monitoring Report.

Site personnel often work in different parts of the site and therefore have an opportunity to observe different fauna that may not be located during the targeted fauna monitoring. To ensure that this information is captured site personnel shall be encouraged to report all opportunistic observations. This information shall be logged in a central register and presented in the Annual Monitoring Report.

A fauna survey of rehabilitated areas will be carried by an independent specialist every 5 years. The survey will assess the indicative usage and fauna presence in selected rehabilitated areas. This data will be qualified by comparison against data taken from a reference site selected in close proximity to the rehabilitation sites. The objective of fauna monitoring is to gain an understanding of which species are/are not recolonising and provide information on known or potential reasons for this.

Information collected through the inspections, observations and surveys will assist in the planning of future rehabilitation activities and fauna management activities. The operation will also where possible, assist external pest management activities by sharing this information and permitting conditional access to lease areas for feral animal control.

5.4 The Annual Monitoring Report

An Annual Monitoring Report, covering the previous calendar year, will be collated to include all monitoring data and, where applicable, the analysis of trends. Data and trends will be discussed evaluating the effectiveness of the rehabilitation program. Rehabilitation methods should continually improve as additional knowledge develops from monitoring data obtained.

This report shall be held on site and will be available to the administering authority on request.

6.0 MAINTENANCE

Maintenance of rehabilitated areas will be undertaken where necessary and in response to results of the monitoring program to ensure success criteria are being met, or are projected to be met before operations cease on ML1124 and ML7064. The operation will use a checklist to document maintenance checks and subsequent actions.

6.1 Land Stability

Where washouts are observed or where rehabilitation continues to have high rates of soil loss remediation measures will be undertaken. Silt fencing will be utilised to reduce the effects of water on eroding slopes. Where washouts/gullies occur, hay bales (or other vegetation) will be placed to good effect to repair the washouts; or other diversions (e.g. bunds) created to redirect the water.

6.2 Propagation and Replanting

Where a species has not become established or is limited in the number of individuals from direct seeding, it will be propagated and replanted. Seeds will be collected from the Island and taken to the onsite nursery for treatment and propagation. Planting programs will be generally campaigned in autumn (if required) for optimum seedling establishment success.

6.3 Weed Control

To ensure that weed species do not propagate on site (including non-local native species); the presence of weeds will be monitored. Should weed species be identified they will be controlled by a combination of herbicide spraying (though this will not include broad acre spraying) and physical removal on a progressive and continual basis. The likely significant environmental weed species in the area will be grass species.

Weed spraying will be avoided near or alongside watercourses. However, if it is deemed unavoidable, wetting agents harmful to aquatic fauna will not be used. This spraying will take place during dry periods with little wind, so as to reduce potential drift.

