ENVIRONMENTAL ASSESSMENT

SECTION 75W MODIFICATION (3)

DA 267-11-99

HODGSON QUARRY PRODUCTS PTY LTD

ROBERTS ROAD

MAROOTA

17 May 2015

NEXUS
Environmental Planning Pty Ltd

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ROBERTS ROAD

MAROOTA

Prepared by:
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TABLE OF CONTENTS

FIGURES

APPENDICES

STATEMENT OF VALIDITY

Submission of Environmental Assessment

Prepared under Section 75W of the Environmental Planning and Assessment Act 1979

Environmental Assessment prepared by

Name:	Neil Richard Kennan
Qualifications:	B.A., Dip. Urb. & Reg. Plan., Dip. Cart., Ord 4. Certified Practising Planner
Address:	PO Box 212 **CONCORD NSW 2137**
In respect of:	Section 75W Modification No.3 of Development Consent No.267-11-99

Applicant and Land Details

Applicant name:	Hodgson Quarry Products Pty Ltd
Applicant address:	PO Box 1778 **GOSFORD NSW 2250**
Land to be developed:	Lots 1 & 2, DP 228308 and Lot 2, DP 312327 Roberts Road MAROOTA NSW 2756

Environmental Assessment — An Environmental Assessment is attached

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Statement of Validity — I certify that I have prepared the contents of this Environmental Assessment in accordance with the 29 May 2014 Secretary's Requirements and that, to the best of my knowledge, the information contained in the Environmental Assessment is neither false nor misleading.

Signature: 

Name: Neil Kennan

Date: 17 May 2015

EXECUTIVE SUMMARY

INTRODUCTION

Hodgson Quarry Products operates an extractive industry at Roberts Road, Maroota pursuant to Development Consent 267-11-99 (**the Consent**) issued by the then Minister for Urban Affairs and Planning.

Modification (2) to the Consent proposes to both regularise the existing extraction operation and to extend the life of the approved extraction. The Draft Environmental Assessment for Modification (2) has been submitted to NSW Planning and Environment for review.

Modification (3) which seeks the approval of the Minister for the extension of extraction on the Site for 1 year, or another time frame considered appropriate, pending the resolution of Modification (2). This Environmental Assessment has been prepared on behalf of Hodgson Quarry Products pursuant to Section 75W of the Environmental Planning and Assessment Act 1979.

The objectives of the proposed Modification (3) are:

(a) To continue the supply of graded sand and gravel products suitable for use in the construction industry and specialty markets, and

(b) To continue to realise the economic potential and maximise the efficient recovery of natural resources on the Site pending the resolution of Modification (2).

THE SITE

The land to which the Consent relates (**the Site**) is:

Lots 1 & 2, DP 228308 and Lot 2, DP 312327
Roberts Road
MAROOTA

The Site is located on the northern side of Old Northern Road, at the intersection of Old Northern Road with Roberts Road. A small part of Lot 2, DP 228308, however, is located on the southern side of Old Northern Road, however, that part of Lot 2, DP 228308 was never part of the proposed extraction and, for the purposes of preparation of information below, that section of Lot 2, DP 228308 has been discounted.

Access to the Site is via Roberts Road.

The land is within The Hills Shire Council local government area and is zoned RU1 Primary

Production pursuant to The Hills Local Environmental Plan 2012.

DEVELOPMENT CONSENT No.267-11-09

The Minister for Urban Affairs and Planning, by Notice of Determination dated 31 May 2000, granted consent to DA 267-11-99 subject to conditions.

A Notice of Modification (Modification (1)) dated 29 November 2000 was issued by the then Minister for Urban Affairs and Planning.

The Consent, as modified, permits:

(a) development for the purposes of an extractive industry on the Site, in accordance with details contained in the Environmental Impact Statement (**EIS**) prepared by Nexus Environmental Planning Pty Ltd, dated 1999 as submitted with the development application;

(b) extraction in accordance with an extraction plan prepared by Woodward Clyde which details both the sequence and depth of extraction, and

(c) extraction in accordance with the modified method of extraction as detailed in the documents prepared by Dick Benbow & Associates which were submitted with the Modification (1) application.

MODIFICATION (2)

Hodgson Quarry Products is currently seeking the approval of the Minister for Planning to modify the Consent as follows.

Dam Construction

Part of the Consent was for the continued construction of a water supply dam on the Site, that dam being required to provide sufficient water to maintain the life of the approved extraction.

The approved dam was to be constructed in two (2) stages, details of which were described in the EIS which accompanied the application for extraction.

During the construction of the approved dam, the applicant has determined that the construction process would be better served if the dam were to be constructed in three (3) stages rather than the approved two (2) stages. It is proposed to amend the consent to modify the dam construction process accordingly.

Sequence of Extraction

There is an approved sequence of extraction of the Site.

During the extraction process, it has been determined that the approved method of extraction is neither an economic nor practical way to achieve that extraction.

It is proposed to modify the approved sequence of extraction to reflect that which is now being undertaken on the Site such that the most efficient means of extracting the material on the Site is achieved.

Extraction Process

The approved extraction was to be undertaken in accordance with the method of extraction described in Modification (1) to the Consent where a *"Pumping Unit"* method of extraction was to be employed.

Since commencement of the extraction, it has been determined that the approved *"Pumping Unit"* method of extraction is not a practical means by which the resource can be extracted.

While the general concept of the *"Pumping Unit"* method of extraction remains, it is proposed to modify the Consent to regularise the existing method of extraction.

Approved Volume of Material to be Extracted and Life of the Consent

The EIS relating to the Consent provided details of the sequence of extraction, the volume of material to be extracted from each cell, and the time for that extraction to be completed, those data having been provided by Woodward Clyde as part of the mine plan prepared for the approved extraction.

It has become apparent that the volume calculations undertaken by Woodward Clyde are flawed in that they do not provide accurate volumes of the material present on the Site.

To establish a more accurate figure of the volume of material contained on the Site, VGT Environmental Compliance Solutions (**VGT**) has undertaken detailed volume calculations utilising survey data obtained in December 2013. Using a computer generated model of the Site, VGT has determined that there is 4,607,822m^3 of material on the Site compared to the 2,144,000m^3 calculated by Woodward Clyde.

Advice from the applicant is that a conservative estimate of 2 tonnes per m^3 should be applied to determine the tonnage of material on the Site. Applying that conversion rate, there is 9,215,644 tonnes of material on the Site. The applicant has advised that a figure of 60% sand to 40% clay/gravel is generally obtained. As such, 5,529,386 tonnes of the volume calculated by VGT would be sand product.

The applicant has advised that approximately 1,000,000 tonnes of sand has been exported from the Site during the life of the extraction to date which means that approximately 4.5 million tonnes of sand product remains to be extracted.

In light of the above, Modification (2) seeks approval to extend the life of the extraction from 31 May 2015 to 31 May 2025.

MODIFICATION (3)

As detailed above, one of the modifications to the Consent proposed in Modification (2) is that the life of extraction on the Site be extended from 31 May 2015 to 31 May 2025.

The assessment process for Modification (2) has been such that the collection of a complex level of empirical detail which has been required with regard to groundwater, acoustic and air quality impacts has been such that the timeframe originally expected for the completion of the Environmental Assessment has been significantly exceeded. As such, the assessment of Modification (2) by the Department of Planning and Environment and other agencies involved in that assessment will not be completed by 31 May 2015.

If extraction activity ceases on 31 May 2015, pending the resolution of Modification (2), there would be an hiatus in the provision of Maroota Sand to the Sydney construction industry. In addition, less than half of the Site has been extracted, and, as such, it would be impossible to rehabilitate the Site in accordance with the Consent until such time as the Site is fully extracted as per the Consent. In order to cause the least disruption to the operation of the existing extraction, the continued employment of workers at the Site, and to maintain the supply of Maroota Sand to the local market, Modification (3) has been submitted to extend the existing extraction of the Site for a period of up to 12 months while Modification (2) is comprehensively assessed and determined.

It is proposed that the extended period of extraction proposed as Modification (3) would allow the continued extraction of the Site in accordance with the current Consent as modified.

Part of the Environmental Assessment process for Modification (2) has been determined that the wet weather groundwater level of the Site is higher than that predicted in the original EIS. As such, it is proposed that the continued extraction of the Site as proposed in Modification (3) would not involve extraction within 2 metres of the newly assessed groundwater level of 183.1m AHD.

CONCLUSION

Modification (2), with commitments in place, would ensure that a valuable resource is utilised to its economic capacity and ensure that the Site would be rehabilitated to be consistent with the agricultural landscape of the area.

