Land and Environment Court of New South Wales

Record of Hearing

Judge	Talbot J	
Number	10712 of 1993	
Parties	**Applicant**	Kembla Coal & Coke Pty Limited
	First Respondent	Wollondilly Council
	Second Respondents	Bo & Judith Bjorklund Bridge Street Action Group
Hearing Dates	14 - 29 June 1994, 19 August 1994	
Judgement	Reserved	
Date of Judgement	7 September 1994	

VOLUME 2

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		Bridge Street Action Group

Key Issues

- Development application - whether new or existing mine - effect of savings clause in Model Provisions - interaction of EPA Act and Mining Act - prohibition in LEP applies.
- Development application for underground mine and surface facilities - traffic - visual amenity - subsidence - adequacy of the shaft entry site.

Statutes

- *Wollondilly LEP 1991*
- *Model Provisions* cl 35
- *EPA Act* s 76, s 4 Definition 'owner', s 100A, s 101
- *Local Government Act* s 3 Definition 'owner'
- *Coal Acquisition Act*
- *Mining Act 1992* s 64(5), s 65(1), s 74, Sch 1 Pt 2 Div 2 & 3

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Appearances	**Applicant**	Mr N A Hemmings QC (Solicitor) (14 - 16, 21, 23 - 29 June 1994 and 19 August 1994) Mr A R Beatty (Solicitor) (17, 21 - 22 June 1994)
	First Respondent	Mr S B Austin QC (Barrister)
	With	Mr D B Studdy (Barrister) (14 - 16 June 1994 and 19 August 1994) Mr D B Studdy (Barrister) (17 - 29 June 1994)
	Second Respondents	Bo & Judith Bjorklund - Mrs J Bjorklund (In Person) Bridge Street Action Group - Mr R Waller (In Person)
Solicitors	**Applicant**	Allen Allen & Hemsley
	First Respondent	Abbott Tout
	Second Respondents	N/A

Number of pages 43 and Annexure

Summary of orders

- Appeal allowed subject to conditions

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IN THE LAND AND ENVIRONMENT COURT OF NEW SOUTH WALES

MATTER No. 10712 of 1993
CORAM: Talbot J
DECISION DATE: 7 September 1994

KEMBLA COAL & COKE PTY LIMITED
Applicant

v

WOLLONDILLY COUNCIL
First Respondent
BO & JUDITH BJORKLUND and BRIDGE STREET ACTION GROUP
Second Respondents

JUDGEMENT

On 16 June 1994, I delivered a judgement on a preliminary question in respect of the adequacy of an environmental impact statement lodged by the applicant company in support of its development application in regard to the extension of current underground workings at Tahmoor Mine into the Tahmoor North coal reserve and the construction of mine entry facilities. In that judgement I outlined the background history of the workings at the Tahmoor Mine and the chronology of events relating to the present development application. It is not necessary to set those matters out again.

THE PROPOSAL

The development application is made by Kembla Coal and Coke Pty Limited (KCC) on behalf of Novacoal Pty Limited which is the holder of Consolidated Coal Lease 716 (CCL 716) which covers the existing workings.

A new surface site located on Lot 22 Bridge Street, Picton comprising an area of 4.35 hectares will accommodate the following facilities:-

- bathhouse and administration buildings;
- mine entry and ventilation shaft;
- shaft winder;
- ventilation fan and air compressor station; and
- car park.

The project will provide access to sub-surface land which adjoins the existing Tahmoor underground workings within CCL 716 thereby affording the applicant a mineable coal reserve to continue operations while utilising established facilities on the present mine site at Tahmoor including the coal refuse emplacement area on vacant Crown land and Part Portion 16, Parish of Bargo to the east.

The area to be undermined runs from Tahmoor in the south, through the township of Thirlmere, under Redbank Creek and parts of the town of Picton. The sub-surface land is covered by Mining Lease Application No. 1 Sydney 1992 (MLA No.1) made by Novacoal Pty Limited.

STATUTORY CONTROLS

The Wollondilly LEP 1991 was published in Government Gazette No. 119 on 23 August 1991.

The surface facility is located on land zoned Rural 1(a2) and is a permitted land use with council consent under Wollondilly LEP 1991.

The underground workings will be located under land in ten different zones. Mines are a prohibited use in a number of these zones including the Residential 2(a) zone, the Industrial zone, two Special uses zones, two Environmental Protection zones and the Open Space Reservation zones (the prohibited zones).

The Model Provisions published in the Government Gazette of 26 September 1980 are adopted in all relevant respects for the purposes of Wollondilly LEP 1991.

The provisions of cl 35 of the incorporated Model Provisions are as follows:-

> "35 Nothing in the local environmental plan shall be construed as restricting or prohibiting or enabling the consent authority to restrict or prohibit -
>
> (a) the carrying out of development of any description specified in Schedule 1;
>
> (b) the use of existing buildings of the Crown by the Crown; or
>
> (c) home occupations carried on in dwelling-houses."

Schedule 1 to the Model Provisions contains the following description:-

> "7 The carrying out by the owner or lessee of a mine (other than a mineral sands mine), on the mine, of any development required for the purposes of a mine, except -
>
> (a) the erection of buildings (not being plant or other structures or erections required for the mining, working, treatment or disposal of minerals) and the reconstruction, alteration or extension of buildings, so as materially to affect the design or external appearance thereof; or
>
> (b) the formation of any means of access to a road."

A "mine" is defined in the Model Provisions as follows:-

> "'mine' means any place, open cut, shaft, tunnel, pit, drive, level or other excavation, drift gutter, lead, vein, lode or reef whereon, wherein or whereby any operation is carried on for or in connection with the purpose of obtaining any metal or mineral by any mode or method and any place on which any product of the mine is stacked, stored, crushed or otherwise treated, but does not include a quarry"

The hearing proceeded, after I delivered a judgement on the preliminary issue, on the basis that there was no issue regarding the jurisdiction or power of the Court to grant consent. When considering the whole of the material in evidence, after reserving my decision on 29 June 1994, I became aware that development for the purpose of a mine was prohibited in a number of zones. The issue of whether the Court could grant development consent in those circumstances had not been canvassed at the hearing and accordingly I requested the parties to separately address the effect of cl 35 of the Model Provisions. Further submissions confined to that issue, were made on 19 August 1994.

Mr Hemmings QC, for the applicant, made no direct submission during the hearing that development consent was not required for the underground workings. Indeed he asserted that the development application and the EIS related to the proposed workings as well as the surface facilities. He expressly recognised that cll 34 and 35 of the EPA Regulation apply to the content and preparation of the EIS. After the parties were invited to make further submissions directed solely to that issue, he recognised the difficulty with the operation of cl 35. Adopting what he described as the better view, he argued that development consent is not required for the mining of a coal seam as an extension of an operating mine but nevertheless the Court has jurisdiction to determine this appeal because:-

(a) certain parts of the development application before it relate to uses of land which require development consent (eg, the proposed surface facilities at the Bridge Street site which only have a purpose if mining is extended);

(b) both respondents have conceded that the development application before the Court is subject, inter alia, to cll 34 and 35 of the EPA Regulation; and

(c) it is clearly open to the Court to grant consent in respect of a development application even where, as here, parts of that application may not require consent owing to the operation of cl 35 of the Model Provisions.

The submission relies on the applicant, KCC, being either the owner or lessee of a mine.

If Mr Hemmings is right, and no development consent is required for the underground workings, then it would follow, as a matter of construction, that the prohibition against mines could not be construed as prohibiting the development in the prohibited zones. The effect of cl 35 is not to make otherwise prohibited development permissible with consent.

It is remarkable that the council was content to maintain only a watching brief once the preliminary issue was decided yet, after the issue of the effect of cl 35 was raised by me, it contended that development for the purpose of a mine is prohibited and that the development application should be refused.

There is no definition of an owner or a lessee in the Model Provisions or the LEP.

In the *Environmental Planning and Assessment Act* (EPA Act) "owner" has the meaning ascribed thereto in the *Local Government Act 1919* pursuant to s 4(1).

The reference to the *Local Government Act 1919* is to be read as a reference to the *Local Government Act 1993* pursuant to cl 4 of Sch 7 to the new Act.

Pursuant to s 3 of the *Local Government Act 1993*, expressions used in that Act which are defined in the dictionary at the end of that Act have the meanings set out in the dictionary.

The following meanings appear in the dictionary.

"**owner:**

(a) in relation to Crown land, means the Crown and includes:

(i) a lessee of land from the Crown; and

(ii) a person to whom the Crown has lawfully contracted to sell the land but in respect of which the purchase price or other consideration for the sale has not been received by the Crown; and

(b) in relation to land other than Crown land, includes:

(i) every person who jointly or severally, whether at law or in equity, is entitled to the land for any estate of freehold in possession; and

(ii) every such person who is entitled to receive, or is in receipt of, or if the land were let to a tenant would be entitled to receive, the rents and profits of the land, whether as beneficial owner, trustee, mortgagee in possession, or otherwise; and

(iii) in the case of land that is the subject of a strata scheme under the Strata Titles Act 1973 or a leasehold strata scheme under the Strata Titles (Leasehold) Act 1986, the body corporate under that scheme; and

(iv) in the case of land that is a community, precinct or neighbourhood parcel within the meaning of the Community Land Development Act 1989, the association for the parcel; and

(v) every person who by this Act is taken to be the owner; and

(c) in relation to land subject to a mining lease under the Mining Act 1992, the holder of the lease; and

(d) in Part 2 of Chapter 7, in relation to a building, means the owner of the building or the owner of the land on which the building is erected."

"lease:

(a) includes an original lease, derivative lease or an under-lease or an agreement for any of them, and extends to any case where there is the relation of landlord and tenant, whether there is or is not any instrument in writing; and

(b) in relationship to Crown land, land owned by or vested in the Crown or land within a State forest, includes a licence, permit, permissive occupancy or authority (other than a licence issues under section 27A, 27B, 27C, 27G or 28 of the Forestry Act 1916, or a permit granted under section 31(1), a permit to occupy land for bee-farming purposes granted under section 31(1A)(b), or a permit granted under section 32B(1) or 32F(1), of that Act), and land occupied under a mineral claim under the Mining Act 1992 is taken for the purposes of this Act to be held under a lease by the person in lawful occupation, under the mineral claim, of the land."

"lessee includes:

(a) an original lessee, derivative lessee or under-lessee and any person deriving title under or from a lessee of under-lessee; and

(b) the holder of a mineral claim under the Mining Act 1992."

The definition of owner in the *Local Government Act 1993*, incorporated in the EPA Act, carries through to the LEP, including the Model Provisions pursuant to s 34(1) of the EPA Act, there being no contrary intention appearing.

By the *Coal Acquisition Act 1981*, all coal was vested in the Crown freed and discharged from all trusts, leases, licences, obligations, estates, interests and contracts.

Coal was defined in that Act as follows:-

"'coal' means coal within the meaning of the Coal Mining Act, 1973, that is in a natural state on or below the

surface of any land to which the legislative power of the State extends."

Section 64(5) of the *Mining Act 1992* (the Mining Act) provides that a mining lease may not be granted under that section otherwise than in accordance with Pt 2 of Sch 1.

Divisions 2 and 3 of Pt 2 of Sch 1 establish a procedure for notification of applicants and councils before inviting tenders for or granting a mining lease where development consent is required before the land may be used for the purpose of obtaining minerals and, also, where development consent is not required.

Section 65 of the Mining Act is as follows:-

"65. (1) This section applies to land for which development consent is required before the land may be used for the purpose of obtaining minerals.

(2) The Minister must not grant a mining lease over land to which this section applies unless an appropriate development consent is in force in respect of the land.

(3) If a mining lease is granted over land for which an appropriate development consent has been given:

(a) any condition (being a special purpose condition within the meaning of Division 2 of Part 2 of Schedule 1) imposed on the development consent by a consent authority, or by a body hearing an appeal from a consent authority, is void; and

(b) the development consent (to the extent only to which it relates to the use of the land concerned for the purpose of obtaining minerals) is taken to have been given free of the condition."

A "special purpose condition" is defined in cl 15 of Sch 1 to the Act as follows:-

"'special purpose condition' means a condition concerning:

(a) the preparation of land for mining; or

(b) the mining methods to be employed while mining operations are being carried on; or

(c) the rehabilitation of land, either while mining operations are being carried on or after they have ceased; or

(d) the safety measures to be adopted, either before mining operations are commenced, while they are being carried on or after they have ceased; or

(e) the security to be given with regard to the performance of any matter referred to in paragraph (a), (b), (c) or (d)."

Section 74 of the Mining Act provides:-

"74. (1) While a mining lease has effect:

(a) nothing in, or done under, the Environmental Planning and Assessment Act 1979 or an environmental planning instrument operates so as to prevent the holder of the mining lease from carrying on mining operations in the mining area; and

(b) to the extent to which anything in, or done under, that Act or any such instrument would so operate, it is of no effect in relation to the holder of the mining lease.

(2) Subsection (1) ceases to apply to a mining lease over land for which development consent to the use of land for the purpose of obtaining minerals is required if mining operations under the lease have not begun within 5 years after the date on which the development consent is given.

(3) This section does not exempt the holder of a mining lease from obtaining any consent under the Environmental Planning and Assessment Act 1979 that the person is required to obtain in connection with the erection of buildings, the opening of roads or the subdivision of land.

There is no provision in the Mining Act which expressly applies where mining is prohibited development.

After the development application was referred to him, the Minister advised the council that the proposed extension to the Tahmoor colliery is not affected by the ministerial direction dated 4 June 1987 under s 101 of the EPA Act. Accordingly the council is the determining consent authority for the purpose of this development application.

SUBMISSION BY THE FIRST RESPONDENT IN REGARD TO CLAUSE 35 OF THE MODEL PROVISIONS

Mr Austin QC, for the council, submitted that as KCC itself is not the "owner or lessee of a mine" as required by paragraph 7 of Sch 1 to cl 35 of the Model Provisions, then cl 35 can have no operation. The fact that a related company, Novocoal, may be the lessee of another mine is irrelevant when determining the operation of cl 35 of the Model Provisions to the proposed development the subject of this development application which is by another party for another mine.

Further paragraph 7 of Sch 1 to cl 35 of the Model Provisions requires that the carrying out of any development be on the mine by the owner or lessee of that mine. According to the council, the sinking of the shaft at the proposed Bridge Street site constitutes a mine in its own right and therefore will be a separate mine from the existing mine at Tahmoor. The fact that Novocoal is the lessee of the Tahmoor Mine is not relevant to the carrying out of development at the Bridge Street site, which is a separate mine and will be by a different company. Mr Austin QC argued that cl 35 can have no operation in these circumstances.

The council pointed to the different regimes under the Mining Act which respectively control prospecting, an application for a mining lease and a mining lease itself to demonstrate that planning laws have different effect on development associated with mining depending on the circumstances.

Pursuant to ss 64(5), 65(1), 65(2) and cl 13 of Div 2 Pt 2 of the Mining Act, the Minister required the present application to be made as an essential statutory prerequisite to the issue of the lease applied for by Novacoal in MLA No. 1.

Thus, before mining can commence the applicant for a coal lease must obtain two approvals both of which may be granted subject to conditions. They arise from the different statutory responsibilities of the consent authority and the Minister.

The important point explained by Mr Austin is that cl 35 has no operation until the lease is granted and there is an exiting mine at the site of the subject development application. It has no application in respect of a proposed mine as in the present case.