Figure 1 Location of Site

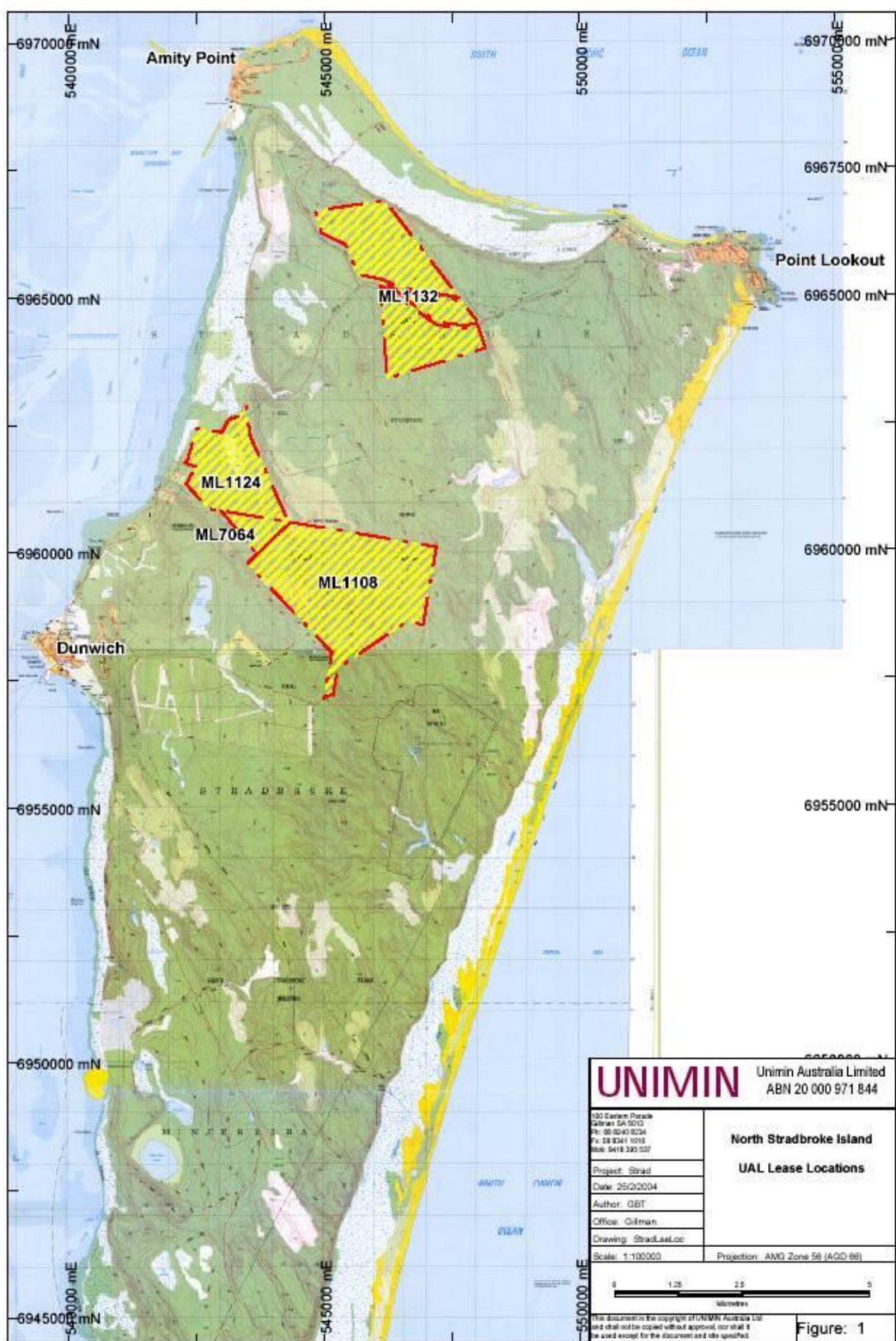


Figure 2 Disturbed Area Plan

