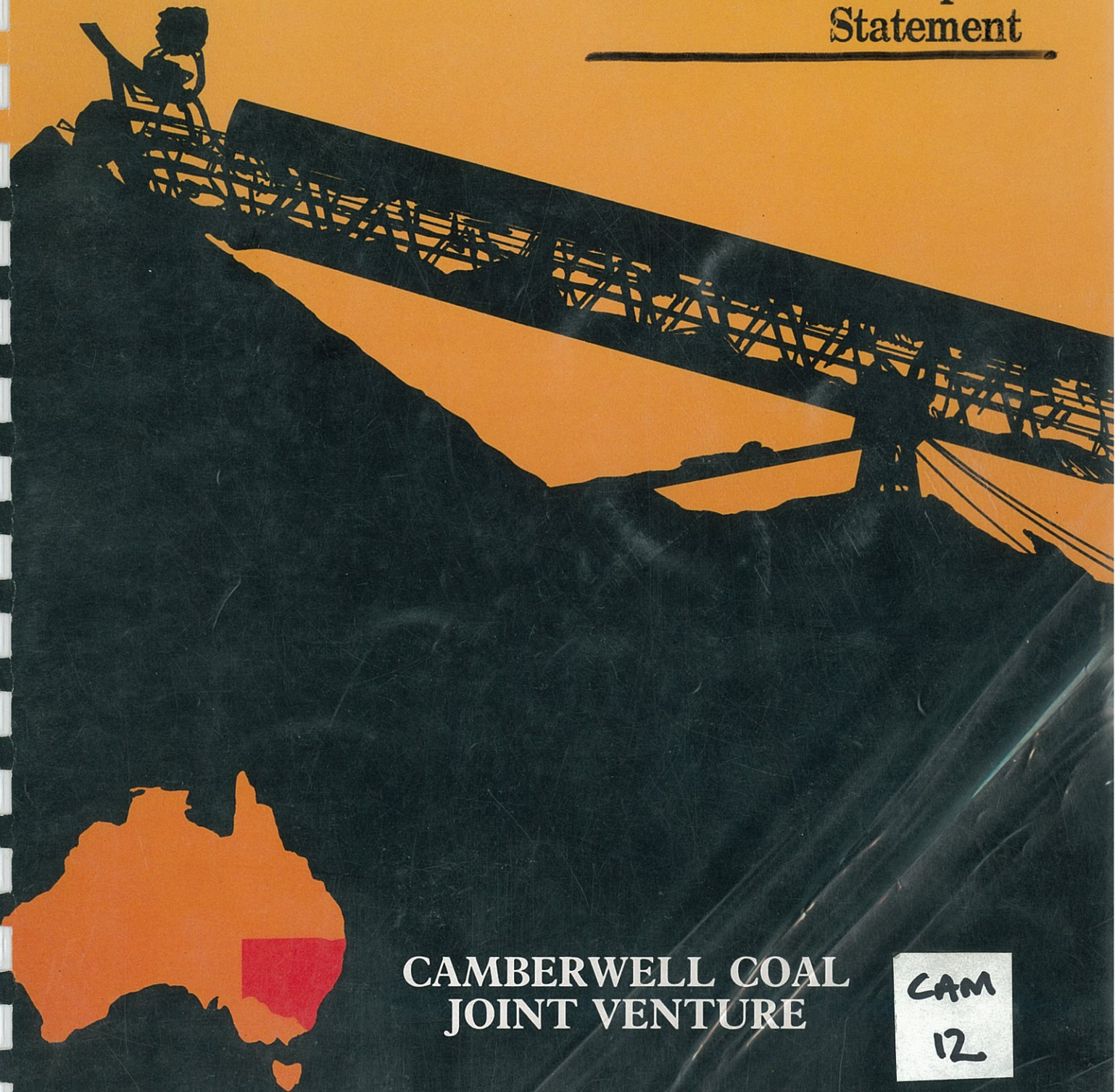


# Camberwell Coal Project

Glennies Creek, NSW.

## RESPONCES TO Environmental Impact Statement



CAMBERWELL COAL  
JOINT VENTURE

CAM  
12



**Camberwell Coal Pty Ltd**  
**Responses to Letters of Objection Submitted to Council**

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NOTHING  
(INCLUDED)  
ON  
TISDALE

He must not  
therefore have  
lodged an  
objection

## Section 1 – Bridgman Road Residents

### 1.1. J.F. Furlong

- (i) In his letter of 6 December 1989, Mr Furlong sought an extension of time to prepare and submit his case for objection. As at 8 January Singleton Shire Council had not received any further submission from Mr Furlong so that Camberwell Coal will address only the points made in his letter of 6 December. Mr Furlong's main points of objection were –
- (a) Access Road/ Vehicle Entrance.
  - (b) Noise.
  - (c) Dust
  - (d) Visual Impact
  - (e) Not advised of the Project at the time of purchase negotiations in November/December 1988.
  - (f) Plans to produce and market wine placed in jeopardy.
- (ii) Mr and Mrs Furlong attended the discussion day organised on 9 December. The Company's response to their submission is as follows.