Proposed Modification (3) would allow for the continued extraction of the Site as per the Consent pending the resolution of Modification (2). There would be no significant impact to the environment of the Site and the locality resulting from approval of Modification (3).

Part One
INTRODUCTION

1.1 Introduction

Hodgson Quarry Products operates an extractive industry at Roberts Road, Maroota pursuant to Development Consent 267-11-99 (**the Consent**) issued by the then Minister for Urban Affairs and Planning.

It is proposed to modify the Consent to extend the life of the approved extraction on an interim basis pending the completion of the assessment of Modification (2) to the Consent which is currently in draft form with NSW Planning and Environment.

1.2 The Site

The land to which the Consent relates (**the Site**) is:

Lots 1 & 2, DP 228308 and Lot 2, DP 312327
Roberts Road
MAROOTA

The Site is located on the northern side of Old Northern Road, at the intersection of Old Northern Road with Roberts Road. A small part of Lot 2, DP 228308, however, is located on the southern side of Old Northern Road, however, that part of Lot 2, DP 228308 was never part of the proposed extraction and, for the purposes of preparation of information below, that section of Lot 2, DP 228308 has been discounted.

Access to the Site is via Roberts Road.

The land is within The Hills Shire Council local government area and is zoned RU1 Primary Production pursuant to The Hills Local Environmental Plan 2012.

The land has been extensively disturbed by the extraction.

The Site is owned by:

- Dr Leonard Stanley Martin.

Figure 1.1 shows the Site location. **Figure 1.2** shows the Site in more detail. **Figure 1.3** is a plan showing the cadastral details of the Site and surrounding land and **Figure 1.4** is an aerial photograph of the Site.

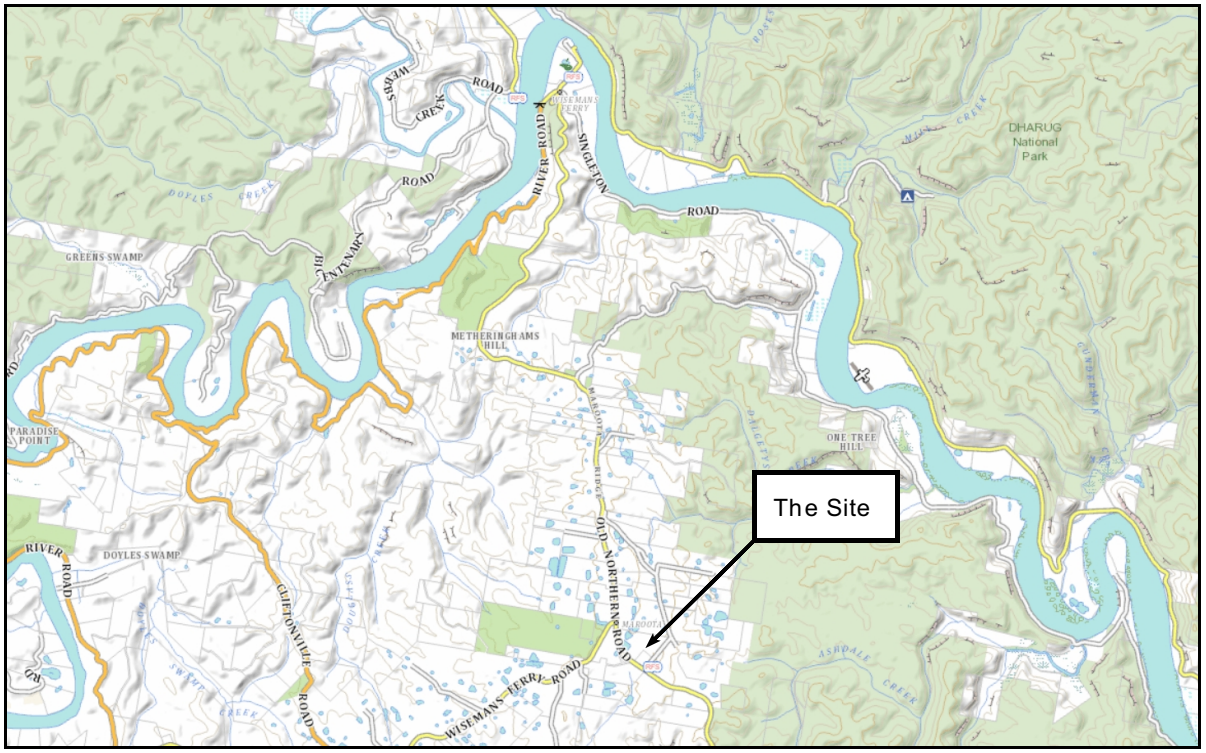

Figure 1.1: Regional Location of the Site.

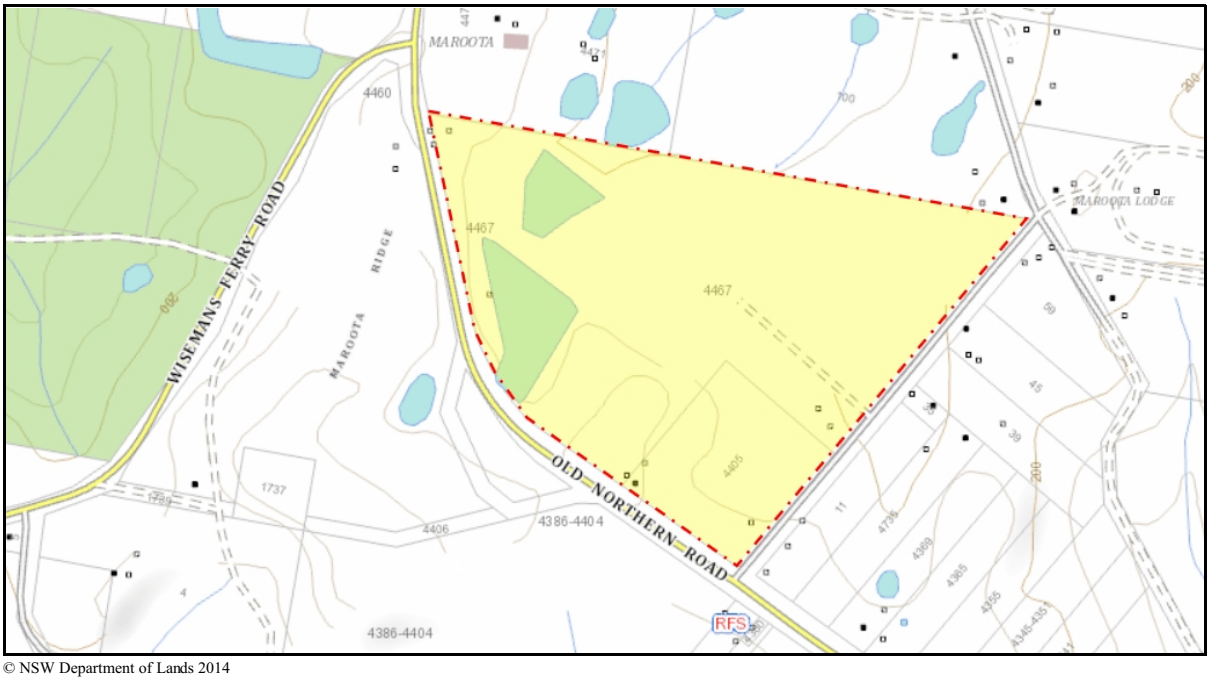

Figure 1.2: Site location highlighted in yellow.