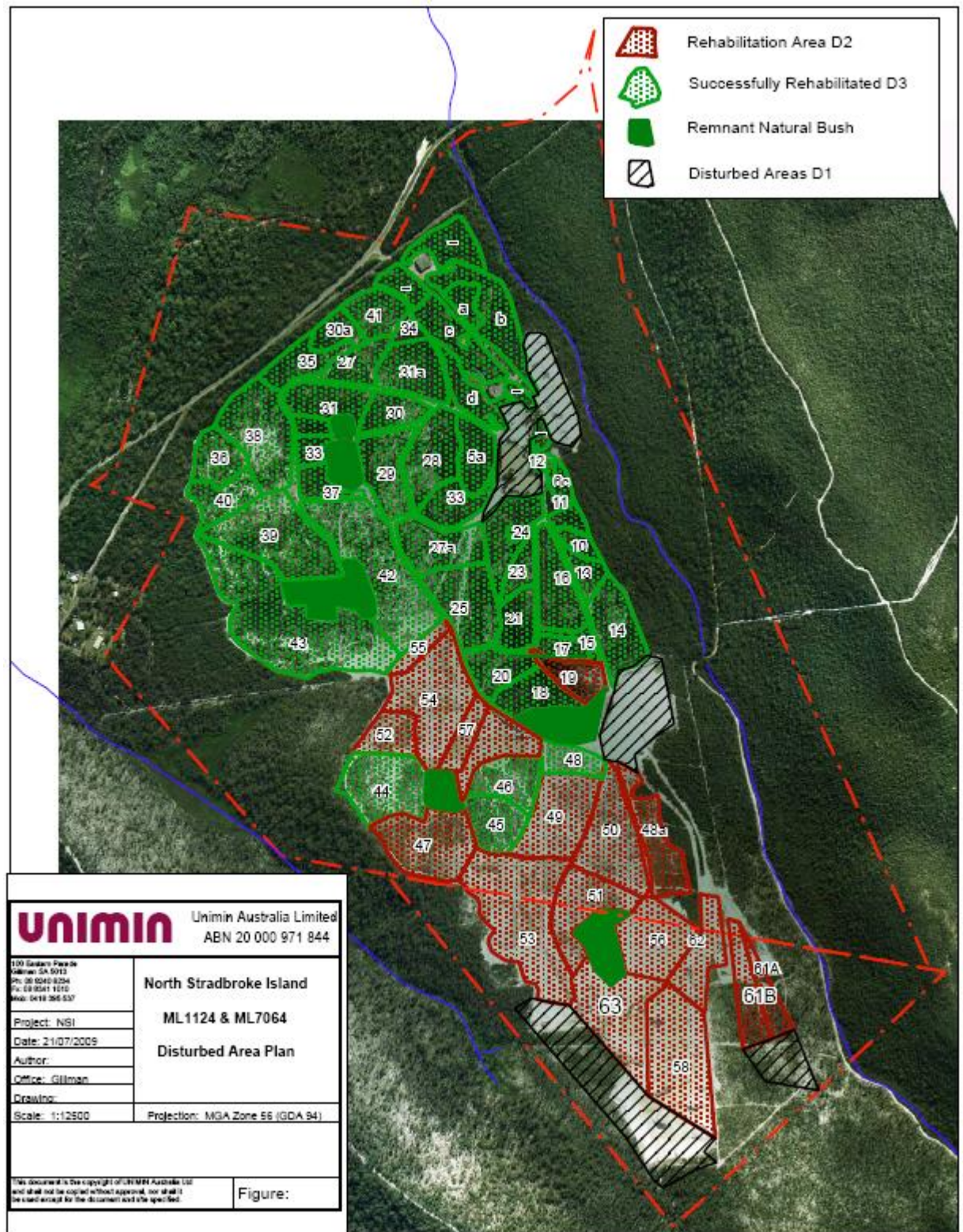
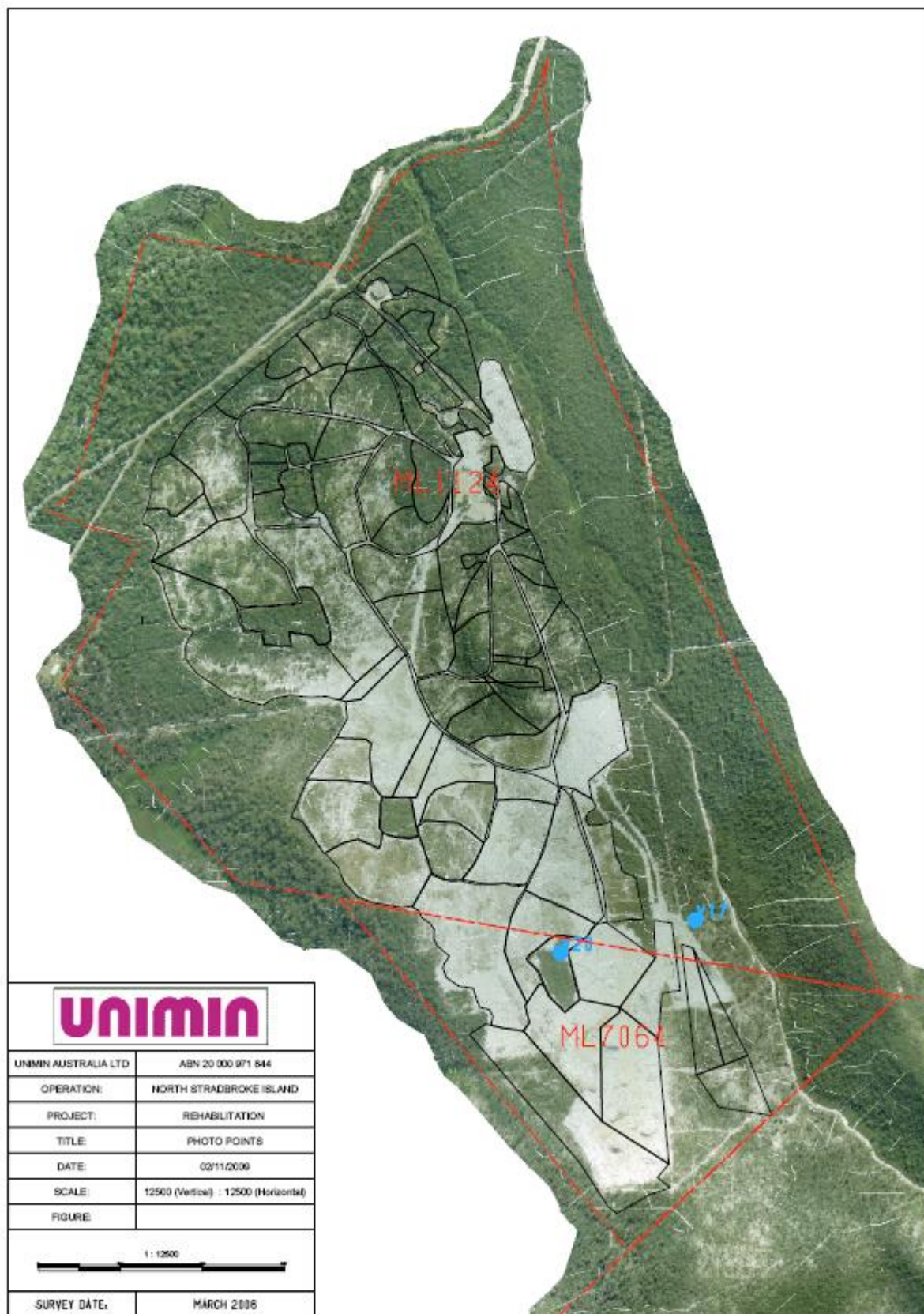