This approach, he says, is consistent with the decision in *Associated Minerals v Wyong Shire Council* (1947) 4 ALR 353 at 363.

SUBMISSION BY THE SECOND RESPONDENTS - MR & MRS BJORKLUND IN REGARD TO CLAUSE 35 OF THE MODEL PROVISIONS

Mrs Bjorklund points out that Novocoal, the holder of CCL 716 covering the existing workings and the application in MLA No. 1 covering the proposed new lease area, although a subsidiary of KCC, is a separate company. It is a corporate identity in its own right.

Further, Queensland Coal Pty Ltd, the owner of Lot 22, Bridge St Picton, the proposed site for the surface facilities, is also a separate company.

Therefore she says since KCC is neither the owner nor lessee, the exemptions detailed in the Model Provisions do not apply.

The argument that this development is regarded by KCC as an extension of an existing development, according to Mrs Bjorklund, does not contribute to the discussion that mines are a prohibited use in 7 of the 10 zones to be undermined because;

a. The proposed development is an extension to the existing mine only in that it shares existing infrastructure. The EIS presents argument against the establishment of a new mine on the basis of cost. If it had been more cost effective to establish a new mine, then presumably this development application would be describing a new mine.

b. The Department of Mineral Resources considers the application as being for a new lease, not an extension of the existing lease. Similarly the proposed mine should be regarded as a new mine, not an extension of the existing mine. It is a fortuitous co-incidence for KCC that the proposed new lease area is adjacent to the old, and hence the proposed new mine is adjacent to the old. As such it can utilise the existing infrastructure for financial savings.

c. The fact that the proposal by the applicant includes the use of the existing facilities does not necessarily imply the proposed development is an extension of the existing development. It merely states facilities will be shared.

She concludes that the Land and Environment Court does not have jurisdiction to determine this appeal because a major component of the application, that is the undermining of certain zones, in particular Residential 2(a) and Industrial

4(a), is a prohibited activity, and as such the provisions of sections 100A and 101 of the EPA Act apply.

SUBMISSION BY ROBERT WALLER ON BEHALF OF BRIDGE STREET ACTION GROUP (BAG) IN REGARD TO CLAUSE 35 OF THE MODEL PROVISIONS

Mr Waller also argued that as there is neither a lessee nor an owner of the mine, cl 35 and Sch 7 cl 7 are not applicable and the Court, as the consent authority, is not restricted in its application of the Wollondilly LEP provisions in regard to zoning.

Consequently he says pursuant to s 76(3) of the EPA Act, the development becomes a prohibited development and so the provisions of s 100A and s 101 would apply.

I do not propose to deal with the effect of s 100A and s 101 except to suggest that if the proposed development, or at least part of it, is prohibited then the interaction of s 65 of the Mining Act and s 101 of the EPA Act will need to be considered. That question will not arise in these proceedings.

The BAG submission also noted that the applicant has, for all relevant purposes, throughout the proceedings treated the North Tahmoor development as a separate and new mine and that use of joint facilities for the two mines, the geological relationship of the resource and juxtaposition of the workings do not necessarily establish an alternative approach.

WHAT IS THE EFFECT OF CLAUSE 35 OF THE MODEL PROVISIONS

Clause 35 recognises that mines have particular characteristics that place them in a special category of development. That approach is not inconsistent with mining

legislation in NSW dating back to the *Mining Act 1906* and beyond. Historically the mining legislation has been directed towards facilitating mining.

It is instructive to reflect on the other descriptions contained in Sch 1. Invariably they relate to development concerned with public undertakings. Presumably those undertakings are also regarded as being in a special category of development.

Clause 35, by referring to the owner or lessee of a mine presupposes that the land is already the subject of a substantive mining title.

The reference to "development required for the purposes of a mine" implies that it does not cover the mine itself. That it must be carried out "on the mine" further supports the notion of a pre-existing mine. The aim is to ensure that once the mine itself is authorised and operating all future development required for the purpose of that mine, with limited exceptions, may proceed without any further compliance with the LEP and any requirement for consent or notwithstanding that it is prohibited.

The objective of cl 35 is to remove the effect of restrictions and prohibitions imposed by the planning instrument after the mine itself has been approved pursuant to the EPA Act or the Mining Act. The provision is complementary to s 74 of the Mining Act already referred to (see also, the now repealed s 91 of the *Coal Mining Act 1973* and s 116 of the *Mining Act 1973* which applied when the Model Provisions and the LEP were made).

If all mine development, other than the nominated buildings and roads, was saved by cl 35, the controls over mines in the LEP could never have effect.

The use of the land within meaning (c) of the definition of development in s 4 of the EPA Act is not always saved by cl 35 (see *Road & and Traffic Authority v Shellharbour Municipal Council and Kiama Municipal Council* Unreported 15 October 1992 Bannon J; and *Lang v Hornsby Shire Council & Ors* Unreported 16 March 1994 Talbot J distinguished by Waddell AJ in *Strathfield Council v State Rail Authority of NSW* Unreported 29 July 1994).

It would be a strange result if the mining legislation required that development consent be obtained and the planning legislation waived that requirement in the same circumstances. I therefore do not accept that cl 35 has effect to limit s 65 of the Mining Act (cf *Coal Mining Act 1973* s 91 and *Mining Act 1973* s 116).

THE POSITION OF KCC AS THE OWNER OR LESSEE OF A MINE

Novocoal Australia Pty Ltd and Queensland Coal Pty Limited are subsidiaries of KCC. KCC, in turn, is a wholly owned subsidiary of CRA Limited.

KCC lodged the development application for and on behalf of Novocoal with the consent of Queensland Coal as owner of Lot 22 Bridge Street.

The development is described in the development application and the EIS as the extension of underground workings at Tahmoor Mine into the Tahmoor North reserve area and the contribution of mine entry facilities.

The existing Tahmoor Mine is the subject of CCL 716 granted to Novocoal on 15 June 1990.

On 26 April 1989 BP Coal Development Australia Pty Ltd was granted Authorisation No. 410 to prospect for coal in 9,075

hectares north of the Tahmoor Mine for a period of three years. Authorisation No. 410 was renewed until 26 April 1994 under the provisions of the *Coal Mining Act 1973*.

A coal reserve within a 26.41 km^2 portion of Authorisation No. 410 was identified as a suitable mining domain for which MLA No. 1 was lodged with the Minister for Natural Resources on 5 November 1992 by Novocoal.

By letter dated 27 January 1993, the Director General of the Department of Mineral Resources required Novocoal to lodge an application for development consent in accordance with the provisions of cl 13 of Sch 1 of the Mining Act.

On 21 March 1994, pursuant to s 113 of the Mining Act, KCC, on behalf of Novocoal, made application for a further renewal of Authorisation No. 410 over the reduced area of 26.42 km^2 for a period of five years.

Authorisation No. 410 continues to have effect pursuant to s 117 of the Mining Act.

Under the provisions of Sch 6 cl 4 of the Mining Act, Authorisation No. 410 is taken to be an exploration licence granted under the Act.

Relying on the effect of the *Coal Acquisition Act 1981*, and Authorisation No. 410, Mr Hemmings argued that the application for development consent was made by KCC on behalf of Novocoal as the lessee of the coal seam vested in the Crown. This argument fails to recognise the distinction between a mining lease and an exploration licence.

The holder of an exploration licence may, in accordance with the conditions of the licence, prospect on the land for the mineral specified. Prospecting can be carried out without regard to the EPA Act by dint of the provisions of s 381 of

the Mining Act. Section 381 recognises the impracticality of obtaining development consent in such circumstances.

On the other hand the holder of a mining lease may, in accordance with the conditions of the lease, prospect on the land and mine on that land as well as carrying out primary treatment operations and prescribed mining purposes. Section 65 of the Mining Act specifically requires that an appropriate development consent is in force before the Minister grants a mining lease.

In the Mining Act, the following definitions apply:-

> "'**mine**' means:
>
> (a) when used as a noun - any place, pit, shaft, drive, level or other excavation, drift, gutter, lead, vein, lode, reef or salt-pan (whether occurring naturally or artificially created) in, on or by means of which, any mining operation is carried on; and
>
> (b) when used as a verb - to extract material from land for the purpose of recovering minerals from the material so extracted or to rehabilitate land from which material has been so extracted;"
>
> "'**prospect**' means to carry out works on, or to remove samples from, land for the purpose of testing the mineral bearing qualities of the land;"

Until a mining lease is granted in respect of land there can be no mine on that land.

It does not assist the applicant to treat the proposal merely as an extension of the existing Tahmoor Mine. Until such time as the applicant becomes the actual lessee of the new area or in some way can be recognised as the owner of that area and a mine is operating, there is no mine in or on the land the subject of the application.

The area covered by the prospecting licence, and eventually the mining lease, will not be confined to the actual seam of coal, so that even if the applicant does hold a licence or authority within the meaning of the definition of lessee in the *Local Government Act 1993* it is not limited to that part of the land vested in the Crown by the *Coal Acquisition Act*. Both the exploration licence and any mining lease apply to the land described therein in all its dimensions without being constrained to the actual seam of coal.

Whether the application for development consent is made by KCC or Novocoal is not therefore relevant because neither company can be regarded, for the purpose of cl 35, as the owner or lessee of a mine in the new area. Considered in statutory context, the utilisation of existing facilities at Tahmoor does not by itself bring the new workings and entry facilities within cl 7 of the Schedule to the Model Provisions. Put in proper perspective the proposal is to use some of the existing facilities for the purposes of a new mine. This is so notwithstanding the not unusual circumstance that the same coal seam will be common to both mines.

It is the intention of the legislative scheme that each new mine be considered by due process under the EPA Act before a mining lease is granted. Once that process has been completed and a lease is granted, s 74 of the Mining Act applies. In the meantime, any relevant provision of an environmental planning instrument has effect. Clause 35 of the Model Provisions does not change that position.

The applicant is required to obtain development consent pursuant to Wollondilly LEP. Neither the council nor the Court have the power to grant development consent in respect of land where a mine is prohibited.

Notwithstanding the prospect of a finding to the above effect, KCC has requested the Court to determine the merits of the

development application in regards to those parts of the land within MLA No. 1 where development for the purpose of a mine is permissible with consent.

I propose to consider the development application on the basis that the development is as it is described in the EIS and other supporting material but excluding those areas within the prohibited zones.

The respondents argued that consent cannot be granted for the development application in the present form because it is proposed, in part, in land where mines are a prohibited use. In my opinion, the development, when considered in the context of the complimentary mining legislation, will not be changed to the extent that it should be treated as a different development.

Although the scale of the operation as to time and intensity may be modified in some respects, the consequences and impact from the development will remain generally the same except in regard to subsidence.

The issue of subsidence within the prohibited zones will not arise in these proceedings now, but it is, in my opinion, appropriate to reflect on the evidence presented in this respect.

CONSIDERATION BY COUNCIL

The development application was the subject of a detailed report to the development committee meeting of the council held on 4 November 1993. The committee recommended that the application be approved subject to conditions.

The Development Management Panel chaired by the Chief Town Planner and comprising the Development Control Planner, the

Manager of Building and the Developments Engineer carried out a comprehensive review of submissions on the project following a public meeting held on 4 November 1993. In conclusion the Panel considered that all aspects associated with the proposal had been adequately addressed and that, as a result of the detailed assessment undertaken, not only by council officers but officers of various government departments, the development is appropriate to proceed subject to recommended draft conditions set out in the review.

These class 1 proceedings were commenced as an appeal against the deemed refusal of the development application.

Following judgement in respect of the preliminary issue, Mr Studdy, appearing for the council, informed the Court that the council and the applicant were in agreement in respect of each condition now proposed by council, apart from one. Thereafter the council limited its interest in the merits of the proposal to a disputed condition related to works in Bridge Street adjacent to the site including the widening of a bridge passing over the railway line. The applicant agreed to carry out works in respect of Bridge Street for about 250 metres from the point of entry to the site but disputes the necessity for the bridge works and the extension of road works beyond the 250 metres.

THE RESPONDENTS

The second respondents maintained their opposition to the development throughout the proceedings.

Nine further objectors made application to the Court pursuant to s 97(2) to be heard at the hearing of the appeal as if they were a party to the appeal. Each of these objectors gave evidence.

THE MERIT ISSUES

In general terms it is fair to say that the primary concerns of the second respondents were the inadequacy of the shape and size of Lot 22 and its capacity to accommodate the surface facilities and the effect of subsidence.

It is common ground that of the 2,900 existing buildings in the proposed lease area only 1,200 have been built with the approval of the Mine Subsidence Board. 1,000 of the existing buildings are outside any Mine Subsidence District. Particular concern has been expressed about the potential for structural damage to buildings within the Thirlmere Urban Conservation Area which is a place identified as an heritage item in Wollondilly LEP 1991. The Thirlmere Urban Conservation Area consists of two separate precincts. One contains places of railway significance maintained by the Rail Transport Museum and the other contains residential properties which represent a late 19th century period of development including the Thirlmere Way Cottages Group. Under the provisions of the LEP a person must not demolish, alter or damage any of these buildings or works, except with the consent of the council.

Issues were also raised in regard to the impacts of traffic, particularly at the point of entry to the site and across the railway bridge.

Council is seeking to impose condition 36 in the following terms:-

> "36. Widening of the sealed pavement along Bridge Street - towards Picton (0.65 km) and Thirlmere (1.65 km). Widen shoulders by 1.5m with 1m of seal to Council Standard W421 sheet 1 (Annexure D). Widen the railway bridge to the same standard. The adoption of this standard will make some provision for cyclists."

On the other hand, the applicant argues that condition 36 should provide as follows:-

> "36. Widening of the sealed pavement along Bridge Street - towards Picton (250m). Widen shoulders by 1.5m with 1m of seal to Council Standard W421 Sheet 1 (Annexure D)."

The alleged constraints imposed by the shape and size of the site and the adjoining Redbank Creek raised issues relating to the impact upon flora, and to a lesser extent fauna.

The potential for pollution of Redbank Creek and the consequences of blasting associated with the sinking of the shaft were also raised as issues by the second respondents.

Mr and Mrs Bjorklund, in particular, were concerned about the effect on visual amenity and the potential for adverse noise impacts on their property which is situated north west of the site.

For the purpose of minimising the impact of noise and visual intrusion to the Bjorklund property, the council proposes the following condition:-

> "84. The company shall submit its engineering plans to Council for approval for the construction of an earth and rock fill mound at least 245 metres long and between 4-6 metres high on the SRA land opposite the Bridge Street frontage of the development generally in accordance with figure 7.1 annexed hereto and marked 'C'. Such mound shall be vegetated with native trees, shrubs and grasses together with the provision of a 2 metre high solid acoustic fence constructed along the crest of the mound. All works are to be provided to the satisfaction of the Council details of which shall be submitted with the building application. The mound with fencing and screen landscaping shall be constructed prior to commencement of any construction works on the Bridge Street site."

The council position in relation to the mound is that it is an essential element of the development, and that without it, development consent should be refused.

The applicant contends that the construction of the mound is unnecessary as the development meets all of the relevant criteria, particularly in regard to noise, but is prepared to accept the construction of the mound as a condition of consent if the Court considers that is appropriate.

Mr and Mrs Bjorklund remained ambivalent about the effect of the mound particularly as the details of it were not produced until the last moment. Although they had not had time to properly assess its impact or benefits, they expressed concerns about its potential for impact on a gully running from the extremity of the mound, noise, access and line of sight along the road during construction, stability and weed control.