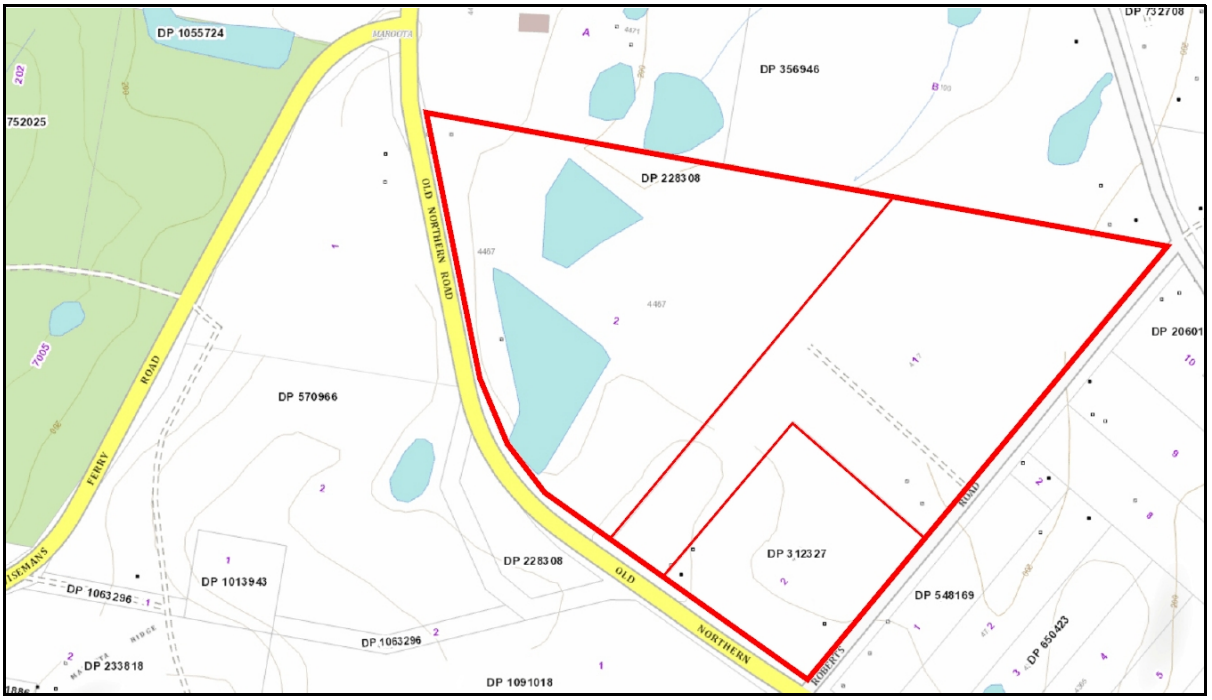

Figure 1.3: Cadastral details of the Site and surrounding land.

Figure 1.4: Aerial photograph showing the boundary of the Site.

1.3 History of the Site

Prior to extraction, the Site had been used for agriculture and, in particular, as an orchard and plant nursery. The north western corner of the Site remains in use as a plant nursery.

The initial "extraction activity" on the Site related to the construction of a dam which was located on the northern boundary of the Site. The construction of the dam commenced in or around 1970.

The construction of the dam was dependent on the winning of clay material from the Site to provide for a comprehensive seal of that dam. The material available on the Site is a mix of clay materials suitable for the dam construction and sand which is important in the Sydney construction market.

The clay material on the Site was separated from the sand by washing the raw product which resulted in a significant amount of sand as a by-product of the winning of the clay material for the dam construction. The by-product sand material was exported from the Site to the Sydney construction market.

Notwithstanding the construction of the dam on the Site, the then Baulkham Hills Shire Council (**the Council**) commenced Class 4 proceedings in the Land and Environment Court which was based on the opinion of the Council that the construction of the dam was unlawful in that is was an unapproved extractive industry.

The Land and Environment Court, by Orders dated 29 May 1991, permitted the continuation of the construction of the dam. Order No.3(g) of the Court Orders stated:

> *(g) The construction of the dam and rehabilitation of the surrounding area is to be completed within ten (10) years. The respondent may apply to the Council for an extension of the period of time specified setting out reasons and the applicant Council shall give such application due and proper consideration.*

Having regard to the above Order No.3(g), the construction of the dam and the rehabilitation of the surrounding area was required to be completed by 29 May 2001, unless an extension of that period was granted.

It was always intended that the construction of the dam would cease on the granting of consent for the extraction of the remaining sections of the Site not covered by the Court Orders. In this regard, a Development Application (No.90/108) and an accompanying Environmental Impact Statement (**EIS**) were lodged with the Council for an extractive industry covering that part of the Site where sand and clay materials were to be extracted for the construction of the dam.

The Executive Summary to the EIS which accompanied Development Application No.90/108 states:

> *The landholders, Dr Martin and the Warrah School Society now require to extract the Maroota Sand deposit within an approximately rectangular area of about 16 ha. This area comprises the easternmost two thirds of the subject lands. Although there is in excess of 2 million cubic metres of commercial sand on the total site this application, which is partly aimed at regularising past operations addresses only the first stage of extraction. In this stage a total volume of about 300,000 m^3 of Maroota sand will be removed, processed into construction sand and aggregate and transported from the site over a 5 year period.*

By Notice of Determination dated 7 November 1990, the Council consented to Development Application No.90/108 for the operation of an extractive industry on the Site, subject to a number of conditions.

It had been the intention to extract sand in accordance with the abovementioned approval such that sufficient funds could be generated to prepare a second EIS and Development Application which would seek the approval of the Council for the extraction of the remaining sand resource on the Site. The commencement of the approved extraction operation was, however, dependant upon the completion of the water supply dam the subject of the Court Orders. The water supply was required in order to sustain sufficient water supply on the Site to wash the clay from the material won from the approved extractive operation.

In the years which followed, a number of events occurred which led the Council to conclude, rightly or wrongly, that Consent No.90/108 had not been commenced and, as such, the consent had lapsed. This was essentially due to the fact that the dam construction had not been fully completed to allow extraction to occur.

Following protracted discussions with the Council as to whether the consent had or had not lapsed, Dr Martin, the landowner, indicated to the Council that he would not, at that point in time, pursue that Consent further pending approval of a further Development Application for extraction of sand from the entire Site.

On 22 November 1999, an application for extraction of sand from the Site was submitted to the then NSW Department of Urban Affairs and Planning pursuant to the then State Significant Development provisions of the Environmental Planning and Assessment Act 1979. The application was DA 267-11-99. The EIS which accompanied that application stated:

> *Future extraction operations will involve the excavation, washing and screening of the Maroota Sand using the same process plant as per the existing operation. The proposed excavation will cover the majority of the site, some 23 ha, allowing for boundary buffer zones .....*
>
> *Production objectives are demand related, however, a maximum sand production rate of 1000 t/day has been used for the extraction plan.*
>
> *Future extraction operations are to involve the following:*

- *Materials are to be excavated using a self-loading scraper and transported to the process plant. In areas where the underlying material cannot be effectively excavated using the scraper, the surface would be initially ripped using an excavator and in exceptional circumstances using a dozer.*

- *Process water for washing/screening will be primarily sourced from a water dam constructed at the location of the existing excavation pit (adjacent to the northern boundary). The existing pump-out facility will be utilised.*

- *Processed material is to be stockpiled adjacent to the plant area prior to transportation off-site generally using articulated trucks. A front-end loader is to be used to load the trucks.*

- *The residue clay/silt slurry is to be delivered by pipeline to designated drying areas in the previously extracted cell where it is spread in thin layers to dry. Liberated water will be drained into the water dam for re-use in the process plant. The clay materials will be used for the rehabilitation of the extracted areas.*

- *The materials are to be sequentially extracted in "cells" commencing along the northern boundary (adjacent to the process water dam) and working towards the southern boundary (to Old Northern Road). Each cell will be approximately 200 m x 50 m wide (1 ha in area) which provides sufficient area for the machinery to load and manoeuvre within each cell. The extraction process will minimise the disturbed area (i.e. the area exposed to erosive processes) and enable rehabilitation procedures to commence during operations.*

- *Each cell will be progressively rehabilitated (following extraction of the sand materials) involving surface contouring and replacement of a suitable growth medium/topsoil layer to enhance revegetation.*

Extraction within the site will be undertaken in two stages as follows:

Stage 1 Area *located to the east of the catchment divide (i.e. the process water dam catchment), occupying a total area of approximately 16.5 ha, and*

Stage 2 Area *located to the west of the catchment divide (i.e. the catchment of the two existing water dams for the nursery), occupying a total area of approximately 6.5 ha.*

Extracts from *"Figure 12: Proposed Water Dam Layout*, *Figure 15:Cell 1A Extraction"* and *"Figure 21: Final landform Contours"* of the EIS which accompanied DA 267-11-99 are **Figure 1.5, 1.6 & 1.7** below. Figure 1.5 shows the location of Stage 1 and Stage 2 of the then proposed extraction.