Figure 3 Reference Transect Locations



APPENDIX A - Completion Criteria

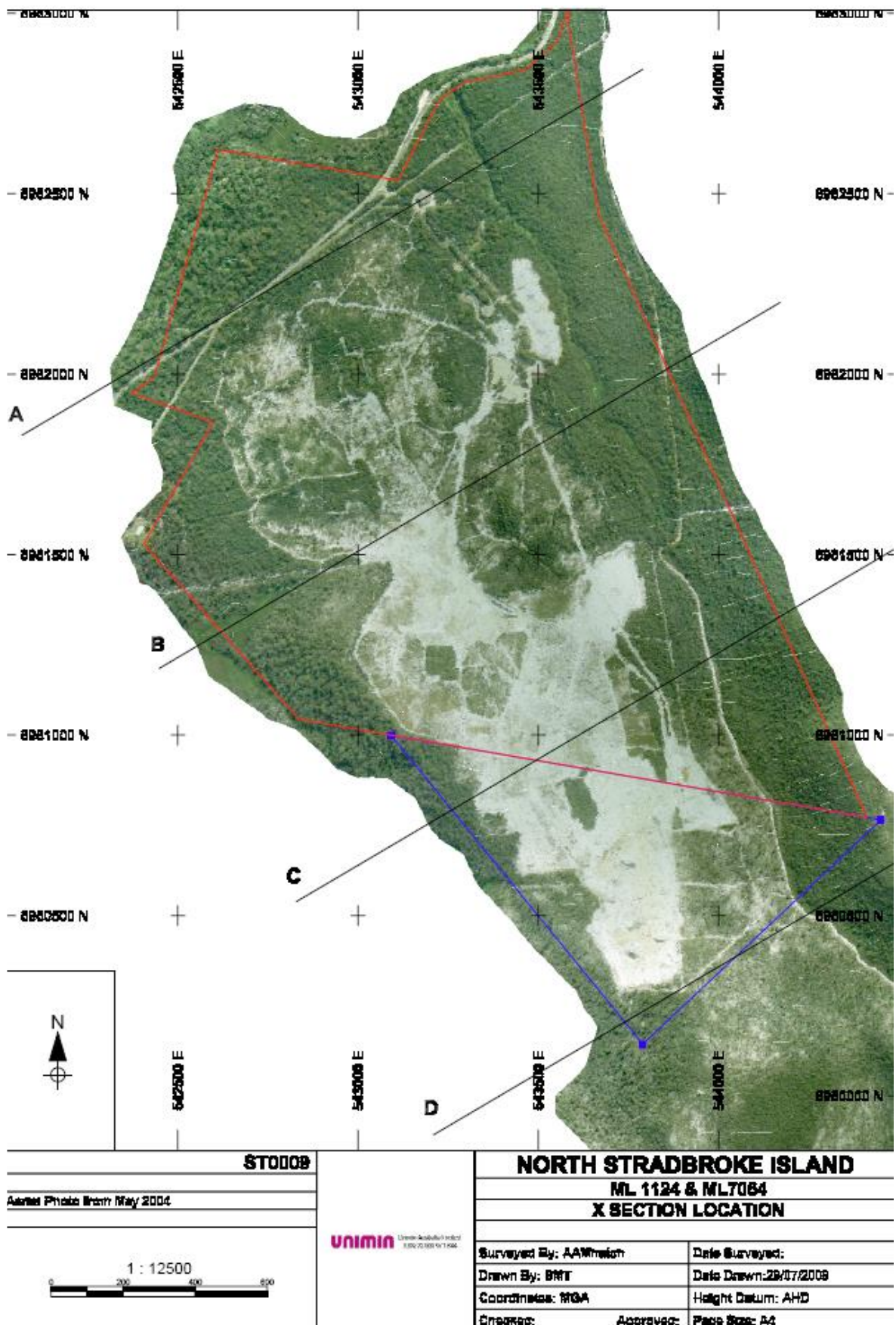
Rehabilitation objectives, indicators and completion criteria