SUBSIDENCE

In the event that buildings and surface infrastructure are damaged by mining the owners are entitled to be compensated. In New South Wales their rights are protected by the *Mine Subsidence Compensation Act* (MSC Act). The administration of the compensation scheme is handled by the Mine Subsidence Board which receives claims from property owners, investigates them and settles them. The cost of the compensatory measures is covered by a levy imposed upon all colliery owners.

An unsuccessful claimant has a right of appeal to this Court.

After listening to the evidence and submissions made by those persons who object to this proposal there can be little doubt that significant numbers of the general public have little confidence that the Mine Subsidence Board will act in their

interests in regard to claims for compensation. Neither that public perception nor the role of the Board is a matter that can be resolved in these proceedings. However the Court, as the consent authority, is obliged to take into consideration, pursuant to s 90(1)(g) of the EPA Act, whether the land to which the underground mine relates is unsuitable for that development by reason of its being or being likely to be subject to, inter alia, subsidence.

There is no dispute that some subsidence will occur.

The EIS discloses that the longwall mining system was introduced at Tahmoor in 1986. The current mine workings and planned development involve eight longwall blocks. It is not expected that these will be recovered totally due to significant disturbances which will reduce the recoverable reserves. A coordinated subsidence program was established in 1984.

The applicant appointed consultants, Rikard & Partners Pty Limited to carry out a study of the likely effects of mine subsidence. The scope of the work by the consultants included showing how surface structures will be affected in general terms and to identify:-

(a) Structures which have been built to resist subsidence damage;
(b) Structures which are most vulnerable;
(c) Structure which should be protected;
(d) The extent of preventative means likely to be required.

The proposed lease area will be mined using longwall faces of 220 metres width, roadways of 5 metres width and pillars 20 metres width. For an extracted width of 230 metres a pillar width of 40 metres, an average depth of cover of 454 metres and an average thickness of 2[illegible] metres, the maximum subsidence is predicted to be 750 mm.

The Court was told that the subsidence will not occur as one event but will comprise a number of separate events over a three to four year period.

According to the consultants, the first event to be experienced at any point will occur either when a sub-critical panel is being worked below it, or as the subsidence effects from an adjacent panel start to affect the point. The amount of subsidence and the level of strains and tilts will generally be small as the first effects are noted.

The second and third events which occur as the extraction passes beneath that point will be much greater in impact and as much as 75% of the total subsidence can occur from either one of these events. Together they account for 90% of the total movement.

The final subsidence event will generally be very small and similar to the first.

It is anticipated by the experts that the majority of buildings within the proposed lease area will experience the lower categories of damage and that all of the damage can be easily repaired when subsidence is complete.

The applicant proposes to inform all owners of property within the lease area of its intention to mine beneath their property. The consultant considers that discussion is essential to ensure that an agreed strategy can be implemented before mining occurs. That strategy should involve:-

"1. Survey and study of any building structure or service considered to be at risk to determine the likely response to mining displacements and strains.

2. Identification of protective measures.

3. Establishing whether monitoring is required during subsidence.

4. Determination of the methods of monitoring.

5. Establishment of the timing and programming of the monitoring and preventative works.

6. Identification of the resources required to carry out the works.

7. Identification of contingency measures which can be made available.

8. Establishment of such security measures as may be required for protection of the public.

9. Definition of the remedial measures required on completion."

There is no statutory obligation upon the miner to consult with land holders nor is there any established regime that demands pre-mining survey of surface structures before underground mining commences.

The MSC Act establishes a scheme for the payment of compensation where improvements on the surface are damaged by subsidence. Pursuant to s 13A the Board may carry out work to mitigate its prospective liability. The owner of improvements who incurs expense in preventing or mitigating damage that, in the opinion of the Board, the owner could have reasonably anticipated, may lodge a claim pursuant to s 12A. It is self evident that in most cases an owner would not have the necessary information to make such a determination. Provision of advice by the Board pursuant to s 16A is discretionary.

The Court considers that it is reasonable for the miner to be required to give notice to the owner of land before the land is undermined. The owner, as the innocent bystander, should thereupon be given an opportunity to demand an inspection of the improvements to establish their pre-mining state. The reasonable cost of such an inspection should be the responsibility of the miner.

The scheme established under the MSC Act does not guarantee protection from damage. Pre-mining remedial action is contemplated on the one hand to limit the liability of the Board and secondly only at the risk of the owner being able to establish subsequently that is was reasonable in the opinion of the Board.

The improvements on land within the Thirlmere Urban Conservation Area are in a special category. The Court has heard evidence that the cottages are unique and that the structures associated with the railway museum are sensitive to ground movement. The inherent nature of many of these improvements does not lend itself to restoration without the possible consequence of degrading the heritage value.

It is particularly not appropriate for mining to take place under the conservation area.

It is worth reiterating my findings in regard to the effect of the LEP and in particular cl 35 of the Model Provisions as they have particular relevance to the issue of subsidence.

Clause 35 of the Model Provisions only has effect in favour of the owner or lessee of a mine. No lease can be granted until any appropriate development consent is in force. Until a developer is the actual owner or lessee of the mine, the LEP controls development. The applicant is not the lessee of the land the subject of the application to carry out underground mining. There is no evidence that it is the owner of the land and hence the proposed mine. The prohibition against the use of the land within the prohibited zones is therefore not affected by cl 35.

Section 65 of the Mining Act prohibits the grant of a mining lease unless an appropriate development consent is in force. The Mining Act is silent about circumstances where development is prohibited under the EPA Act.

Section 74 of the Mining Act provides that while a mining lease has effect, nothing in or done under the EPA Act or an environmental planning instrument operates so as to prevent the holder of the mining lease from carrying on mining operations in the mining area. Section 74 applies only while a mining lease has effect.

The provisions of the EPA Act and the LEP at present operate to prohibit a mine in the prohibited zones. This is recognised by s 65 of the Mining Act.

The development for a mine is not permissible in the prohibited zones. Development consent cannot be granted in respect of that land by this Court.

That prohibition applies to land within the residential areas of Tahmoor, Picton and Thirlmere including the conservation area. In practical terms, that disposes of the issue of subsidence under the EPA Act as it relates to the residential areas.

The Court is not in favour of mining under the conservation area at Thirlmere under any conditions.

Further investigation followed by additional consideration should be undertaken before mining is allowed to occur below any of the other urban areas of Tahmoor, Thirlmere or Picton. The only expert evidence came from the applicant's consultant.

Where the development of a mine is permissible with consent, any "special purpose condition" within the meaning of cl 15 of Sch 1 to the Mining Act, imposed under the EPA Act, once a mining lease is granted, will be void. A condition of development consent seeking to control subsidence by specifying the mining methods to be employed or the safety measures to be adopted may be ineffective pursuant to s 65(3) of the Mining Act.

It is my view that under the EPA Act the subsidence question can be resolved, in respect of the land where mining is permissible with consent by a condition which requires notice to be given to the owners of improvements prior to the commencement of undermining and thereafter affording them the opportunity for a pre-mining survey at their discretion but at the cost of the applicant. Any development consent should be determined subject to a condition to this effect. It is unacceptable for owners of land to be left in the invidious position of being forced to carry a substantial burden of proof to show that any damage to property has been caused by subsidence. That onus should be substantially the other way. The proposed procedure will facilitate resolution of claims under the MSC Act. This Court recommends that any mining lease granted to the applicant contain the same condition.

The issue in regard to subsidence in non-urban areas can be resolved by the abovementioned condition.

INADEQUACY OF THE SITE

Notwithstanding the lack of assistance from any expert witness, the second respondents have nevertheless persisted with an argument that the Bridge Street site is unsuitable accommodation for the surface facilities by reason of its inadequate shape and size.

They point out that the proximity to Redbank Creek creates a potential for polluted run off to enter the creek either directly or through a gully lying to the north east of the development.

The complaint by the respondents, as objectors, in this respect amounts more to a challenge on the ground that the EIS failed to address the adequacy of the site rather than actual proof that it is inadequate.

Monitoring of Redbank Creek shows that the water in the creek has poor microbiological properties and a high level of pollutants. There is currently a significant input of sewage and faecal pollutants from the surrounding catchment. The water is not suitable for drinking or primary contact recreational use.

The results of the water quality investigations of potential ground water discharges during shaft sinking indicate that, after simple treatment, the water will be suitable for discharge and is expected to have a positive effect on water quality in the creek.

The majority of waste water from the surface facilities will be from the bath house. The preferred option for disposal would be to connect waste water to the Water Board sewer but if this is not available at the time of the opening of the site, temporary holding tanks and a pump out system will be installed until connection can be arranged.

Storm water control measures can be implemented on the site providing the capacity for grease/oil separation, a detention basin and sedimentation pond. There is no reason to believe that these facilities cannot be physically contained within the site or that they cannot be designed to function in a satisfactory manner.

The respondents are concerned that the works will impinge upon a unique Myrtle Forest and the 40 metre set back required under the *Rivers and Foreshores Improvement Act 1948*.

Protected land under the *Rivers and Foreshores Improvement Act* means:-

> "(a) land that is the bank, shore or bed of protected waters; or
>
> (b) land that is not more than 40 metres from the top of the bank or shore of protected waters (measured horizontally from the top of the bank or shore); or

(c) material at any time deposited, naturally or otherwise and whether or not in layers, on or under land referred to in paragraph (a) or (b);"

The excavation or removal of material from protected land is prohibited unless a permit is held under Pt 3A of the Act. It is reasonable to assume that a permit will not be forthcoming for any part of the works which encroach within 40 metres of the bank of Redbank Creek unless there is adequate protection for the creek and the waters in it. In any event, a condition of development consent that a permit be obtained under the Act before works proceed is proposed.

The question of the siting of and the specification for drainage is a matter that can be adequately dealt with by conditions of consent. It is proposed that the applicant shall, as a condition of development consent, obtain the approval for the undertaking of works adjacent to the creek pursuant to the *Soil Conservation Act 1938* prior to commencement. The Court accepts that site works should be constructed having due regard to the existing trees and vegetation on the land. It is claimed that this particular Myrtle Forest is uncommon as it occurs on shale soils rather than in deep sandstone gullies. The actual siting of the car park and drainage facilities in the detailed plans submitted with a building application should seek to preserve as much of the Myrtle Forest as possible.

The Court is satisfied that adequate protection can be provided for Redbank Creek by the prescription of conditions and the requirements imposed by the *River and Foreshores Improvement Act* and the *Soil Conservation Act*.

The constraints of the site necessitate the undertaking of significant traffic control works in Bridge Street. I propose

to deal with this issue in conjunction with the traffic aspects.

TRAFFIC

The site will have a frontage of approximately 300 metres along the southern alignment of Bridge Street.

The total number of employees is estimated at 350.

The applicant's experts assess the distribution of the employee traffic as 73 per cent east on Bridge Street and 27 per cent west on Bridge Street based on the geographic distribution of the workforce. The future distribution of all other traffic at the site is presumed to be 100 per cent east to or from the direction of Picton.

The applicant's traffic consultant, Robert McCotter, gave evidence that continuation of past growth of daily traffic volume on Bridge Street between 1983/84 and 1990 indicates that traffic volumes at the site could increase by 51 per cent before the commencement of operations. Mr McCotter reached this conclusion based upon a statistical analysis. He gave his evidence without ever having visited the site. The council and a number of local residents have challenged this statistical analysis.

Mr McCotter conceded in cross-examination that the number of vehicles using the road, including heavy vehicles, is a factor to be taken into account in assessing the level of service of the road. It was apparent that his lack of local knowledge meant that the advantages of alternative routes to the site from the west had not been taken into account, by him. Mr McCotter's report, which was in evidence, had been prepared on the basis of information collated by Dr Tim Brooker, a senior

traffic engineer with his firm, who was substantially the author of the documents upon which Mr McCotter relied.

Dr Brooker gave evidence and confirmed that, in his opinion, the future mine traffic would not affect the level of service at any time on Bridge Street to the west and that the future mine site traffic volume increases along an alternative route through Thirlmere Way are not considered to be significant. He asserted that because the future mine traffic to the west will be locally based traffic, the drivers would be familiar with the road.

Evidence from local residents suggests that there was a significant increase in the use of Bridge Street west of the site immediately after the road was tarred in 1982. That dramatic increase occurred over 4 to 5 years but in recent years the rate of growth has remained static. If that pattern is correct then the prediction of sustained growth made by Mr McCotter could be skewed with the result that the effect on the level of service of Bridge Street west of the site could be more significant than he suggests.

Even on the applicant's figures almost 200 additional vehicles per day associated with the site will proceed along the western section of Bridge Street. Concentrations will be highest at the beginning and end of the day shift when there will be approximately 40 vehicle movements within a period of half an hour. It is assumed that the balance of the traffic will travel along the eastern section of Bridge Street in the direction of Picton.

The report by council officers to the development committee meeting of council held on 4 November 1993 concluded that mine traffic will not significantly affect the level of service on Bridge Street except in a minor respect during the morning peak period. The author of the report accepted the distribution of traffic between east and west set out in the

EIS. However the report recommended a condition regarding the widening of the sealed pavement and the railway bridge in the form of the disputed condition 36.

The council officers accepted during the assessment process that the current standard of Bridge Street is not adequate to accommodate the development and hence the request for imposition of conditions requiring substantial upgrading works of Bridge Street including the railway bridge. The company responded to the request by suggesting that determination of the extent of road upgrading be deferred. This suggestion was rejected.

The bridge is currently 6.1 metres wide. Council condition requires bridge widening to 9.2 metres.

The issue of access and upgrading works was considered by the Roads and Traffic Authority, the Traffic Committee as well as council officers. The report to council and recommended conditions reflect their assessment and views.

Of the eight accidents reported in Bridge Street between January 1985 and June 1991 four were in the vicinity of the railway bridge. The occurrence of accidents in Bridge Street is below the State accident rate for the period.

The real matter for consideration is whether the increase in traffic entering and leaving the site in the immediate proximity to the bridge demands upgrading of the bridge.

Neither the EIS nor the report by Mr McCotter addresses the impact of the proposal on the bridge as a potential traffic hazard in respect of the subject site. It is notable that the EIS refers to the hazardous nature of the bridge only in the context of rejecting an alternative site on the Thirlmere side of the bridge adjacent to the Main Southern Railway Line as follows:-

"This location was rejected because of poor site access. The main issues involved road safety and included:-

- A site access road intersection on Bridge Street would be unsafe because of poor visibility and poor road alignment;

- The rail bridge is hazardous to traffic with sharp approach curves, poor visibility and narrow road pavement. The Project will generate less bridge traffic if the selected site were on the Picton side of the bridge, as a majority of mine traffic will travel from Remembrance Drive;"

Although traffic generation over the bridge may be reduced by moving to the Picton side of the bridge, I have not been satisfied that the reduction will be sufficient to allay the same concern expressed about the alternative site.

In the circumstances, I accept the council submissions that the proposal will require the upgrading of the bridge. The extension of the widening of the road to the full extent suggested by council between the site and the industrial area to the east has not been justified, and accordingly it is reasonable that the applicant be required to widen the sealed pavement in that direction for the shorter distance of 250 metres.