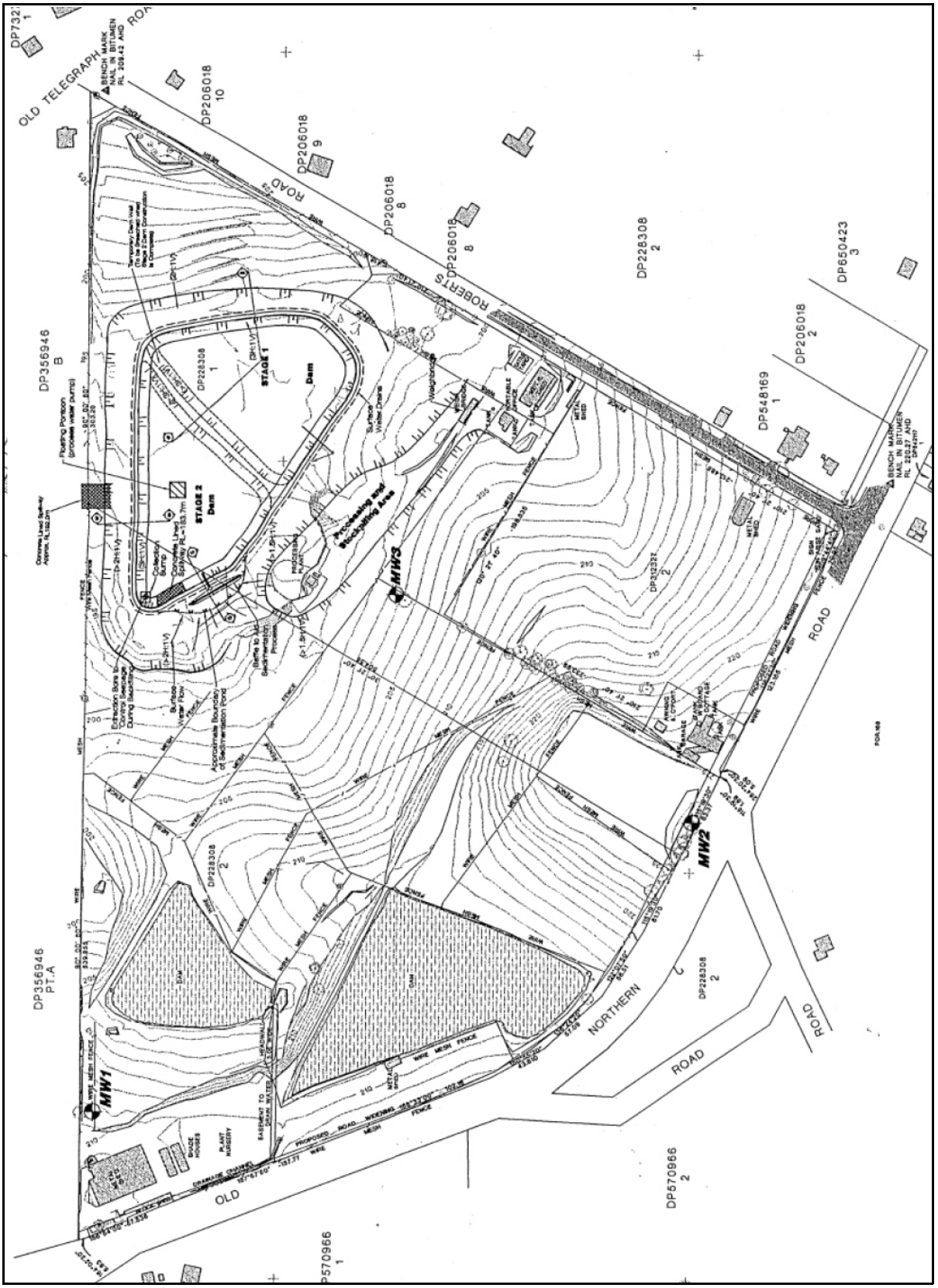

Figure 1.5: Extract from Figure 12 of the EIS which accompanied DA 267-11-99 showing the then proposed dam layout.

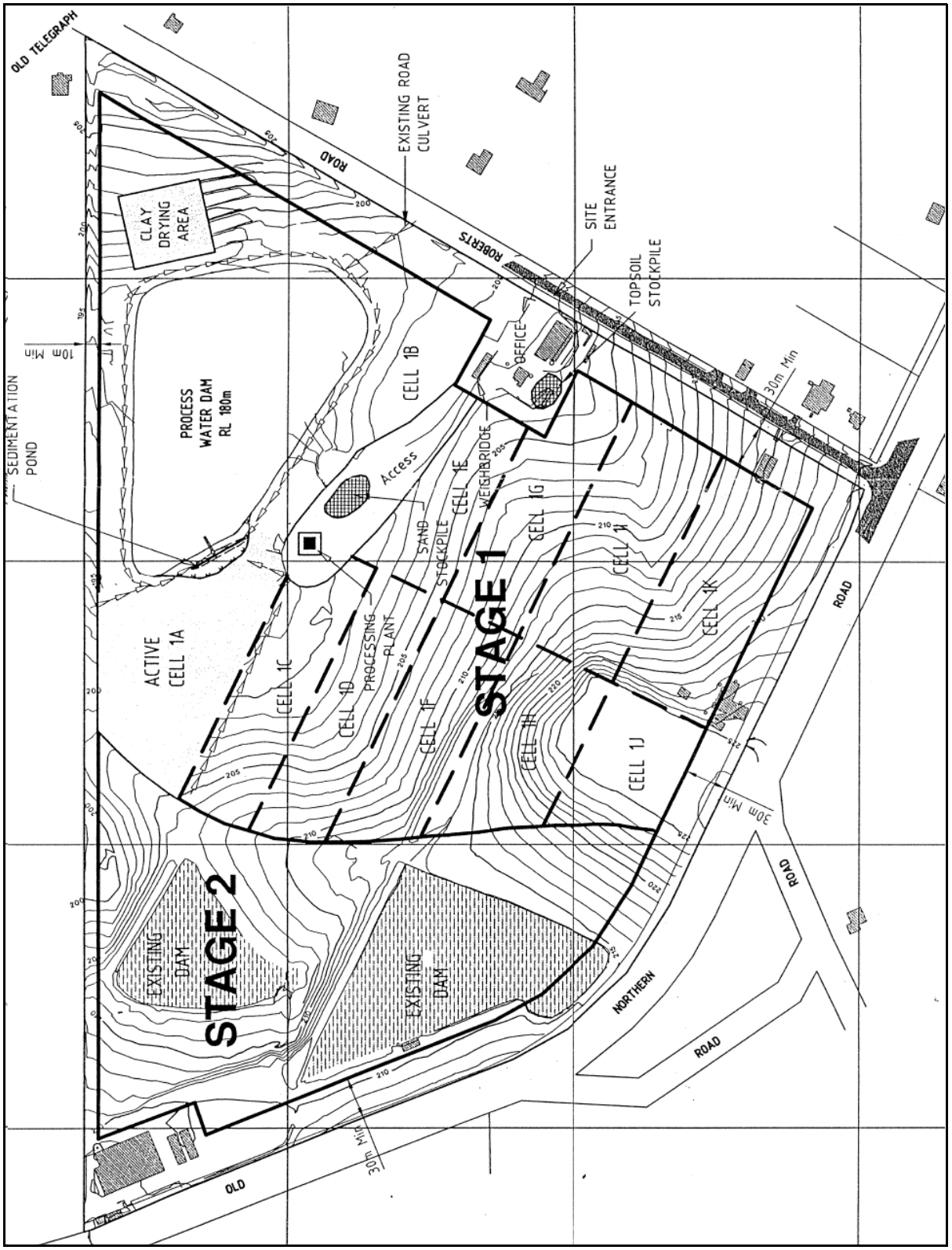

Figure 1.6: Extract from Figure 15 of the EIS which accompanied DA 267-11-99 showing Stage 1 and Stage 2 of the approved extraction and the location of the Cells of extraction for Stage 1.