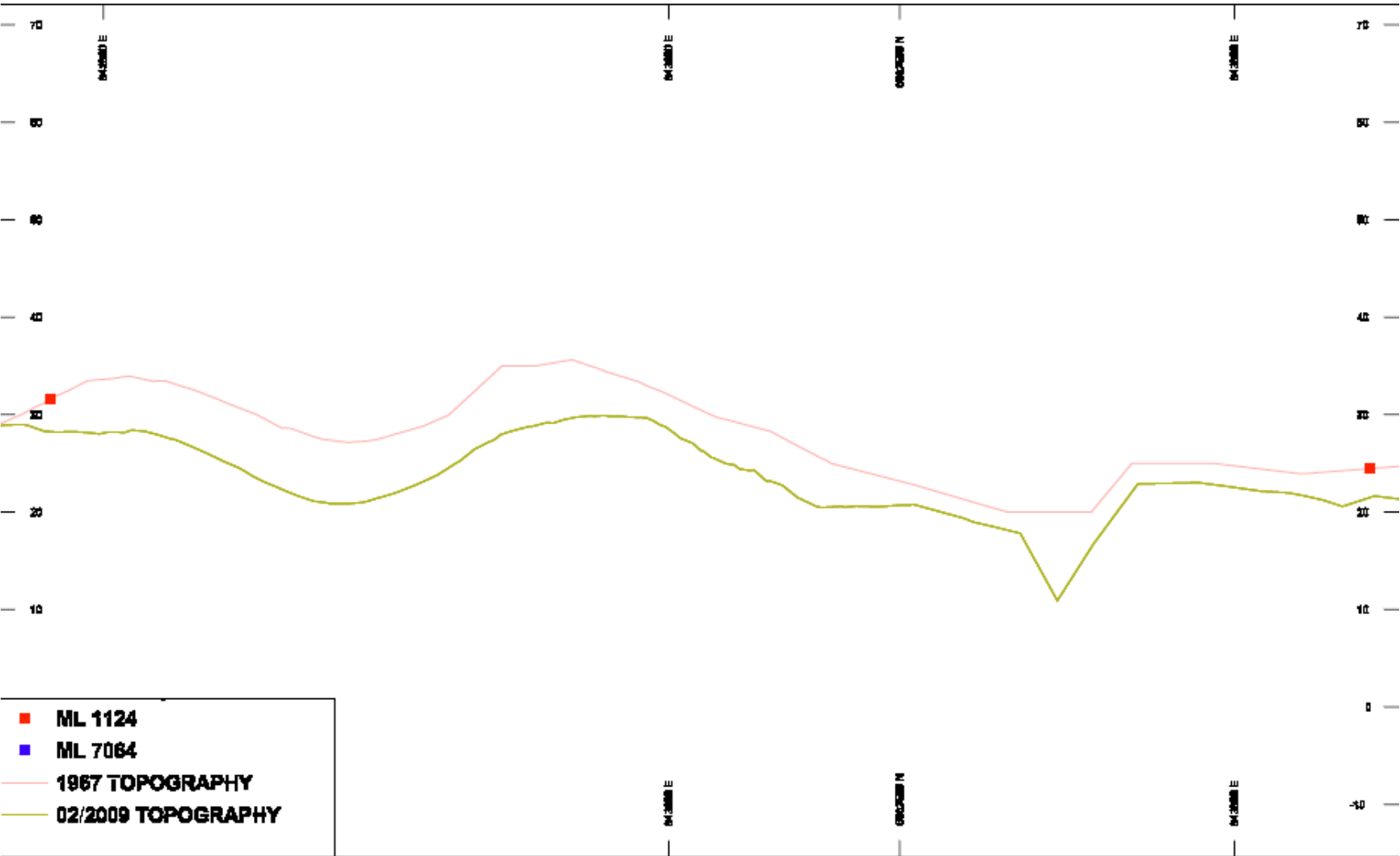
REHABILITATION PARAMETER	POSSIBLE REHABILITATION OBJECTIVES	POSSIBLE INDICATORS	NATURE OF COMPLETION CRITERIA
Landform	Landform design meets criteria	<i>Slope direction and aspect</i>	Disturbed areas to approximate the pre-mining surface landform by comparison with pre-mining contour mapping.
		<i>Landform height</i>	Disturbed areas to have a general reduction in landform height of about 5 to 10 metres (the depth of sand mined) by comparison with pre-mining contour mapping.
		<i>Slope angle and length.</i>	Where lowered (mined) areas meet undisturbed ones, slope and angle meet the specified guidance presented in Table 1 of this document.