NOISE

The only direct evidence from an acoustical expert was called by the applicant. Dr Renzo Tonin gave evidence that construction noise impact will be within acceptable limits at the nearest residential locations. The principal noise sources from operations at the Tahmoor North facility were identified by Dr Tonin as the mine ventilation fan, fan motor room and noise break outs from the air compressor building which occur 24 hours per day. He expressed the opinion that the noise levels in the EIS are conservative because they take no account of the screening effect of the bathhouse. Dr Tonin

has calculated noise levels at the two nearest residences to the site. The nearest residence is that of Bo and Judith Bjorklund, two of the second respondents. Even in adverse weather conditions, Dr Tonin concluded that with the implementation of recommended noise control measures, noise and vibration levels generated from the construction and operation of the proposed new mine shaft will be within the recommended criteria and are therefore considered acceptable.

Included in the noise control measures recommended by Dr Tonin was the construction of a temporary barrier five metres high adjacent to the north-west boundary of the shaft site, so as to provide a line of sight barrier to the residence of Mr and Mrs Bjorklund.

In regard to the impact of traffic noise, Dr Tonin concluded that during the important waking period, 6.00 am to 7.00 am, the predicted noise levels in the year 2002 will be no greater than the current traffic noise levels.

The condition of consent proposed by council contemplates the construction of a mound 4 - 6 metres high on land owned by SRA opposite the Bridge Street frontage of the development vegetated and with the provision of a two metre high solid acoustic fence along the crest of the mound.

Dr Tonin in oral evidence explained that the proposed mound is not necessary in order to meet the criteria during the construction or operation phase. However it would be beneficial and have the effect of reducing the noise further below the acceptable level.

Dr Tonin, for the purpose of his assessment, incorrectly assumed that the fence on top of the mound would be four metres high. Nevertheless, having regard to his assessment of noise levels, irrespective of the existence of the mound, any change in the predicted levels will be reflected only by a

reduction to a level even further below the acceptable noise level.

Although Dr Tonin may, as Mrs Bjorklund pointed out, have omitted to take account of road works to be undertaken by council in conjunction with the development of the site, the Court is satisfied that the noise levels generated at the nearest residences will be within acceptable levels. In particular so far as Mr and Mrs Bjorklund are concerned, the benefits of the placement of the mound on SRA land as a condition of consent would provide even further protection.

VISUAL AMENITY

The main visual impact of the development will be the aspect from the residence of Mr and Mrs Bjorklund. In that direction, at least, they enjoy a pleasant vista over their own paddocks through the trees along Redbank Creek adjacent to the site to the rolling farmland hills beyond. They have what is, in effect, a 180° view from the front of the house. Part of that view encompasses the buildings within the Picton Industrial Estate. The impact of the view of the Industrial Estate is to a large extent softened by distance and the rural lands beyond Picton.

The main impact of the development will be the 28 foot tower proposed over the mine shaft. A montage, produced to assist with the assessment of the affect of the mound proposed on SRA land, demonstrates that the impact of the tower and the other buildings proposed on the site can be significantly reduced by the landscaped mound to a point where the adverse impact of the view of the development is reduced so that it is tolerable.

THE PROPOSED MOUND

The combined benefits of the mound in regard to noise and visual amenity justify its construction as being an essential prerequisite to the commencement of any works on the site.

No development application has been made in respect of the mound and there has been no opportunity, up to this point, to properly and fully consider relevant matters pursuant to s 90 of the EPA Act.

Mr and Mrs Bjorklund have raised a number of issues in regard to the development of the mound itself and quite rightly complain that there has not been sufficient opportunity to deal with these issues.

It follows that although the mound will be an essential requirement before the development can proceed, there must first of all be a separate development application for the construction of the mound followed by due process. That due process will give Mr and Mrs Bjorklund and the council an appropriate opportunity to consider its impact in a measured way.

THE EMPLACEMENT

It is proposed that refuse from the expanded extraction area will be placed on the site of the existing emplacement adjacent to the Tahmoor Mine.

The actual area to be occupied by the emplacement will be reduced from that which currently has the benefit of development consent although the height will be increased.

Concerns were expressed by some people who made submissions regarding the potential for impact on flora and fauna, the escape of leachate and storm water run off.

Although the question of flora and fauna was not directly addressed, there is no evidence to suggest that there will be adverse impact in this regard particularly as no new areas will be disturbed to accommodate the increased emplacement.

The Court is satisfied that appropriate controls and drainage works will be constructed and maintained and that these will be adequate to prevent unacceptable adverse impact from run off.

The company has already commenced the re-generation process of parts of the existing emplacement and there was no evidence produced which would justify any expectation that an acceptable level of re-generation of trees, grasses and other vegetation will not occur or cannot be achieved.

ALTERNATIVE SITE

Mr Waller, representing the BAG, made a substantial submission in regard to the availability of an alternative site for the surface facilities.

Without calling any supporting evidence, Mr Waller drew from the existing material in an attempt to establish that a satisfactory alternative site, comprising approximately 14 hectares on the opposite side of Redbank Creek and meeting the criteria set by the company, was available. He sought to demonstrate that access could be provided along a route alternative to that investigated and rejected by the applicant. He attempted to convince the Court that it was an ideal location which would accommodate camouflage of the proposed tower. He further pointed out that the access which

he proposed could be constructed within existing roads or road reserves although a bridge would be required over the railway line.

Mr Hemmings responded to Mr Waller's submission and pointed out that not only would a bridge be required over the railway but also over Redbank Creek. Further he submitted no questions were put to the company representative in cross-examination in regard to the alternative site and a number of the aspects addressed by Mr Waller were no more than matters of conjecture.

There is no requirement that a developer must accept the most suitable or acceptable site. The EPA Regulations require that the contents of an environmental impact statement shall include any feasible alternatives to the carrying out of the proposed designated development and reasons for choosing the latter. This requirement was satisfied. The Court is here concerned with an assessment of the subject site pursuant to s 90 of the EPA Act. If the proposed site is acceptable after a consideration of all the relevant matters, then the fact that there is an alternative site available, is not an essential relevant consideration.

OTHER ISSUES

A number of other issues, many of which were peripheral, were raised during the course of the hearing. I do not propose to deal with each one of these, in turn. Prepared written statements of evidence were furnished from each of those who made submissions by way of objection to the development and who appeared as if they were a party in the proceedings. Those persons were also given ample opportunity to give supplementary oral evidence. That opportunity was taken up. I have taken into account the whole of the written and oral evidence presented to me before making a determination in this

matter. No further issue was raised which, of itself, would justify refusal of consent. Many of them will be covered by the proposed conditions.

CONCLUSION

I am by no means convinced on environmental grounds that mining should ever take place within the prohibited zones particularly the urban areas. The Court is unreservedly opposed to mining beneath any of the Items of Environmental Heritage listed in the LEP without absolute safeguards for the protection of those properties. Those safeguards have not been demonstrated.

However I am satisfied that after having regard to the whole of the evidence, the development for the purpose of an underground mine, (where that development is permissible with consent) the construction of surface facilities at North Tahmoor and the use of the existing emplacement for mine refuse can be approved by the Court subject to conditions.

CONDITIONS

I have decided that the issues can be adequately resolved by conditions of consent.

The concerns relating to the effects of subsidence will be satisfied, under the EPA Act, by refusing consent for the underground workings in the prohibited zones and by requiring appropriate notice to be given to the owners of land outside those zones before undermining takes place.

The effect on the amenity of Mr and Mrs Bjorklund, in my opinion, will be substantially ameliorated by the requirement

that the applicant construct the mound on railway land after obtaining a separate development consent for that work.

The applicant will be required to carry out roadworks including the widening of the bridge east of the entry shaft site.

The conditions of consent will be generally in the form settled by the council and to a large extent agreed to by the applicant, with the exceptions I have already referred to, incorporating some amendments recommended by the second respondents.

Mr Waller requested, on behalf of BAG, that the Court give formal notice pursuant to cl 13 of Sch 1 of the Mining Act in regard to the inclusion in any mining lease of special purpose conditions relating to the effects of subsidence. I have not done this because I am confident that the council, as the consent authority, will do so if it considers that to be necessary at the time. Furthermore, I expect that the Minister will be furnished with a copy of this judgement for his consideration before any lease is granted.

ORDERS

The formal orders of the Court are as follows:-

1. The Development Application for underground workings in the Tahmoor North coal reserve, construction of mine entry facilities on Lot 22 DP 734563 Bridge Street Picton and refuse emplacement on vacant Crown land and part Portion 16 Parish of Bargo is determined by the granting of consent subject to conditions contained in Annexure "A".

2. The exhibits may be returned.

I HEREBY CERTIFY THAT THIS AND THE PRECEDING 42 PAGES ARE A TRUE AND ACCURATE RECORD OF THE REASONS FOR JUDGEMENT HEREIN OF THE HONOURABLE JUSTICE R N TALBOT

ASSOCIATE

MATTER No. 10172 of 1993

KEMBLA COAL & COKE PTY LIMITED -v- WOLLONDILLY COUNCIL and BO & JUDITH BJORKLUND and BRIDGE STREET ACTION GROUP

ANNEXURE A

General Conditions

1. No development shall take place in land within Zone 2(a) - Residential A; Zone 4(a) - Industrial General A; Zone 5(a) Special Use "A"; Zone 5(b) - Special Uses "B" (Railways); Zone 6(a) Open Space "A" (Recreation); Zone 7(a) Environmental Protection "A"; Zone 9(d) - Open Space Reservation. Otherwise, the development shall be carried out substantially in accordance with Environmental Impact Statement ("EIS") received by council on 23 February 1993 except where amended by the conditions of consent.

2. The submission of a formal building application which must comply with the requirements of the Building Code of Australia for a Class 5 and ancillary buildings.

3. Details of effluent disposal in the form of a septic tank application to be submitted with the building application.

4. An area being set aside for the collection of wast material awaiting removal. Such area is to be shown on the building plans and reserved for the specific purpose and is to be maintained in a clean, tidy and hygienic manner. The area is to be exclusive of parking and manoeuvring areas and shall be suitably screened.

5. Upon completion of the Picton, Tahmoor, Thirlmere Sewerage Scheme the proposed bathhouse and facilities are to be connected to such scheme within six months of such scheme becoming available.

6. Compliance with the provisions of Council's Tree Preservation Order.

Under the Order a person shall not, except with the consent of council ringbark, cut down, top, lop or wilfully destroy any tree which:

(a) Is greater than 3 m in height;
(b) Has a girth greater than 45 cm at a height of 1 m from the ground;
(c) Has a branch spread greater than 3 m.

In particular consent under Council's Tree Preservation Order must be obtained in respect of any tree situated more than 3 m from any proposed building.

7. The applicant is to obtain the written concurrence of the Water Board and submit this to council prior to release of the Building Application. Details from the Board are to be submitted stating that the development can be supplied with water without it reducing the current level of service to the residents of the area.

Bridge Street Site Construction Conditions

8. During construction temporary pump-out facilities are to be provided for amenity facilities provided for the construction of the proposal. Details in the form of a septic tank application to be submitted to council for approval prior to the commencement of any works.

9. The company is to provide written confirmation from the EPA that the proposal to remove effluent during the construction period to the existing effluent disposal facility at Tahmoor Colliery is permissible under the terms of the existing pollution control licence issued for the site.

10. Removal of effluent from the construction site (and the operation site if effluent removal by tanker is required) is to occur during the hours of 7.00 am - 6.00 pm by a dedicated effluent tanker on weekdays only.

11. Submission of a copy of approval granted by the Commissioner of Soil Conservation Service for the undertaking or works adjacent to a prescribed stream as described in the Soil Conservation Act, 1938 prior to the commencement of any works at the access shaft site.

12. Submission of a copy of approval granted by the Department of Water Resources for the undertaking or works within protected riverland as described in the Rivers and Foreshores Improvement Act, 1948, prior to the commencement of any works at the access shaft site.

13. A submission prior to the commencement of any works of a Soil and Water Management Plan outlining sediment and erosion control measures for the works to be carried out at the Bridge Street site. The plan is to be prepared generally in accordance with Sinclair Knight Merz report annexed hereto and marked "B" and in accordance with the Department of Conservation and Land Management Guidelines.

14. The approved soil and water management plans for the Bridge Street site being under the control of a nominated Soil Conservationist appointed by the company at its expense, and approved by the council, whose duties will include:

    * Control and management of all measure approved within the soil and water management plans.
    * Control and responsibility of employees required to maintain soil and water management devices.

* Completion of a written report to be submitted to council every two (2) weeks certifying compliance with the approved soil and water management plans for the duration of construction works.

15. Before any shaft sinking commences provision of details of groundwater's composition including chemical composition and estimates as to the volumes of groundwaters to be disposed within one month of the completion of the preliminary borehole excavation.

16. There being nil discharge of groundwaters to Redbank Creek unless discharge satisfies EPA licence conditions as notified to council. Any results of water quality testing shall be submitted to council as soon as practicable after the test.

17. 1. The company is to provide details for proposed monitoring of blasting activities including vibration and blast over pressure for approval by council prior to the commencement of any blasting at the site. The monitoring proposal is to provide methods of ensuring meteorological conditions including temperature inversions will not result in exceedances of specified noise criteria as stated in this consent.

2. Monitoring of all blasting is to include noise levels and both speed of vibration and lateral and horizontal displacement of ground at the two closest residences.

18. Removal of spoil from the site and delivery of concrete to the site between the hours of 7.00 am and 6.00 pm Monday to Friday only.

19. (a) There being no batching plant being located upon the site by virtue of this approval.

(b) There being no storage of explosives, as prescribed under the Dangerous Goods Act, on site. Blasting material must be brought to the site on a daily basis.

20. The company is to notify council of the completion of all construction works to council's satisfaction as confirmed in writing prior to the commencement of normal post construction operations at the site.

21. Mine entry site spoil disposal is to be a site approved by council. Depending upon the number of loads, the proposal to use the Tahmoor Mine refuse emplacement for shaft spoil disposal may require upgrading works for Rockford Road and Charlies Point Road. Such works are to be carried out at no cost to the council.

22. There being no encroachment onto adjoining lands by fill placed near boundaries.

23. In order to ensure minimal impact of construction activities upon the creek gully vegetation a chain wire fence (or similar) a minimum of 1.8 metres high is to be erected at the immediate rear of the construction area continuing to the eastern extremity of the construction area then continuing to the Bridge Street boundary. The exact location of the fence is to be shown on plans approved by Council's Chief Town Planner. The fence is to remain until construction is complete.

24. In order to ensure the preservation of all trees not specifically required to be removed for building/construction work, a minimum of 1.8 metre high chain wire fence (or similar) is to be erected around trees at least one metre distance from the tree in the vicinity of the construction area as specified by Council's Chief Town Planner. The fence is to remain until construction is complete.

All existing trees within and adjoining the construction site are to be identified on a survey plan submitted with the management plan for the Bridge Street site. Trees proposed to be removed are to be identified for approval by council.

25. The details of the colours of external materials of construction and finishes shall be to the satisfaction of the Chief Town Planner and detailed in the building application.

26. In order to ensure that the development is adequately landscaped the application is to submit a detailed landscaped plan prepared by a suitably qualified landscape architect for approval by Council's Chief Town Planner prior to release of the building application.

27. Landscaping is to be installed in accordance with the approved plan and maintained in accordance with the details provided on that plan.

28. Details with respect to the exact location, design and colour of any required noise barrier erected during construction is to be submitted to council for approval.