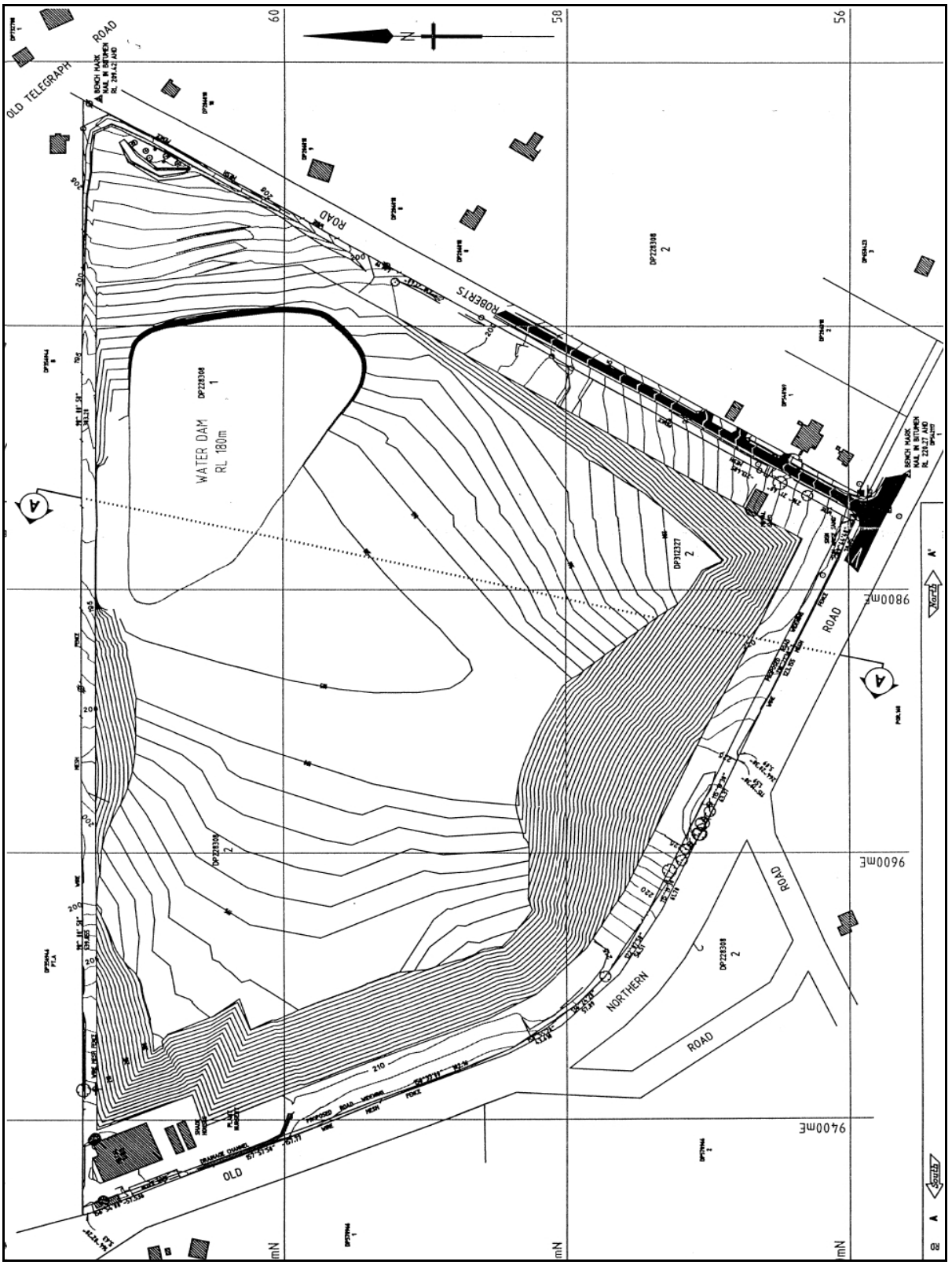

Figure 1.7: Extract from Figure 21 of the EIS which accompanied DA 267-11-99 showing the approved final landform.

Of particular note is the fact that the development proposed in DA 267-11-99 included the continuation of the construction of the dam on the Site.

The Minister for Urban Affairs and Planning, by Notice of Determination dated 31 May 2000, granted consent to DA 267-11-99 subject to conditions. A copy of the consent is at **Appendix 1.** As such, the construction of the dam on the Site was now included in this consent.

Of particular importance was Condition No.9 which stated:

> *9. The duration of extraction under this Consent is for a maximum period of 15 years. The Applicant shall ensure that rehabilitation of all disturbed areas is completed within six months of completion of extraction.*

As such, Consent 267-11-99 requires extraction on the Site to cease on 31 May 2015.

1.3.1 Modification (1) of Development Consent DA 267-11-09

On 21 July 2000, an application to modify consent DA 267-11-99 was made to the then Department of Urban Affairs and Planning pursuant to section 96(2) of the Environmental Planning and Assessment Act 1979. The planning report which accompanied the s.96(2) application stated:

> *The proximity of housing to the site of the approved extractive industry has resulted in the need for a variety of acoustic mitigation measures to be incorporated into the design of the extraction plan, not least of which is the requirement for perimeter bunding to assist in the reduction of the potential impact of noise from the extraction operation.*
>
> *..... the main generators of noise from the approved extraction will be:*
>
> - *the dredging excavator*
> - *pump adjacent to the dam*
> - *scraper*
> - *dozer.*
>
> *In order to alleviate the noise impact from the approved extraction, Condition No.8 of the development consent states, inter alia:*
>
> > *"8. No extraction shall commence in areas that are not currently subject to extraction, until the Applicant has:*
> >
> > *(a) constructed the perimeter bund wall;"*
>
> *.... In order to mitigate the potential impact from noise generated by the above*

machinery, Dr Martin has investigated an alternative means of winning the extractive material. Dr Martin, in conjunction with Sand Classifiers Pty Limited, has developed two (2) options:

1. The Genflo Injector, and

2. The Pumping Unit.

.... It is the Pumping Unit option which is now proposed by Dr Martin.

.... Sand is extracted using an excavator. The excavator would start at the natural ground surface level but would immediately dig a hole so that the excavator and processing equipment would be working against an extraction face. The extraction face provides significant noise shielding.

The excavator which will be used will be fitted with acoustic mufflers to achieve a noise level of approximately 76 dBA when measured at 7 metres. This noise level has been achieved at several similar sites with noise issues. Discussions with the potential excavator suppliers have found that this specification can be met.

The excavator loads the sand into an acoustically lined hopper. The hopper is located above a belt feeder which introduces the sand into a mixing tank. The belt drive is variable rate controlled and is powered by an electric motor.

A centrifugal electrically driven water pump will be located at the approved clean water storage dam. This pump will pump water to the mixing tank through a rubber and polyethylene pipeline. The flow rate of the clean water will be controlled so that the water level in the mixing tank remains constant.

The sand slurry is then drawn out of the mixing tank by an electrically driven slurry pump and pumped via a rubber and polyethylene pipeline to the sand processing plant.

Electricity will be supplied to the belt feeder and slurry pump from a diesel generator. The generator will be fitted with an acoustic enclosure. A design for the enclosure has been provided by Enco Noise Control Pty Ltd. The design states that a noise level below 44 dBA at 30 metres will be achieved.

The belt feeder, mixing tank, slurry pump and enclosed generator will be located on a rubber tyred trailer. This will allow the unit to be moved as the sand extraction face progresses.

.... The major benefit of the proposed pumping unit system is that sand is won from the extraction cell by means of an excavator rather than a bull dozer and/or scraper. The excavator will be fitted with a power shovel which will allow the excavator to be located on the floor of the extraction cell, thus allowing for acoustic attenuation.

The material won will be mixed with water from the approved water supply dam in a portable mixing tank located in the extraction cell. It is then transported by gravity to the processing plant by means of a pipe system. The only noise generating machinery attached to the mixing apparatus will be a diesel powered motor which will be contained in an acoustic enclosure for noise attenuation purposes.

.... The pumping unit method of extraction will provide a significant number of environmental benefits which will accrue when compared to the approved method of extraction. These benefits include:

- *elimination of the need for both the bull dozer and scraper to win the sand from the extraction cell and transport the material to the processing plant. This will provide for a significant reduction in noise generated from the site during extraction.*

- *the removal of the bull dozer and the scraper from the extraction process will mean that many of the noise mitigation measures which are now required will no longer be required to meet the requirements of the EPA. In particular, there will no longer be a need for the perimeter bunding to extend around the site .... The removal of that bunding will mean a significant improvement in the visual impact of the site when viewed from Old Northern Road, Old Telegraph Road and Roberts Road. We are of the opinion that this will be a major environmental benefit.*

- *the use of the excavator and the portable mixing apparatus will mean that a smaller section of the active extraction cell will be worked at any one time compared to the total cell being worked with the use of the scraper, thus reducing the area of the site disturbed at any one time.*

- *the removal of the need to transport the extractive material from the extraction cell to the processing plant by scraper will mean that there will be little, if any, traffic on the site other than delivery trucks entering and leaving the site. This will have a significant and positive impact on the potential of the development to generate dust.*

Of particular note is that the Modification (1) stated that:

- *the approved amount of sand to be extracted will not alter.*

- *the approved time frame for the extraction (15 years) will not alter.*

- *the approved number of truck movements (100 per day) from the site will not alter.*

- *the approved dam design and capacity will not alter.*

- *the existing processing plant configuration will not alter.*

- *the approved extraction cells proposed as part of the EIS will not alter either in their location or area. The only change will be the method of winning the material from the cells and the reduction in area of the cell disturbed at any one time.*

- *the removal of the bund walls from the perimeter of the site will mean that the visual impact will be altered but only in a positive way.*

- *the proposed landscaping of the perimeter will not alter, however, it will now not have to incorporate the perimeter bunding.*