REHABILITATION PARAMETER	POSSIBLE REHABILITATION OBJECTIVES	POSSIBLE INDICATORS	NATURE OF COMPLETION CRITERIA
Landform (continued)	Landform design meets criteria (continued)	<i>Surface drainage/flow</i>	Disturbed areas will approximate the pre-mining surface landform by comparison with pre-mining contour mapping.
Stability	Erosion in rehabilitated areas equivalent to non disturbed reference sites	<i>Measurement of erosion rates</i>	Erosion rates are below 10mm/yr.
		<i>Measureme nt of gullies</i>	No erosion gullies exist that exceed 2m wide x 1m deep.
Sustainable Land Use	Establish specified self sustaining natural vegetation or habitat	<i>Species type and diversity</i>	The index of similarity has increased for 3 consecutive years after the value has reached 50%.

REHABILITATION PARAMETER	POSSIBLE REHABILITATION OBJECTIVES	POSSIBLE INDICATORS	NATURE OF COMPLETION CRITERIA
Sustainable Land Use (continued)	Establish specified self sustaining natural vegetation or habitat (continued)	• <i>Species percent comparison</i>	• Species comprising more that 15% of the reference areas, the difference in percentage between reference and rehabilitation areas is within $\pm 20\%$.

APPENDIX B – Landform Cross-sectional Mapping





■ ML 1124
■ ML 7064
— 1967 TOPOGRAPHY
— 02/2009 TOPOGRAPHY

ST0009

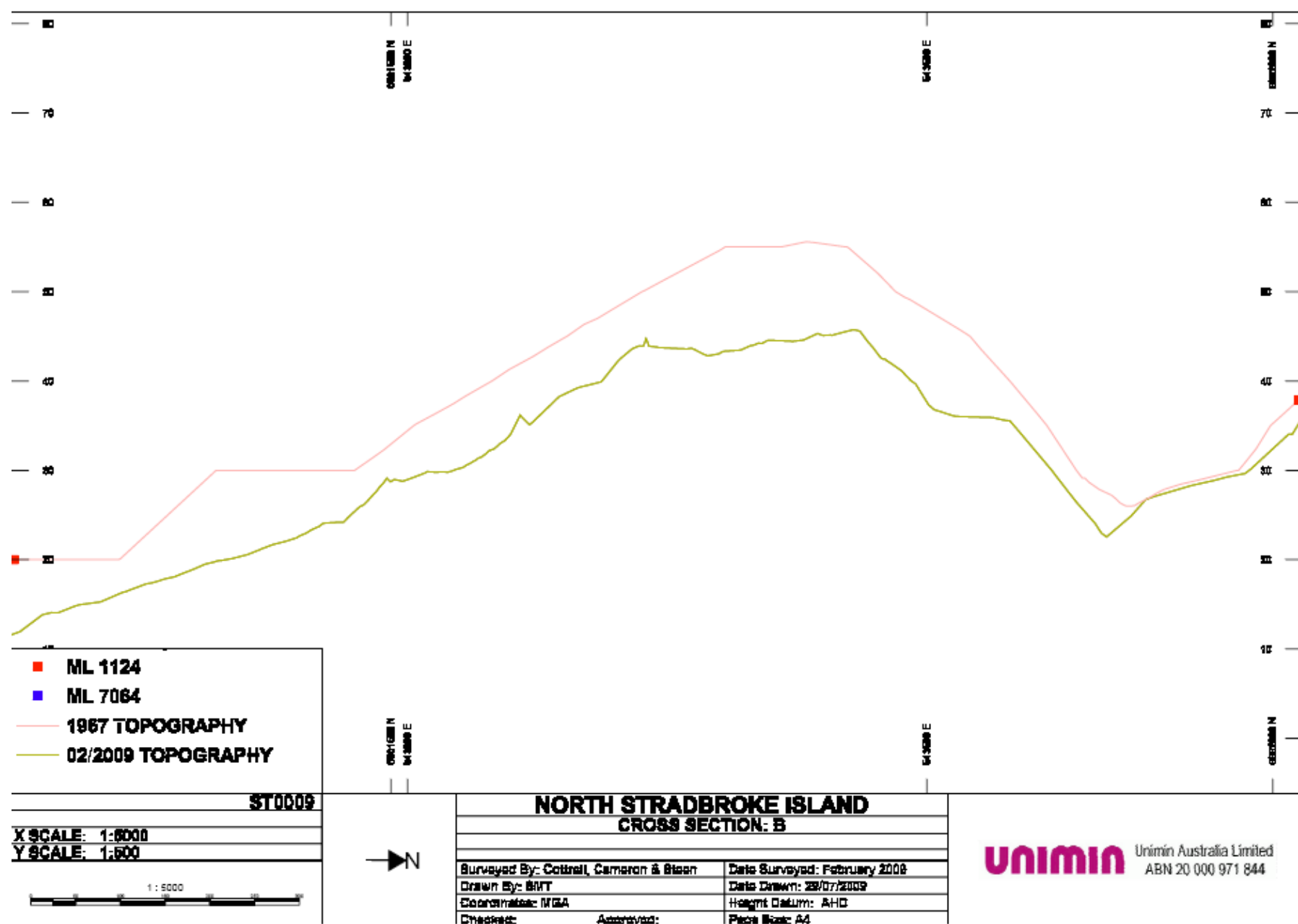
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Y SCALE: 1:500