29. Construction work is to cease immediately upon the discovery of any archaeological deposit, potential archaeological deposit or any protected or endangered fauna, as defined in the Endangered Fauna (Interim Protection) Act, 1991. Work is not to recommence until approval is obtained from the National Parks and Wildlife Service in accordance with the National Parks and Wildlife Act, 1974.

30. The company is to forward details to council for consideration and approval prior to the installation of

construction and permanent lighting at the site. The details are to include:

* the proposed lighting layout and lighting pattern
* lux levels at the boundaries of the site, the immediate site area to be lit and at a distance of 10 m beyond the site boundaries.

31. Prior to the commencement of building construction works the company is to submit details for stormwater drainage works to be undertaken for the removal of roof waters and car park stormwater from the site.

The details are to outline:

* the proposed layout of the pipe work
* the discharge location
* the extent of site works and vegetation removal required to install the drainage system
* erosion and sediment control measures to be incorporated prior to the commencement of works.

Bridge Street Site Operational Conditions

32. The proposed mine ventilation not be reversed to an upcast mode of operation until a completed report into studies being under taken for the utilisation of mine gases is submitted to council for approval. The report is to detail proposals for reduction of mine gas release to the atmosphere as well as economic and technical bases for such recommendations.

33. There being nil discharge of groundwaters to Redbank Creek unless discharge satisfies EPA licence conditions as notified to council. Any results of water quality testing shall be submitted to council as soon as practicable after the test.

Roadworks Conditions

34. Provisions of road shoulder and kerb and gutter along the Bridge Street frontage of the site, together with associated drainage works.

35. The intersection of the site is to be based on a RTA rural design for Bridge Street traffic and an urban design for the frontage works and the side road. To this end the intersection is to be generally constructed in accordance with the requirements of council, the RTA and the company's EIS Figure 4.11. The access road is to be two lanes wide (separated by a wide median strip).

    * Right turn treatment - widen east bound carriageway pavement to 7.00 metres and design in accordance with Figure 4.8.16 (AUR) of the RTA Road Design Guide 1991.

    * Left turn treatment - in accordance with Fig 4.8.26 (BAL) of the RTA Road Design Guide 1991, with auxiliary left turn lane in accordance with Figure 4.8.30 (RTA) and Figure 4.11 of the EIS.

    * The intersection is to be located to maximise drive sight distance east and west along Bridge Street. Sight distance improvement will be required in the vicinity of the proposed entry area.

36. Widening of the sealed pavement along Bridge Street - towards Picton (0.25 km) and Thirlmere (1.65 km). Widen shoulders by 1.5 m with 1 m of seal to Council Standard W421 Sheet 1 (Annexure D). Widen the railway bridge to the same standard. The adoption of this standard will make some provision for cyclists.

37. (i) Stormwater drainage pipelines through allotments and within road reserves shall be designed for a minimum standard of 1:20 year average recurrence interval, with provision for overland flow, within the easement for storms of average recurrence interval of 1:100 years, unless otherwise specified.

(ii) Drainage easements are to be a minimum of 3.0 m, wide and piped to council's specification, with interallotment drainage easements being a minimum 1.0 wide.

(iii) The proposed widths of the various drainage easements is subject to the Shire Engineers approval.

(iv) The discharge of stormwater from the development shall be carried to a point suitable for integration with either the natural or constructed stormwater drainage system. Any necessary amplification or upgrading of the downstream drainage system shall be carried out at no cost to council.

38. Vehicles are to enter and leave the site in a forward direction.

39. Provision of 244 sealed car parking spaces and access thereto for the proposed development, such spaces to measure not less than 2.6 m x 5.5 m for 90 degree parking and 2.5 m x 6.2 m for parallel parking and to be marked on the pavement.

40. (i) Engineering design plans and stormwater drainage calculates, with all levels reduced to Australian Height Datum, for all road, carpark, loading area, access works and stormwater drainage construction are to be submitted to and approved by the Shire Engineer, prior to the commencement of any work.

A plan checking and supervision fee is required to be paid, prior to the release of the approved engineering plans.

Drainage calculations are to be carried out in accordance with "Australian Rainfall and Runoff" published by the Institute of Engineers Australian and are to include contoured catchment diagrams and delineation of flow paths for storms of average recurrence interval of 1:100 years, where appropriate.

(ii) A Defects liability period of six (6) months will apply from the date of issue of the Certificate of Practical Completion by the Shire Engineer. A 10% maintenance bond is to be lodged in accordance with council's construction specification for all work to become the property of council.

(iii) A certified "Works as Executed" plan from a Registered Surveyor is to be submitted before the final inspection and is to specifically include the location and level of service conduits, subsoil drains, interallotment drainage, and pipes laid within proposed drainage easements and show that the work has been constructed in accordance with the lines, levels and other information provided on the drawings and within the tolerances specified.

(iv) To protect the environment and minimise erosion, a soil and water management plan, in accordance with the Department of Conservation & Land Management and Environment Protection Authority guidelines and council's construction specification, is to be included with the engineering design plans. This plan shall be referred, by council, to the Department of Conservation and Land Management for their approval.

(v) The developer and any contractors or sub-contractor used to carry out any work authorised by or out of this approval on council owned or council controlled land, is to carry the following insurances which are to be produced to council prior to any work commencing:

* Motor vehicle insurance (comprehensive or property damage) for all self propelled plant, as well as a valid registration or RTA permit (including CTP insurance). Primary producers registration is not valid registration for use on public road construction works.
* Workers' Compensation insurance.
* Five million dollars Public Liability Insurance.

Refuse Emplacement Conditions

41. Submission of an integrated site management plan for the refuse emplacement within 4 months of the date of consent detailing:

* Design criteria such as storm intensity, time of concentration, co-efficient of runoff calculated peak discharges, the catchment area and a nominated storm return period.
* Dimensions such as batter grades, outlet and pipe sizes, wall heights, wall thickness, freeboard and slope grades for all sediment traps, settling ponds, fill trenches and diversion banks.
* Information in relation to the outletting of both clean and dirty water into Teatree Hollow Creek, including information on outlet size and placement and pipe sizes and placement. Provision shall be made for treatment of dirty water to be outlet into Teatree Hollow Creek.
* The upgrading of the haul road from the mine site, including information on drainage upgrading and no

tree destruction in the area of Teatree Hollow Creek. (This area is Protected Land and the Department of Conservation and Land Management must be consulted before any tree destruction occurs).

* The length of time that the topsoil is to be stockpiled, and what cover crops will be used to decrease erosion of these stockpiles.
* Maintenance of erosion control structures and drainage systems.

42. Submission of a copy of approval granted by the Commission of Soil Conservation for the undertaking of works adjacent to a prescribed stream as described in the Soil Conservation Act, 1938, prior to the receival at the refuse emplacement of refuse from the Tahmoor North lease area.

43. Submission of a copy of approval granted by the Department of Water Resources for the undertaking of works within protected river land as described in the River and Foreshores Improvement Act, 1948 prior to the receival at the refuse emplacement of refuse from the Tahmoor North lease area.

44. All stages identified in the refuse emplacement site management plan are to be pegged by a Registered Surveyor and a copy of a Survey Certificate certifying the compliance of the extent of works at the completion of each stage boundary being forwarded to council.

45. Council is to be formally notified in writing upon completion of each stage and each rehabilitation process at the refuse emplacement for the purpose of carrying out an inspection(s) of the works.

46. Within 4 months of the date of this consent, a detailed refuse emplacement site rehabilitation and revegetation

plan of management is to be submitted to council for approval. This is to include all existing works and embankments and proposed extensions and details are to include:

(a) Topsoil depths and material to be placed upon the refuse and method of retention.
(b) List of propose species and planting densities.
(c) Identification of each stage and species area.
(d) A report describing the method of preparation of planting beds including planting methods, fertilising, mulching, staking etc and an outline of the provision to be made to maintenance. The rehabilitation plan is to give regard to species types indigenous to the native area.
(e) Details of final finished levels relative to depth of refuse and the stated EIS objective of an average of 12 m depth of emplaced refuse.

47. Within 4 months of the date of this consent a detailed refuse emplacement water monitoring plan is to be submitted to the EPA for approval and notified to the council. This monitoring plan is to include:

(a) Proposals for the monitoring of Teatree Hollow and upstream and downstream of its confluence with Bargo River.
(b) Monitoring details for all elements contained within table 6.9-3 of the EIS.
(c) A sampling programme, on a monthly basis, for the duration of coal emplacement at site, or in any case, until notification is received by council, advising the last stage has been completed as required in the conditions of consent.

48. The approved soil and water management plans for the refuse emplacement being under the control of a nominated

employee or consultant being a qualified Soil Conservationist appointed by the company at its expense and advised to council, whose duties will include:

* Control and management of all measures approved within the soil and water management plans.
* Control and responsibility of employees required to maintain soil and water management devices.
* Completion of a written report to be submitted to council on a six monthly basis certifying compliance with the approved soil and water management plans for the duration of construction works at Bridge Street and for the duration or refuse emplacement.

49. The applicant shall provide an annual report on progress of disposal and rehabilitation to the council, Department of Mineral Resources, Department of Conservation and Land Management, and the EPA.

Subsidence Conditions

50. (1) Submission to council for approval of a mine subsidence impact study for all areas proposed to be mined by bord and pillar techniques prior to pillar panel extraction commencing.

(2) Three (3) months written notice shall be given to the owners of all land in (1) of the intention to remove pillar panels.

(3) If requested in writing by an owner within one (1) month after the notice in (2) the applicant shall cause pre-mining surveys to be carried out on substantial improvements within the land and the 35 deg angle of draw at least one (1) month prior to removal of pillar panels taking place. These pre-mining inspections are to include soil sampling for moisture content and soil types. Owners of improvement are to get written reports of all

findings and photographs of the existing condition of all improvements.

51. The applicant shall:

(a) Set up and participate in a community liaison programme upon gaining development consent, in order to provide periodically updated information on the progress of mining and explaining predicted and measured mining induced subsidence effects on residences and land;

(b) Prior to commencement of longwall mining, in any approval granted by the Department of Mineral Resources negotiate with the Mine Subsidence Board and the council as to the most appropriate means to provide a community information service to respond to queries on subsidence, to provide expert advice on specific housing and land within approved mining areas, and the provision of general advice on subsidence effects, the rights of owners of improvements in making a claim for compensation for subsidence or vibration induced damage to improvements and the rights of review and appeal concerning Mine Subsidence Board decisions; and

(c) Provide a representative for an annual liaison meeting of government agencies and council to discuss the results of subsidence monitoring, future mining proposals and study technical issues relevant to subsidence damage.

52. The applicant shall carry out subsidence monitoring according to the requirements of the Department of Mineral Resources and taking into consideration the advice of the annual liaison meeting.

The applicant shall report the results of subsidence monitoring into an annual environmental management plan

report and such results shall be publicly accessible through the council.

53. Mining is not to occur so as to result in the subsidence of any habitable floors to below the 1:100 year flood level (1% flood level).

54. No extraction of coal is to occur so as to cause subsidence of the surface upon which any Item of Environmental Heritage (as listed in Schedule 1 of LEP 1991). A separate consent is required pursuant to Clause 30 of the LEP 1991 for any damage to those items. Prior to the extraction of coal which will result in subsidence with the benefit of actual subsidence data from initial longwall panels (not affecting heritage items), a detailed study of each listed item is to be undertaken identifying expected damage from subsidence. This study is to be considered by a Heritage Architect (to be endorsed by the Heritage Branch of the DOP) and a report prepared by that person on the impact of identified damage on the item's historical significance, and the appropriate premining measures or restoration measures so as to minimise impact on the significance of the item. The two studies, including recommendations, are to form the basis of a separate development application pursuant to Clause 30 of the LEP 1991 for consent to damage any item.

Acoustic Conditions

55. The noise level emanating from any operation of Tahmoor North Mine shall not exceed an L_{10} level of 32 dBA within 3 m of any residence in existence or approved at the date of this consent.

56. The Tahmoor North ventilation fan discharge shall face south.

57. The Tahmoor North ventilation fan discharge duct shall include a 90° radius bend and shall be lined internally with 100 mm thick sound absorbent insulation.

58. All Tahmoor North ventilation fan intake and discharge ducts shall be constructed from steel plate at least 6 mm thick.

59. The Tahmoor North ventilation fan and fan motor shall be enclosed such that the noise level emanating from the enclosure, when measured 7 m from the enclosure in any direction, shall not exceed an L_{10} level of 61 dBA.

60. The Tahmoor North aircompressor shall be enclosed in a structure so that the noise level emanating from the structure measured at a distance of 7 m from the structure, does not exceed an L_{10} level of 56 dBA.

61. Noise levels emanating from construction activity during construction of Tahmoor North facilities shall not exceed an L_{10} level of 32 dBA at any position within 3 m of any residence in existence or approved at the date of this consent.

62. All mobile plant used for construction at Tahmoor North Mine shall be fitted with noise control kits, including high performance exhaust silencers, engine shrouding and cooling fan attenuators, so as to reduce the noise level of each item of plant, when measured at a distance of 7 m, by 5 dBA.

63. A 5 m high barrier shall be constructed adjacent to the northwest boundary of the shaft site prior to commencement of construction and shall be maintained during the construction period.

64. The shaft ventilation fan and motor and the aircompressors used during the Tahmoor North construction period shall be located on the southern side of the barrier referred to in condition 63.

65. A shaft protection door is to be provided on the shaft entrance with minimum openings included and it shall remain closed during all shaft construction operations, excepting blasting and for shaft access.

66. The shaft sinking ventilation fan inlet and discharge shall be acoustically treated before commencement of construction and before operation and shall be maintained and kept clean during the construction period.

67. The overburden drill to be used during construction of the Tahmoor North shaft shall be fitted with a noise control kit to ensure that its noise level when measured at a distance of 7 m does not exceed an L_{10} level of 85 dBA. The kit may be removed providing the overburden drill operates at least 10 m below the existing ground level.

68. Concrete trucks delivering concrete to the Tahmoor North construction site shall, when on site, park within a partial enclosure consisting of two sides and a roof, constructed of material with a surface density at least equivalent to 0.7 mm steel profile sheet, and the open ends of the enclosure are to face east and west.

69. Blasting may be carried out on the Tahmoor North site only during the hours 9.00 am to 3.00 pm Monday to Friday.

70. Ground vibration levels during blasting at the construction site shall comply with the guidelines contained in the EPA's noise control manual.

71. Blast overpressure levels during blasting at the site shall comply with the guidelines contained in the EPA's noise control manual.

72. During construction and operation of Tahmoor North Mine the L_{Aeq} noise level generated by road traffic to and from the site and measure over any 1 hour period shall not exceed 45 dBA during the period 6.00 am - 10.00 pm and 40 dBA during the period 10.00 pm - 6.00 am at the facade of any residence.

73. The noise level emanating from Tahmoor Mine and any associated facilities, including the washery, stock pile area and rail loading facility, shall not exceed an L_{10} level of 45 dBA when measured with 3 m of any residence.

74. The noise level emanating from operations at the refuse emplacement site shall not exceed an L_{10} level of 37 dBA or background + 5 dBA which ever is the greater when measured within 3 m of any residence.

75. The noise level emanating from the Tahmoor North Mine shall be measured within 3 months of commencement of operation over a 24 hour period while operations are taking place and after that, once per annum at the nearest 2 residences. The L_{A10} and the L_{A1} (or L_{Amax}) levels emanating from the operation shall be measured during the daytime and during the night time. A report of the results, including the weather conditions during the measurements, shall be prepared and submitted to council and the owners of the nearest two residences within 1 week of the measurements being completed.