- *the removal of the perimeter bunding will allow the better protection of both the endangered Acacia species and Blue Mountains Mahogany species located on the site.*

- *the removal of the perimeter bunding will alleviate the potential noise impact to adjoining residences during the construction of the bund wall.*

Notwithstanding the above proposal to remove the approved perimeter bunds, the s.96(2) application also included an assessment by Scott Murray & Associates of the proposed modification of the approval from a visual impact perspective. The Scott Murray & Associates report was prepared:

> *... to describe the proposed landscape changes for the Dr Martin property following the approval for the sand extraction and processing development at the site by the Minister for Urban Affairs and Planning on the 31st May, 2000.*

In this regard the following statements were made by Scott Murray & Associates:

> *The removal of the bunds as recommended ... has the potential to impact on the visual and landscaping impact of the development as amended.*
>
> *The revised extraction process .... would result in the elimination of the need for the use of dozers and scrapers on the site, thus significantly reducing noise emissions from the site during the extraction and processing process. As a direct result, the noise modelling .... report, states that: -*
>
> - *The permanent earth bunds around the perimeter of the site as recommended in the EIS will no longer be required – from a noise perspective*
>
> - *The temporary earth bunds around each extraction cell as recommended in the EIS will no longer be required – from a noise perspective*
>
> - *The wall in the processing area as recommended in the EIS will still be required – from a noise perspective*

As a result of this study it is clear that earth bunding – from a noise reduction standpoint – is not required.

However, from a visual impact viewpoint, we believe that certain earth bunding works are still required.

*.... As a consequence, it is therefore recommended – from a purely visual impact standpoint - that initial earth bunding still be implemented at the intersection of Old Northern and Roberts Road to prevent views into the site of the early stage 1 works. Plan **MP–01B** shows this revised bunding strategy. As in the previous scheme, this bunding would achieve heights of up to approximately 3 metres within the 30 metre setback, using a maximum 1:4 road-facing slope.*

*All other earth bunding previously proposed within boundary perimeter setbacks is now to be deleted as it is no longer required from either a visual impact or noise perspective. Again, plan **MP–01B** shows the current proposal.*

It should be noted that there is no alteration to the vegetation proposed within the boundary setbacks – only the deletion of the now unnecessary earth bunding.

*Plans **MP–02B – MP-05B** have been revised to reflect this current proposal.*

A Notice of Modification dated 29 November 2000 was issued by the then Minister for Urban Affairs and Planning, a copy of which is at **Appendix 2**.

Modification to Condition 2(c) of consent 267-11-99 inserts reference to the report of Dick Benbow and Associates (Report No.10065 Issue 1) dated 26 June 2000 into the Consent. The Dick Benbow and Associates report details the modified extraction process as described above.

Figure 1.8 shows the location of the processing plant and loading area.

Figure 1.9 shows the existing entrance to the Site including the location of the weighbridge.

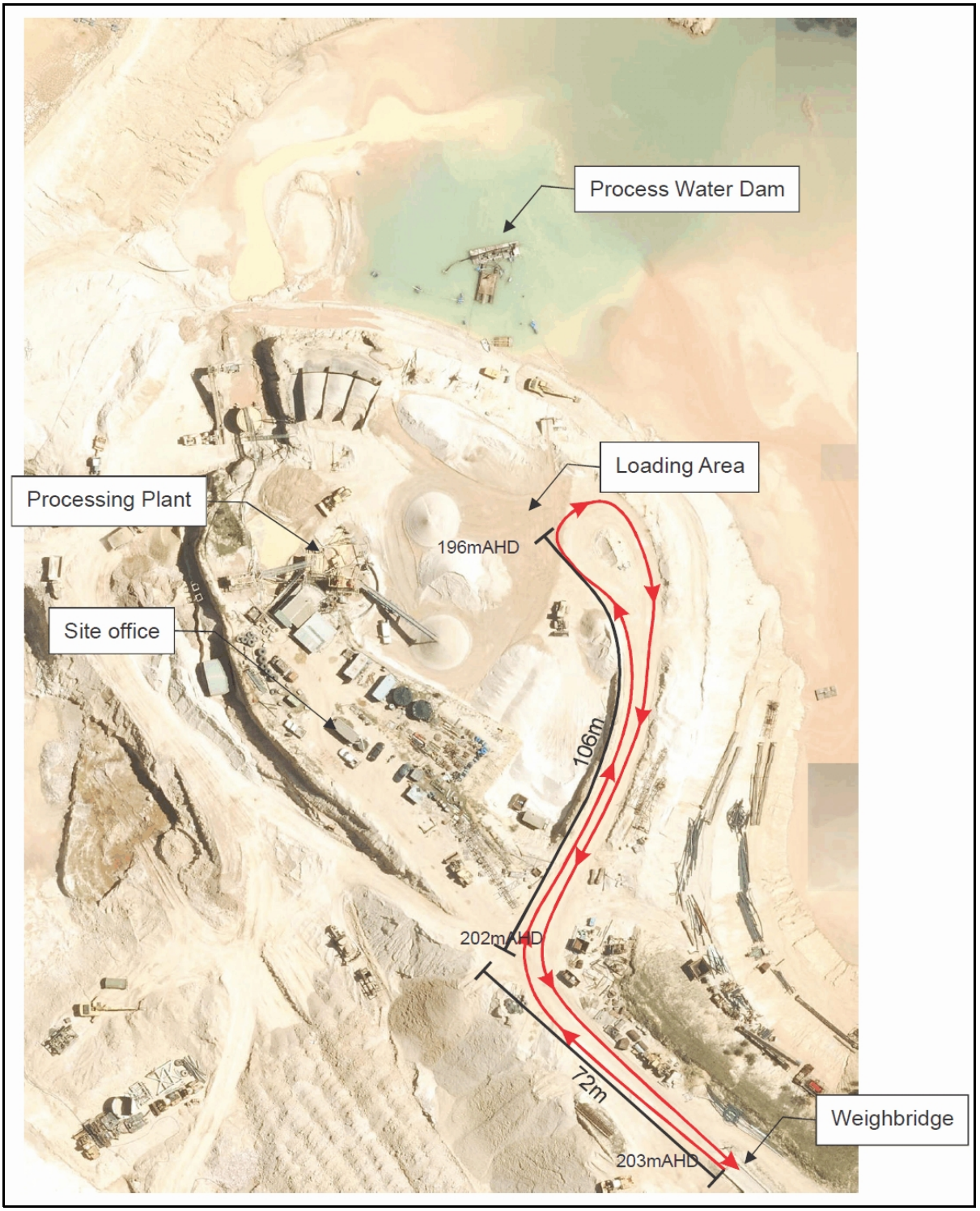

Figure 1.8: Aerial photograph showing the location of the existing processing plant and loading area together with the location of the weighbridge and process water supply source.