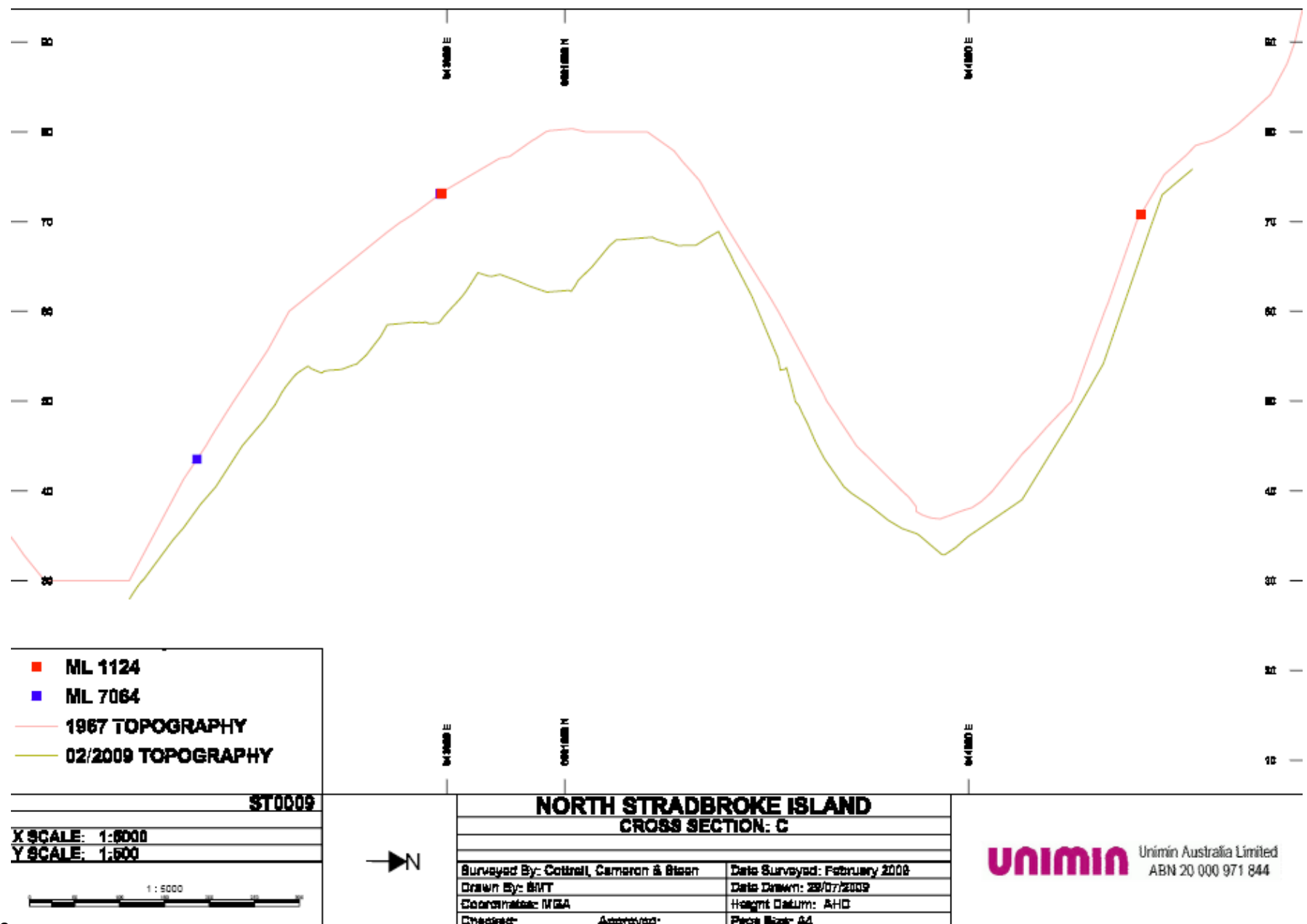
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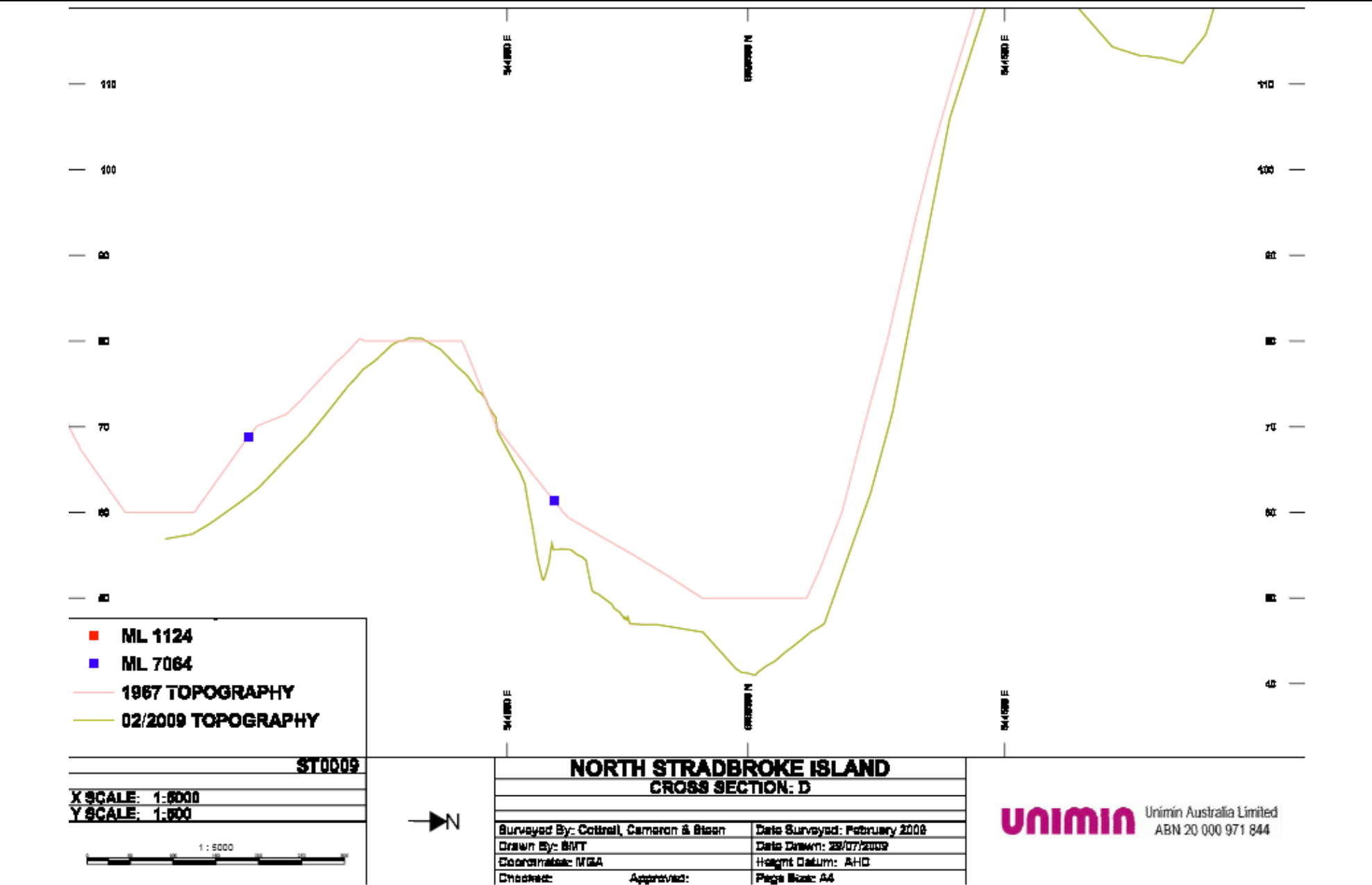


NORTH STRADBROKE ISLAND	
CROSS SECTION: A	
Surveyed By: Cottrill, Cameron & Steen	Date Surveyed: February 2008
Drawn By: BMT	Date Drawn: 29/07/2009
Coordinate: MGA	Height Datum: AHD
Checked:	Approved:
	Page No: A4

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APPENDIX C - Reference Transect Photographs

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