76. During the construction of Tahmoor North Mine the noise level emanating from each item of plant used for construction shall be measured at a distance of 7 m every 2 months. A report giving the results of the

measurements shall be prepared and submitted to council and the owners of the nearest two residences within one week of completion of the measurement.

77. Noise levels shall be monitored for one 24 hour period every month during the construction of Tahmoor North Mine at the nearest two residences. The L_{A10} and L_{A1} (or L_{Amax}) noise levels emanating from the construction operations shall be measured every 15 minutes and the weather conditions shall be noted. A report shall then be prepared giving the results of the measurements and submitted to council and the owners of the nearest two residences within 1 week of the measurements being completed.

78. The noise level emanating from the Tahmoor Mine surface facilities shall be measured at the nearest two residences within 3 months of the commencement of processing and handling of coal from Tahmoor North Mine. The L_{A10} levels and L_{A1} (or L_{Amax}) noise levels emanating from Tahmoor Mine operations shall be determined for both daytime and night time and the weather conditions during the measurements shall be noted. The results obtained shall be included in a report which shall be submitted to council and the owners of the nearest two residences within 1 week of the measurements.

79. The noise level emanating from the refuse emplacement site shall be monitored at the nearest two residences within 3 months of commencement of dumping of refuse from Tahmoor North Mine. The L_{A10} and L_{A1} (or L_{Amax}) level emanating from refuse emplacement shall be measured every 15 minutes during the period 7.00 am to 6.00 pm on any 1 normal working day. The results of measurement shall be included in a report which shall be submitted to council and the owners of the nearest two residences within 1 week of the measurements.

80. This consent is limited to the time required to complete extraction of coal from the area identified in the EIS as being Mining Lease Application No. 1 Sydney 1992 (North Tahmoor).

81. (a) Shaft sinking shall occur between the hours of 6.00 am and 10.00 pm Monday to Friday and 8.00 am to 1.00 pm Saturday with no shaft sinking on Sunday or Public Holidays.

(b) Site works associated with construction works (excluding shaft sinking and blasting) shall only occur between the hours 7.00 am and 6.00 pm Monday to Friday and 8.00 am and 1.00 pm Saturday with no site works on Sunday or Public Holidays.

82. There shall be no removal of vegetation within 20 metres of the north western bank of Redbank Creek and the bank of Redbank Creek tributary which traverses the eastern extremity of the development site.

83. The company shall submit engineering plans to council for approval for the construction of an earth and rock fill mound at least 245 metres long and between 4-6 metres high on the SRA land opposite the Bridge Street frontage of the development generally in accordance with figure 7.1 annexed hereto and marked "C". Such mound shall be vegetated with native trees, shrubs and grasses together with the provision of a 2 metre high solid acoustic fence constructed along the crest of the mound. All works are to be provided to the satisfaction of the council details of which shall be submitted with the building application. The mound with fencing and screen landscaping shall be constructed prior to commencement of any construction works on the Bridge Street site. This condition which is an essential condition of this consent

cannot be relied upon as development consent for the construction of the mound.

Sinclair Knight Merz
May 1994

Kembla Coal and Coke Tahmoor North Coal Project Stormwater and Wastewater Management Plan

SINCLAIR KNIGHT MERZ

Sinclair Knight Merz
May 1994

Kembla Coal and Coke Tahmoor North Coal Project Stormwater and Wastewater Management Plan

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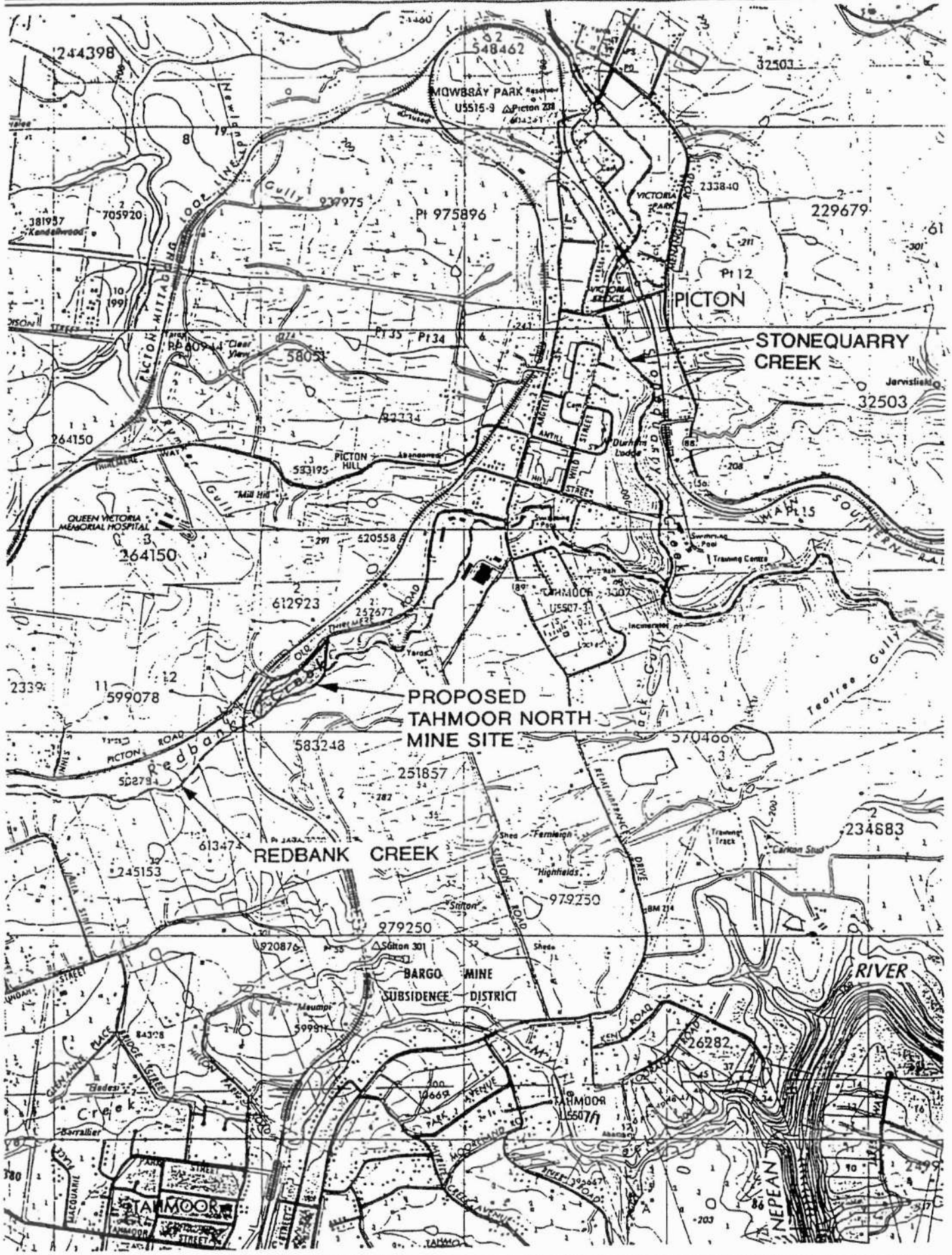
1. Introduction

In February 1993, Kembla Coal and Coke Pty Limited (KCC) submitted a Development Application and Environmental Impact Statement for the development of the Tahmoor North reserve area. In their report to Council, Council's Town Planners recommended that KCC prepare a soil and water management plan prior to the commencement of any works at the proposed surface facilities at the Bridge Street site. In response to that recommendation KCC have commissioned Sinclair Knight Merz to address the issue of water management at that site. This report provides a concept plan for water management including the treatment and disposal of stormwater, groundwater brought to the surface during the drilling of the shaft, and wastewater from the surface facilities.

The site is located approximately 2 km south west of Picton on Old Thirlmere Road, just before its crossing of the Main Southern Railway. The site drains to Redbank Creek which flows into Stonequarry Creek. Stonequarry Creek then flows into the Nepean River. The location of the site relative to these waterways is shown in **Figure 1**. The following sections outline the critical issues addressed, and documents the primary components of the Water Management Plan.

Figure 1
LOCALITY PLAN
Tahmoor North Coal Project

SINCLAIR KNIGHT MERZ


PROPOSED
TAHMOOR NORTH
MINE SITE
REDBANK CREEK
PICTON
STONEQUARRY
CREEK
BARGO MINE
SUBSIDENCE DISTRICT
TAHMOOR
RIVER
NEPEAN
MOWBRAY PARK
PICTON HILL
Redbank Creek
Teatree Gully
Mill Hill
Stonequarry Creek
Bedes Creek
Barrallier
Meumpi
Highfields
Shedo
Fernleigh
Carlton Stud
Training Centre
Training Track
Incinerator
Abandoned
Tahmoor Colliery
Tahmoor Shale Quarry
Tahmoor Inn
Durham Lodge
Victoria Park
Victoria Bridge
Queen Victoria Memorial Hospital
Picton Cemetery
Picton Sewage Treatment Plant
Picton Railway Station
Picton Bowling Club
Picton Golf Club
Picton Showground
Picton Public School
Picton High School
Tahmoor Public School
Tahmoor Sports Club
Tahmoor Colliery Sports Club
Tahmoor Shopping Centre
Tahmoor Colliery Workshops
Tahmoor Colliery Stores
Tahmoor Colliery Offices
Tahmoor Colliery Baths
Tahmoor Colliery Training Centre
Tahmoor Colliery Incinerator
Tahmoor Colliery Abandoned
Tahmoor Colliery Shale Quarry
Tahmoor Colliery Inn
Tahmoor Colliery Lodge
Tahmoor Colliery Golf Club
Tahmoor Colliery Showground
Tahmoor Colliery Public School
Tahmoor Colliery High School
Tahmoor Colliery Sports Club
Tahmoor Colliery

2. Critical Issues

The proposed site for the Tahmoor North facilities drains to Redbank Creek, which has been classified as Class 'P' ('Protected') classification under the Clean Waters Act, 1972.

Given the nature of site activities the relevant requirements of the Clean Waters Act for protected waters are, in broad terms that,

- sewage not be discharged to the creek without treatment;
- wastes not be discharged unless visually free of grease, oil, solids, unnatural discolouration and settleable matter; and
- wastes not to be discharged in concentrations greater than those specified in Schedule 2 of the Act.

It is understood that Wollondilly Council does not specify specific performance criteria for stormwater discharge. Therefore the proposed management plan has been developed based on best engineering practice and the guidelines provided in the Pollution Control Manual for Urban Stormwater by the Environment Protection Authority.

The stormwater and wastewater plan has been developed for both the construction phase, and the use of the site in the operational stage. The primary sources of wastewater during these stages are:

- **Construction Stage**
  - water extracted from the shaft during the sinking of the shaft;
  - stormwater run-off from the construction site.
- **Operation Stage**
  - stormwater run-off from car parks and buildings; and
  - wastewater from the bathhouse.

The critical issues addressed in this management plan are:

- the removal of suspended sediment from water extracted during shaft drilling;
- removal of suspended sediment from run-off during construction operations.
- removal of oil, settleable matter and gross pollutants from stormwater in the operation phase;
- limit the stormwater run-off from site to pre-development levels; and
- disposal of wastewater from the bathhouse in the most environmentally acceptable manner.

We understand that the issue of chemical composition of groundwater, and the suitability of discharge to Redbank Creek is addressed in a separate Statement of Evidence by Stuart Miller.

3. Sitewater Control

The following sections outline the components of the stormwater and wastewater management plan and the design principles used.

3.1 Construction Phase

The construction phase can be considered in two parts. The initial phase of the project is the drilling of the shaft, which is expected to take approximately two years to complete. This is followed by the construction of site facilities on the surface including the bathhouse, office and carpark.

3.1.1 Shaft Drilling and Site Filling Phase

During this phase an access shaft will be drilled on site and spoil from the shaft will in part, be used for site filling. The proposed site layout during this phase is shown in **Figure 2**.

Both groundwater extracted from the shaft and stormwater run-off will potentially be highly sediment laden and would require that a sedimentation pond be used to capture the sediment before discharge from the site.

Preliminary sizing of a sedimentation pond has been made based on estimates of likely sediment load, sediment sizes and run-off volumes. Run-off volumes have been estimated as follows:

Groundwater Extraction

The groundwater flow in the shaft cannot be precisely determined until an explanatory borehole is drilled on the shaft centre line. However a good estimate can be derived from nearby drillings. The No.1 and 2 Tahmoor Mines were sunk on the northern side of the Bargo River approximately 5km south of the proposed site. We have been advised by KCC that during construction these shafts yielded water up to 6 litres/second. are also advised that with modern grouting techniques, the groundwater flow in similar circumstances is likely to be less than what was experienced on these drillings. However, to be conservative preliminary sizing has been based on this maximum flow of 6 litres/second.

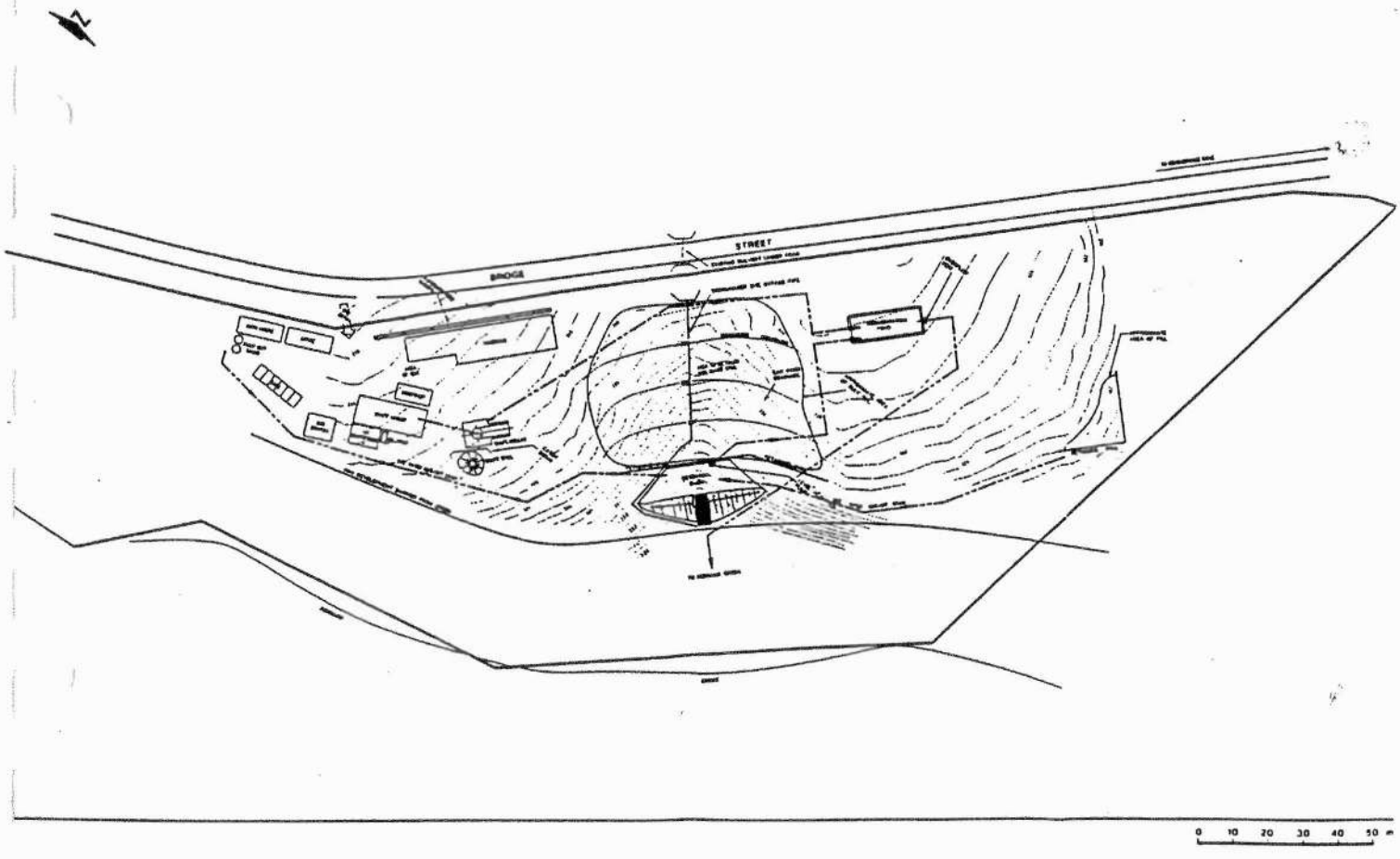
Stormwater Run-off

The stormwater run-off was estimated using the rational method from the following assumptions:

Disturbed Site Area	1.03 ha
Co-efficient of Run-off (disturbed ground)	0.7
10 year 6 hour Rainfall Intensity	15.7 min/hr
Estimated peak run-off rate	31 L/sec

SINCLAIR KNIGHT MERZ

Figure 2
CONSTRUCTION PHASE
Tahmoor North Coal Projec



0 10 20 30 40 50 m

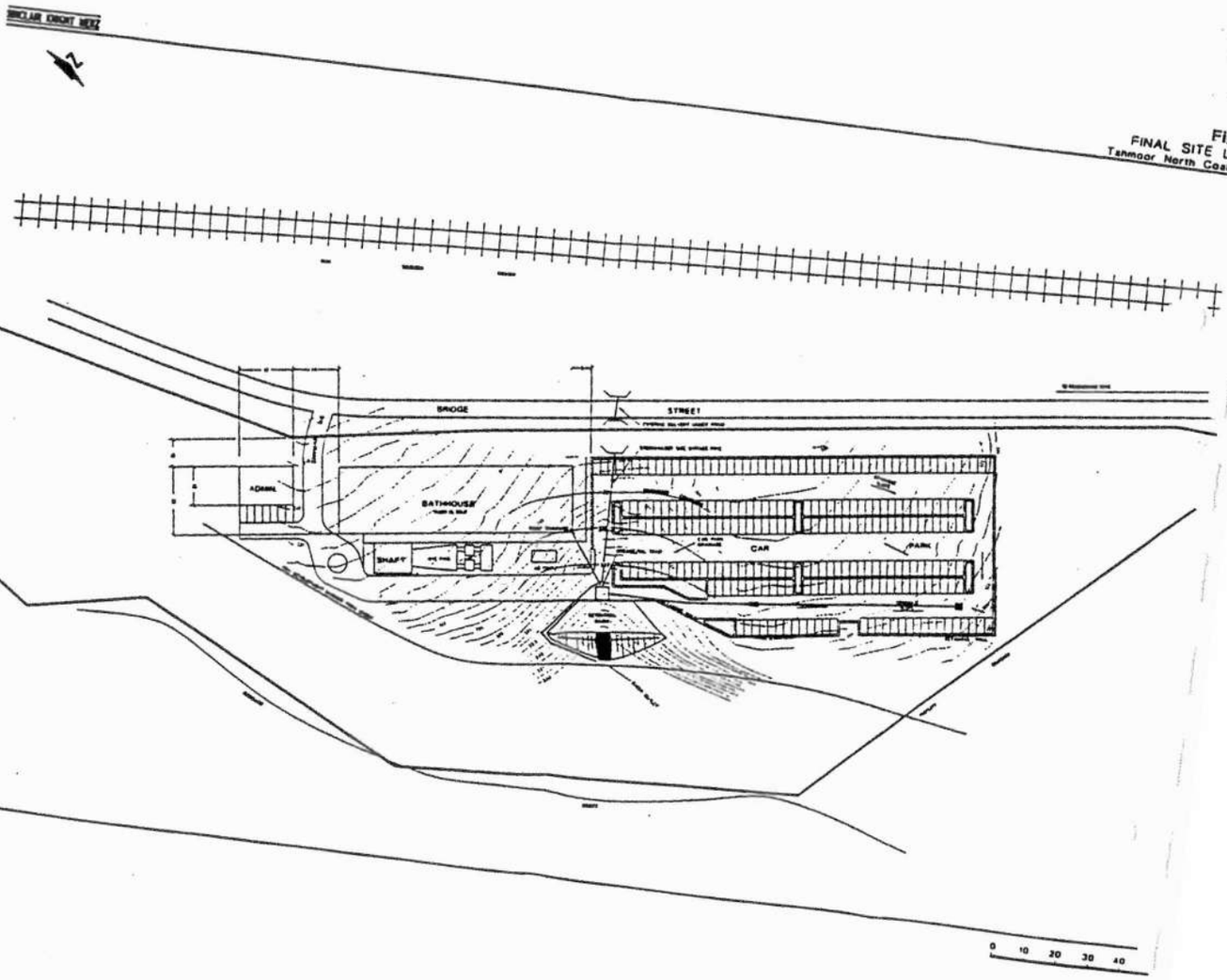


Figure
FINAL SITE LAY
Tahmoor North Coal Pr

3.1.2 Construction of Site Facilities

During this phase, shaft drilling will have ceased. The site facilities including the bathhouse and car park will be under construction. The disturbed land area will be greater during this phase than during site drilling. Stormwater run-off was estimated using the following assumptions:

Disturbed Site Area	1.52 ha
Co-efficient of Run-off (disturbed ground)	0.7
10 year 6 hour Rainfall Intensity	15.7 mm/hr
Estimated Stormwater run-off	46 L/s

3.1.3 Sedimentation Pond Design

The proposed sedimentation pond would treat both stormwater and groundwater extraction. During the shaft drilling and site filling phase, the total flow to be treated would be:

□ Groundwater extraction	6 L/s
□ Stormwater runoff	31 L/s
Total	37 L/s.

During the Construction of site facilities the peak flow form stormwater is estimated to the 46 L/s. Therefore the sedimentation pond has been sized based on the larger peak flow during construction of site facilities.

Preliminary sizing of the sedimentation pond has been based on achieving adequate removal of suspended solids. Therefore the design of a sedimentation pond requires information on both the distribution of sizes of the material being removed from the shaft. Detailed design of the sedimentation pond will be undertaken as part of the detailed design of the project when borehole logs from the geotechnical analysis become available. For this submission, preliminary sizing has been undertaken based on a number of conservative assumptions. This serves to illustrate that the largest pond likely to be required can be accommodated on site.

We understand that KCC has accepted the recommendations contained in the 'Statement of Evidence of Stuart Miller' that water quality discharged from the sedimentation pond be monitored, particularly in regard to Fe and Mn concentrations such that the EPA's requirements are achieved. The sedimentation pond proposed will be part of this treatment process, and additional treatment will be provided if necessary to achieve these requirements.

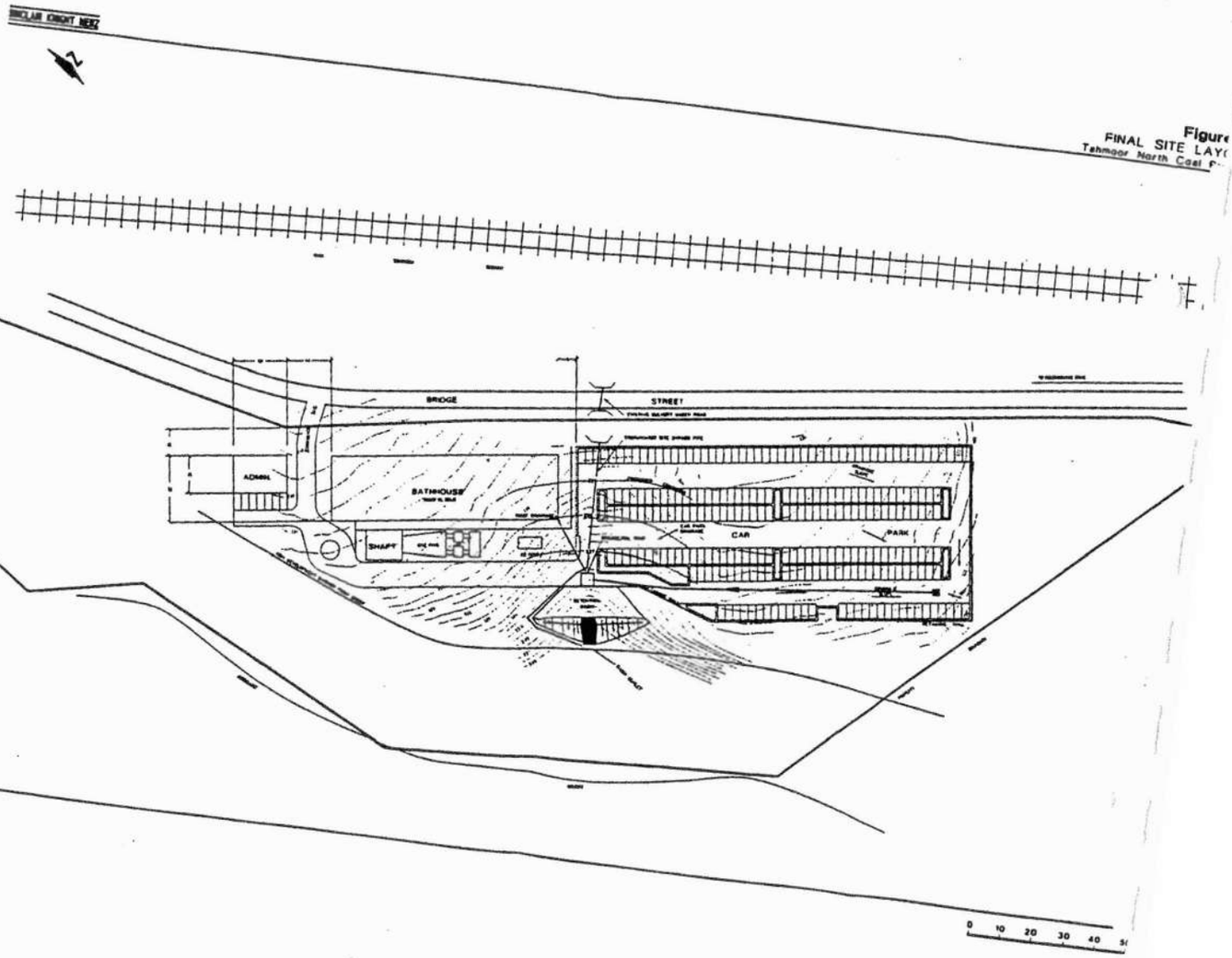


Figure
FINAL SITE LAY
Tehmoor North Coal P

The main areas of conservatism in the sedimentation pond design are:

- quantity of groundwater flow (discussed above)
- design event for runoff control
- particle removal size for pond design.

The design event generally adopted for runoff control is the 10 year, 6 hour event. The critical period while site facilities are being constructed is less than one year, therefore there is a one in ten chance of the design event occurring during this period.

During the two year shaft drilling and site filling phase, the actual flow will be less than the critical design flow and therefore the proposed pond will be more efficient in removing sediment. In particular, during dry weather, when site runoff is negligible (more than 80% of the time, ref: Bureau of Meteorology) the only flow in the basin will be groundwater extraction. During this time, the retention time in the basin will be 7.5 times larger than what is to meet design standards. Therefore, during dry weather, the sediment concentration in water discharge from site will be significantly better than the design standard.

The majority of the sediment load is likely to come from the shaft spoil, either directly when it is stockpiled to drain or when it is placed as fill. Based on a bore log taken at the existing Tahmoor mine, the majority of excavated material will be sandstone, with seams of shale, siltstone, clay stone, mudstone and a narrow band of coal. Preliminary design therefore has been based on removing particles of greater than medium silt which will be sufficient to remove the particle fractions in sandstone. In the event that significant quantities of fine particles occur in water from the narrow bands of claystone, mudstone and coal, allowance will be made for the flocculation of these sediments using alum dosing in accordance with EPA's recommendations.

The maximum tank dimensions would be approximately 25 x 7 metres with a settling depth of 0.6 metres. Because of the steep slope of the site near the banks of Redbank Creek, it will be impractical to site a pond of this size and dimension at the lower end of the site. It is therefore proposed that the sedimentation tank be located in an area which will not be subject to filling. Groundwater from the shaft will be pumped directly to the pond. Stormwater run-off would be collected at the detention basin and pumped to the sedimentation pond as required using an electric level actuated pump, which will be sound proofed according to the acoustic consultant's specification. The pump would be actuated when site runoff raises the water level in the detention basin to the sill level. This would occur on an infrequent basis and only during a significant rainfall event of more than approximately 50mm of rainfall. The sedimentation pond would remain in place until the site filling has been completed and the majority of the site has been sealed.

A storage basin will be required at the low point of the site to collect stormwater. This basin would also be used in the operational stage of the mine as a detention basin to attenuate site run-off in the operation stage to pre-development levels. The proposed detention basin is also shown in **Figure 2.**

3.2 Site Operational Phase

During this phase, the construction is complete and the carpark and surrounding area will have been appropriately sealed to prevent soil erosion. The proposed drainage system layout is shown in **Figure 3** and consists of a drainage network which would collect roof, pavement and car park run-off and direct it to a detention basin. An oil/grease separator would be required to treat run-off from the car park before discharge to the basin.

A detention basin is required to attenuate stormwater flows from the site to pre-development levels. Preliminary sizing indicates that the proposed location is suitable to accommodate a basin which attenuates flow from a 10 year ARI event. It is noted that the detention basin and separator will also provide limited sedimentation of coarse sediments of stormwater from the car park.

3.3. Components of the Stormwater Management System

Each of the components of the proposed stormwater management system are described below.

(1) Site Water Cut-off Drains

These will intercept site run-off and direct it to the detention basin during the first two phases of the project. They will cc' t run-off from site buildings and paved areas, the shaft spoil stockpile and the fill zone as shown in **Figure 2.**

(2) Detention Basin

The detention basin will be built and sized to attenuate post development flows to pre-development levels. During the construction phases the basin outlet will be sealed and only an emergency spillway provided. Outflow will then be only via pump to the sedimentation pond.

The attenuation function of the detention basin will of course also operate during the construction phase and thereby minimise the pump outflow rate and hence reduce the size and cost of pumps required.

The detention basin will also act as a sedimentation pond for larger particles and will need cleaning regularly.

Upon completion of construction works, the detention basin outlet will be unsealed and the pumps removed and basin discharge will be via an outlet pipe or spillway. Scour protection will be needed at the outlet before discharge to Redbank Creek in the form of an energy dissipater, eg. rock protection.

(3) Oil/Grease Separator/Trap

Car park run-off will be directed through an oil and grease separator located within a drainage pit at low point in the car park.

(4) Sedimentation Pond

The sedimentation pond is best located in undisturbed ground away from the construction works. It will be fed by pumps from the shaft and the detention basin.