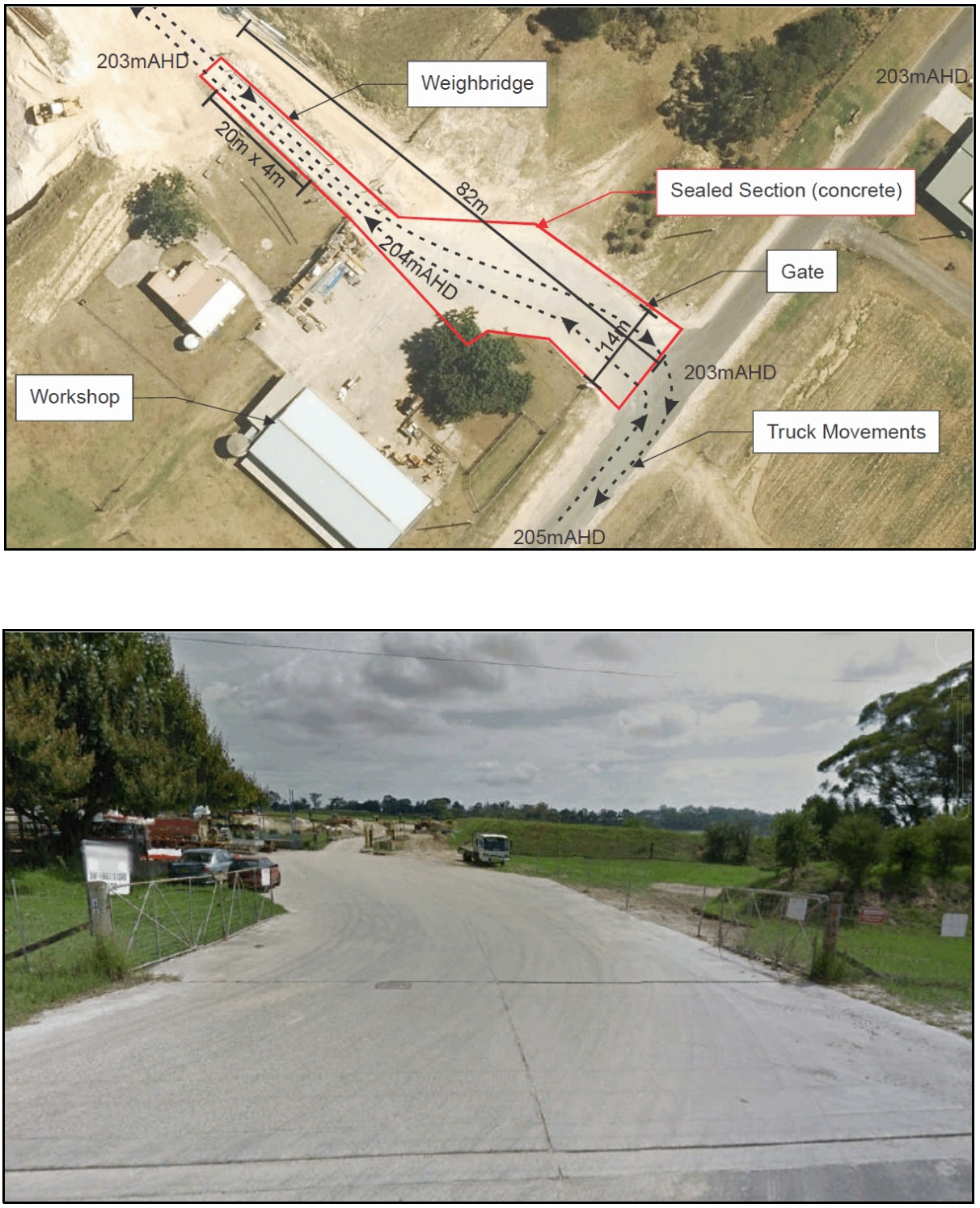

Figure 1.9: This figure shows, at the top view, an aerial photograph of the existing entrance to the Site and the existing weighbridge. At the bottom is a photograph of the existing sealed entrance to the Site with the weighbridge shown in the background of the photograph.

1.3.2 Modification (2) of Development Consent DA 267-11-09

The Consent, as modified, permits:

(a) development for the purposes of an extractive industry on the Site, in accordance with details contained in the Environmental Impact Statement (**EIS**) prepared by Nexus Environmental Planning Pty Ltd, dated 1999 as submitted with the development application;

(b) extraction in accordance with an extraction plan prepared by Woodward Clyde which details both the sequence and depth of extraction, and

(c) extraction in accordance with the modified method of extraction as detailed in the documents prepared by Dick Benbow & Associates which were submitted with the s.96(2) modification application.

Modification (2) to the Consent has been prepared and an Environmental Assessment has been prepared and is currently with NSW Planning and Environment in draft form for review. Modification (2) seeks to amend the Consent as follows.

Dam Construction

Part of the Consent was for the continued construction of a water supply dam on the Site, that dam being required to provide sufficient water to maintain the life of the approved extraction.

The approved dam was to be constructed in two (2) stages, details of which were described in the EIS which accompanied the application for extraction.

During the construction of the approved dam, the applicant has determined that the construction process would be better served if the dam were to be constructed in three (3) stages rather than the approved two (2) stages. Modification (2) proposes to amend the consent to modify the dam construction process accordingly.

Sequence of Extraction

There is an approved sequence of extraction of the Site as shown in **Figure 1.6**.

During the extraction process, it has been determined that the approved method of extraction using the cells shown in **Figure 1.6** is neither an economic nor practical way to achieve that extraction.

The existing extraction process on the Site involves a similar cell by cell extraction process to that which is approved but one which is not as rigidly defined as that portrayed in **Figure 1.6**.

Modification (2) seeks to modify the approved sequence of extraction to reflect that which is now being undertaken on the Site such that the most efficient means of extracting the material on the Site is achieved.

Extraction Process

The approved extraction was to be undertaken in accordance with the method of extraction described in Modification (1) to the Consent where a *"Pumping Unit"* method of extraction was to be employed.

Since commencement of the extraction, it has been determined that the approved *"Pumping Unit"* method of extraction is not a practical means by which the resource can be extracted.

While the general concept of the *"Pumping Unit"* method of extraction remains, there have been modifications made to that method. Modification (2) proposes to modify the Consent to regularise the existing method of extraction.

Approved Volume of Material to be Extracted and Life of the Consent

Table 4.3 of the EIS relating to the Consent provided details of the sequence of extraction, the volume of material to be extracted from each cell, and the time for that extraction to be completed, those data having been provided by Woodward Clyde as part of the mine plan prepared for the approved extraction.

It has become apparent that the volume calculations undertaken by Woodward Clyde, as detailed in Table 4.3 of the EIS, are flawed in that they do not provide accurate volumes of the material present on the Site.

To establish a more accurate figure of the volume of material contained on the Site, VGT Environmental Compliance Solutions (**VGT**) has undertaken detailed volume calculations utilising survey data obtained in December 2013. Using a computer generated model of the Site, VGT has determined that there is 4,607,822m^3 of material on the Site compared to the 2,144,000m^3 calculated by Woodward Clyde.

Advice from the applicant is that a conservative estimate of 2 tonnes per m^3 should be applied to determine the tonnage of material on the Site. Applying that conversion rate, there is 9,215,644 tonnes of material on the Site. The applicant has advised that a figure of 60% sand to 40% clay/gravel is generally obtained. As such, 5,529,386 tonnes of the volume calculated by VGT would be sand product.

The applicant has advised that approximately 1,000,000 tonnes of sand has been exported from the Site during the life of the extraction to date which means that approximately 4.5 million tonnes of sand product remains to be extracted.

Having regard to the errors in the original calculations undertaken by Woodward Clyde, Modification (2) proposes to modify the Consent based on the volume figures calculated by VGT. The EIS for the original development provided a formula to determine the rate

of extraction. Using that formula, the following applies:

- maximum 50 trucks per day (approved).
- average load per truck 33.5 tonnes.
- 1,675 tonnes per day.
- 5.5 days per week extraction = 286 days per annum.
- maximum 479,050 tonnes per annum extracted.
- 9.4 years of extraction remaining.

In light of the above, Modification (2) proposes to extend the life of the extraction from 31 May 2015 to 31 May 2025.

A fully detailed Environmental Assessment process has been undertaken as part of Modification (2) to determine the environmental impact of the modifications proposed.

During the preparation of the Environmental Assessment for Modification (2), it became apparent that there was a significant amount of data which need to be collected to determine the environmental impact of Modification (2), not least of which was the need to undertake significant assessment of the wet weather groundwater level on the Site to ensure that the proposed extension of the life of the Consent did not adversely impact on groundwater.

Since extraction of the Site commenced, policy changes have seen the introduction of the Greater Metropolitan Region Groundwater Sources Water Sharing Plan (**WSP**) (2011) and Aquifer Interference Policy (**AIP**) (2012). As part of the Modification (2), the New South Wales Office of Water requires evidence that the proposed modifications adhere to the above mentioned plans.

While Modification (2) does not seek to increase the lateral extent of the approved extraction, the proposed modification presented an opportunity to review the maximum wet weather elevation for the Maroota Tertiary Sands Groundwater Source (**MTSGS**).

The groundwater assessment which has been required for Modification (2) has concluded that the data which was originally sourced as part of the original EIS was not sufficient to meet the updated requirements the WSP and AIP.

A detailed groundwater impact assessment has been prepared as part of Modification (2) which:

1. Evaluates the approved depth of extraction (from the original EIS) in context of the proposed modification.
2. Updates the original groundwater assessment, including review of groundwater

levels to confirm the extraction depth limit.

3. Assesses the quarry modifications against the Greater Metropolitan Region Water Sharing Plan (GMRWSP) and the aquifer interference policy (AIP).

4. Outlines a strategy for groundwater monitoring and management that will ensure compliance against the WSP / AIP.

1.4 The Proposed Modification (3)

As detailed above, one of the modifications to the Consent proposed in Modification (2) is that the life of extraction on the Site be extended from 31 May 2015 to 31 May 2025.

The assessment process for Modification (2) has been such that the complex level of empirical detail which has been required with regard to groundwater, acoustic and air quality impacts has been such that the timeframe originally expected for the completion of the Environmental Assessment has been significantly exceeded. As such, the assessment of Modification (2) by the Department of Planning and Environment and other agencies involved in that assessment will not be completed by 31 May 2015.