There is also the potential for clay and coal particles to be extracted from the shaft and be present in the run-off which will not settle in such a sedimentation pond. Therefore provision will be made for the flocculation in the sedimentation pond to settle any clay or coal particles if necessary. Flocculation would be achieved using alum dosing techniques in accordance with EPA's recommendations.

The sedimentation pond does need not to be constructed from concrete, as an earth construction with liner will be satisfacto

(5) Upstream Drainage By-pass

Upstream of the site a culvert collects run-off and directs it under Bridge Street/Old Thirlmere Road to the subject site.

This run-off will require diversion, via pipe through the site such that site run-off will not impact on it and it will not impact on site run-off. This bypass pipe should be laid before any other site works commence.

3.4 Summary of Stormwater Control Measures

In summary, the following stormwater control measures are recommended:

- The provision of cut-off dams to capture site run-off during construction phases. These would be resumed after construction.
- The provision of a detention basin to collect run-off and attenuate flows. This will remain after construction.
- The provision of a grease/oil separation pit to remove greases and oils from car park run-off.
- The provision of a sedimentation pond to treat all site run-off during construction phases.
- The provision of an upstream drainage bypass pipe.

4. Wastewater

The majority of wastewater from the surface facilities will be from the bathhouse. Based on the manning schedule, a total of 350 staff will be working at the site over four shifts per day. Assuming most of these staff will be showering after their shift, it is expected that up to 6kL per day of wastewater is likely to be generated. The options for treatment and disposal of this wastewater are described below.

The preferred option would be to connect wastewater collection facilities to a Water Board sewer. The Water Board is presently considering options for sewering the Picton area in the future. Although present plans are for the area to be sewered by 1998 (some years before the operation of the proposed facilities), the timing can not be guaranteed. An Environmental Impact Statement for the sewering of Picton is presently on display, which presents the options to the public for comment.

Therefore, if the Picton area is sewered at the time when the Tahmoor North site is opened then arrangements will be made to connect to the sewer.

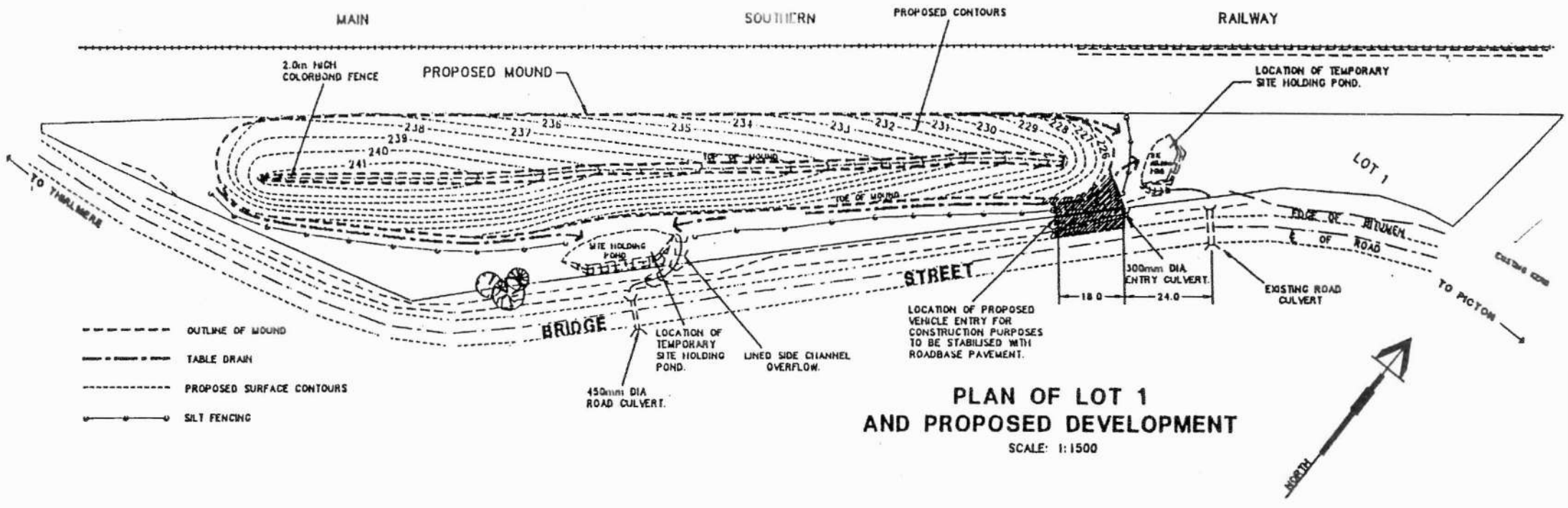
If the Picton area is not sewered at the time of opening of the site operations, temporary holding tanks and a pumpout system will be installed until connection can be arranged.

Under this option, waste would be collected in holding tanks. The system would be pumped out on a regular basis and the waste transported to the existing treatment and disposal facilities at the existing Tahmoor facilities. We are advised by KCC that the total load to be treated at the Tahmoor facility will not increase as a result of this proposal because the combined number of personnel working at both sites will not be greater than the total number presently employed at the Tahmoor site. It is expected that between three to six truckloads per will be required to empty the system. The holding tanks would be designed to provide storage for the volume of waste generated in one day.

Emergency storage would be provided to ensure that there is no overflow from the system in the event that the regular storage can not be pumped out. Holding capacity of an additional two days storage is recommended for this purpose.

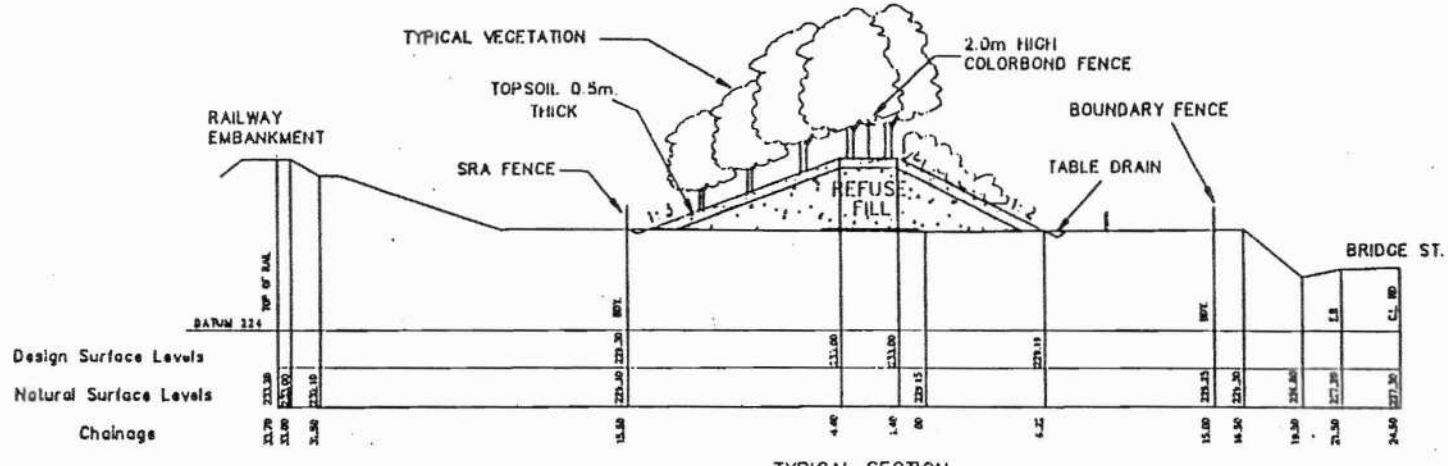
In the event that the plans for sewering of Picton are significantly delayed beyond the time opening of operations of the site, arrangements would be made to reduce the amount of trucking required. The proposed arrangements would involve separating toilet waste from shower waste. The greater volume of shower waste (90% of total wastewater generated) would be directed down the shaft and pumped to the existing treatment and disposal system at the Tahmoor site. The smaller volume of toilet

waste would be held in tanks and pumped out. This would result in a significant reduction in trucking requirements, to less than one load per week.



PLAN OF LOT 1 AND PROPOSED DEVELOPMENT

SCALE: 1:1500



TYPICAL SECTION

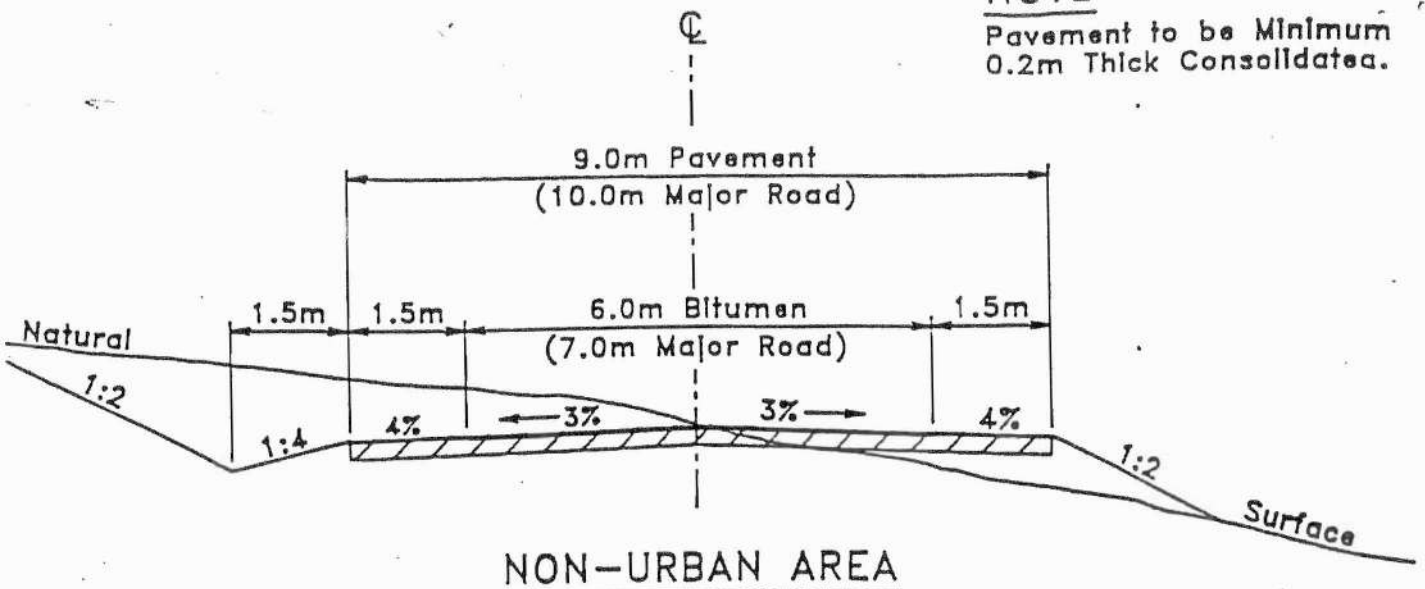
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FIGURE 7.1

BUND WALL LAYOUT AND TYPICAL CROSS SECTIO

NOTE

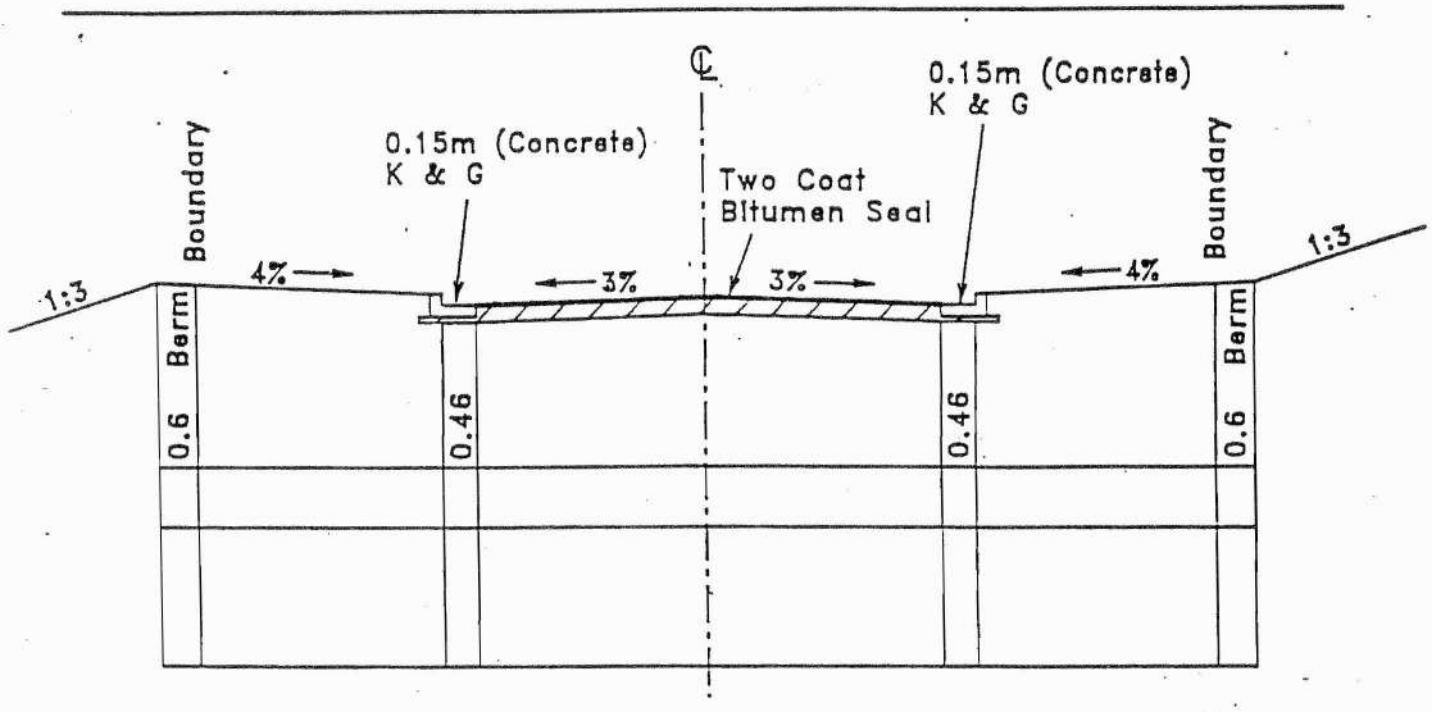
Pavement to be Minimum 0.2m Thick Consolidated.



NON-URBAN AREA

TWO LANE RURAL ROAD

(20m Wide Reserve)



RESIDENTIAL AREA

(15.0m Wide Reserve)

NOTES.

1. Pavement to be Minimum 0.2m Consolidated Thickness of Approved Roadbase – Subject to Testing of Materials to be used.
2. Provide Prime and Two Coat Hot Bitumen Seal Using 20mm and 14mm Precoated Aggregate.

SHIRE OF WOLLONDILLY

TYPICAL CROSS SECTION SUBDIVISIONAL ROADS

AMENDED	SCALE	DRAWN	DRG. No.
GC 28-5-90	NOT TO SCALE	CJD 4-4-84	W421 Sheet 1 of 2

I HEREBY CERTIFY THAT THIS AND THE PRECEDING 42 PAGES ARE A TRUE AND ACCURATE RECORD OF THE CONDITIONS OF CONSENT ANNEXURE A TO THE JUDGEMENT OF THE HONOURABLE JUSTICE R N TALBOT

ASSOCIATE