If extraction activity ceases on 31 May 2015, pending the resolution of Modification (2), there would be an hiatus in the provision of Maroota Sand to the Sydney construction industry. In addition, less than half of the Site has been extracted, and, as such, it would be impossible to rehabilitate the Site in accordance with the Consent until such time as the Site is fully extracted as per the Consent. In order to cause the least disruption to the operation of the existing extraction, the continued employment of workers at the Site, and to maintain the supply of Maroota Sand to the local market, Modification (3) has been submitted to extend the existing extraction of the Site for a period of up to 12 months while Modification (2) is comprehensively assessed and determined.

It is proposed that the extended period of extraction proposed as Modification (3) would allow the continued extraction of the Site in accordance with the current Consent as modified.

Notwithstanding, as part of the Environmental Assessment process for Modification (2), is has been determined that the wet weather groundwater level of the Site is higher than that predicted in the original EIS. As such, it is proposed that the continued extraction of the Site as proposed in Modification (3) would not involve extraction within 2 metres of the newly assessed groundwater level of 183.1m AHD.

Part Two

IMPACT OF THE PROPOSED MODIFICATION (3)

2.1 Existing Impacts

As shown in **Appendix 1** and **Appendix 2**, the existing extraction activity on the Site is subject to a number of conditions relating to, among other things:

- Air quality impact
- Acoustic impact
- Impact on groundwater
- Traffic management
- Soil and water management
- Site rehabilitation
- Hours of operation
- Water quality
- Independent auditing
- A complaints register.

The operation of the existing extraction has occurred such that the general requirements of the conditions of consent have been adhered to and the independent auditing has determined that impacts to the surrounding environment have been in accordance with the requirements of the conditions of consent. This has been confirmed by the lack of complaints during the operation of the existing extraction.

2.2 Impacts Associated with Modification (3)

The extension of extraction on the Site as proposed in Modification (3) will maintain the existing environmental record attained to date and will continue to be subject to the conditions of the Consent, as modified.

The Environmental Assessment of Modification (2) has determined that there would be a requirement for the approved depth of extraction to be raised to ensure the integrity of the Maroota Groundwater Source. As such, as part of Modification (3), it is also proposed to ensure that the depth of extraction does not proceed below 185.1m AHD.

Part Three

DRAFT STATEMENT OF COMMITMENTS

3.1 Introduction

This part of the Environmental Assessment for Modification (3) outlines the measures which Hodgson Quarry Products would undertake in respect of the environmental management of the Site during the continuation of extraction detailed in Modification (3).

3.2 General

(a) The proposed Modification (3) would be undertaken in accordance with the Environmental Assessment prepared by Nexus Environmental Planning Pty Ltd.

(b) The continued extraction of material from Lots 1 & 2, DP 228308 and Lot 2, DP 312327 would be undertaken in accordance with the existing conditions of Development Consent No.267-11-99, as modified.

(c) The continued extraction of the Site would be undertaken in accordance with the existing Licence to extract.

3.3 Groundwater

The proposed Modification (2) seeks to raise the depth of extraction from the approved 183m AHD to 185.10m AHD such that extraction does not impact on the regional groundwater table.

Hodgson Quarries is committed to the continued monitoring to ensure that suitable data are obtained with regard to the behaviour of groundwater as per the current licensing requirements. The following commitments are made with regard to groundwater.

3.3.1 Groundwater Management Strategy

The strategy for groundwater management is to minimise groundwater inflows from the Maroota Tertiary Sands Groundwater Source (**MTSGS**) to the open cut and preservation of groundwater quality. It involves maintaining the depth of mining to an elevation which is at least 2 metres above the "wet weather" groundwater elevation.

The groundwater monitoring program specifically deals with:

- A mechanism for ensuring the project is compliant with the rules of the Water Sharing Policy (**WSP**) and NSW Aquifer Interference Policy (**AIP**).

- Unforseen impacts on groundwater levels on neighbouring properties and on any users of groundwater.

- Unforseen impacts of the development on groundwater quality such as around storages.

- Periodical monitoring for changes and local and regional impacts of the quarry on groundwater levels and quality during the project and on a reduced basis for at least five (5) years post extraction.

Information gained from the monitoring program has been used to determine the modified pit extraction depth of 185.10m AHD. This will ensure the pit floor remains at least 2 metres above the "wet weather" groundwater level of 183.10m AHD, thereby mitigating any drawdown impact to the MTSGS.

Part Four

CONCLUSION

Hodgson Quarry Products seeks the approval of the Minister for Planning to modify Development Consent No.267-11-99 to permit a continuation of the approved extraction on Lots 1 and 2, DP 228308 and Lot 2, DP 312327, Roberts Road, Maroota pending the determination of Modification (2).

Development Consent No.267-11-99, as modified, permits:

(a) development for the purposes of an extractive industry on the Site, in accordance with details contained in the Environmental Impact Statement (**EIS**) prepared by Nexus Environmental Planning Pty Ltd, dated 1999 as submitted with the development application;

(b) extraction in accordance with an extraction plan prepared by Woodward Clyde which details both the sequence and depth of extraction, and

(c) extraction in accordance with the modified method of extraction as detailed in the documents prepared by Dick Benbow & Associates which were submitted with the s.96(2) modification application.

Proposed Modification (2) would amend the Consent as follows.

Dam Construction

Part of the Consent was for the continued construction of a water supply dam on the Site, that dam being required to provide sufficient water to maintain the life of the approved extraction.

The approved dam was to be constructed in two (2) stages, details of which were described in the EIS which accompanied the application for extraction.

During the construction of the approved dam, the applicant has determined that the construction process would be better served if the dam were to be constructed in three (3) stages rather than the approved two (2) stages. It is proposed to amend the consent to modify the dam construction process accordingly.

Sequence of Extraction

There is an approved sequence of extraction of the Site as shown in **Figure 1.6**.

During the extraction process, it has been determined that the approved method of extraction using the cells shown in **Figure 1.6** is neither an economic nor practical way to achieve that extraction.

The existing extraction process on the Site involves a similar cell by cell extraction process to that which is approved but one which is not as rigidly defined as that portray in **Figure 1.6**.

It is proposed to modify the approved sequence of extraction to reflect that which is now being undertaken on the Site such that the most efficient means of extracting the material on the Site is achieved.

Extraction Process

The approved extraction was to be undertaken in accordance with the method of extraction described Modification (1) to the Consent where a *"Pumping Unit"* method of extraction was to be employed.

Since commencement of the extraction, it has been determined that the approved *"Pumping Unit"* method of extraction is not a practical means by which the resource can be extracted.

While the general concept of the *"Pumping Unit"* method of extraction remains, there have been modifications made to that method of extraction.

It is proposed to modify the Consent to regularise the existing method of extraction.

Approved Volume of Material to be Extracted and Life of the Consent

It has become apparent that the volume calculations undertaken by Woodward Clyde, as detailed in Table 4.3 of the original EIS, are flawed in that they do not provide accurate volumes of the material present on the Site.

Having regard to the errors in the original calculations undertaken by Woodward Clyde, it is now proposed to modify the Consent based on the volume figures calculated by VGT as detailed in Modification (2).

In light of the above, the applicant seeks a modification to the life of the extraction from 31 May 2015 to 31 May 2025.

The assessment process for Modification (2) has involved obtaining a complex level of empirical detail with regard to groundwater, acoustic and air quality impacts such that the timeframe originally expected for the completion of the Environmental Assessment has been significantly exceeded. As such, the assessment of Modification (2) by the Department of Planning and Environment and other agencies involved in that assessment will not be completed by 31 May 2015.

If extraction activity ceases on 31 May 2015, pending the resolution of Modification (2), there would be an hiatus in the provision of Maroota Sand to the Sydney construction industry. In addition, less than half of the Site has been extracted, and, as such, it would be impossible to rehabilitate the Site in accordance with the Consent until such time as the Site is fully extracted as per the Consent. In order to cause the least disruption to the

operation of the existing extraction, the continued employment of workers at the Site, and to maintain the supply of Maroota Sand to the local market, Modification (3) has been submitted to extend the existing extraction of the Site for a period of up to 12 months while Modification (2) is comprehensively assessed and determined.

The existing extraction activity causes acceptable impact to the environment of the Site and its surroundings as demonstrated in the independent auditing which has occurred during the life of the extraction. The existing activity on the Site operates within the parameters detailed in the conditions of the Consent, as modified.

The continuation of the existing extraction in accordance with both the existing conditions of consent and the existing Licence would ensure that the environmental impacts would be acceptable pending the resolution of Modification (2).