#### *(a) Access Road/Vehicle Entrance*

Following a request from Mr W. and Mrs S. Cox the Company has agreed to move the turn off from Bridgman Road into the Mine Access Road a distance of 84m south (back towards Singleton) and further away from the Cox and Furlong residences. The turn off to the Mine Access Road will now be approximately 670m south of the Furlong residence.

Use of the Mine Access Road by heavy vehicles will primarily occur during the construction phase when up to 20 heavy vehicles and 173 light vehicle trips per day could be expected.

During the operations phase up to 68 vehicles could be expected to arrive and a further 68 depart at shift change.

The Company will plant a tree screen along the edge of the Access Road to lessen visual and noise impacts.

The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

#### *(b) Noise*

The Furlong residence lies approximately 2.0km south east of the eastern edge of the overburden dump and approximately 2.0km east south east of the coal washery, stockpile and workshop/office infrastructure area.

Predicted noise levels at the residence are not expected to exceed the recommended "acceptable" outdoor background levels of 45dB(A) for day-time (maximum 50dB(A)) and 35dB(A) for night-time (maximum 40dB(A)). During construction of the eastern end of the overburden dump exceedance of night-time noise levels will be avoided by dumping 500m west of the edge of the dump.

Generally noise will be attenuated by the distance of the residence from the operating areas and the shielding effects of the north trending ridge line running between the coal washery and Bridgman Road and the extension of that ridge line by the valley infilling dump face created in Year 1.

### *(c) Dust*

The predicted long term (annual average) dust deposition levels and concentration levels measured at the Furlong residence are not expected to exceed the SPCC long term criteria of:

- a permissible increase in the annual average deposition level of 2g/m<sup>2</sup>/month, with one or two months at 5g/m<sup>2</sup>/month (refer EIS Section 7.4.4. p.165)
- a maximum permissible annual average concentration of 90µg/m<sup>3</sup>.

Similarly for short term, episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of 260 and 150µg/m<sup>3</sup> respectively even with wind speeds averaging 17m/s for a full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised. Provision has been made in the mine design for a spare water truck to ensure that roads, dumps and working faces are well watered. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust.

### *(d) Visual Impact*

The mine infrastructure area, rail loop, roof of the rail loading bin and coal washery are not visible from the Furlong residence, being shielded from view by a ridge running parallel to and to the west of Bridgman Road.

The Mine Access Road on the eastern side of this ridge will be visible at a minimum distance of approximately 600m and a tree screen will be planted along the eastern edge of the road to act as a shield.

Operations on the eastern edge of the overburden dump will be visible during the first year. However when dumping is completed there, the Company intends to rehabilitate the dump face within the first two years, which will provide an effective visual screen for subsequent dumping and mining operations in the North Pit.

Planting of trees that would further assist screening of the Furlong residence would be considered by the Company if requested.

*(e) Not Advised of the Proposed Development at Time of Purchase*

This statement is incorrect. Singleton Council issued a Section 149 Certificate (Number 517/88) under the Environment Planning and Assessment Act on 28 September 1988 which reads as follows:

*"Coal Mining: Subject land may be effected environmentally by possible future coal mining activities in the general area."*

It is the responsibility of the Vendor to make himself acquainted with this Certificate at the time of purchase.

*(f) Wine Production*

There is no evidence to show that dust fallout will affect crop growth.

There is a vineyard successfully growing grapes in close proximity to the Saxonvale operation.

*(g) Mitigation of Impact*

The Company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

*"In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith."*

## 1.2. W. and S. Cox

- (i) Mr and Mrs Cox's main points of objection were
- (a) Method of learning about the proposed development.
  - (b) Camberwell Coal has neglected to take into consideration the residents on the eastern side of their mine site.
  - (c) Dust (health effects).
  - (d) Location of Access Road entry.
  - (e) Location of Overburden dump site (dust in drinking water).
  - (f) Blasting and vibration.
  - (g) Traffic noise and rail noise.
  - (h) Traffic safety for children.
  - (i) Devaluation of land.

Further Mr and Mrs Cox requested that a well advertised public discussion day be held.

(ii) The Company's response to this submission is as follows:

### *(a) Method of Learning about the Development*

The proposed development was well advertised

- Authorisations 81 and 308 (coal) have been held by the Company since 1977 and 1983.
- Department of Minerals and Energy advertised their intention to invite Camberwell Coal to apply for a lease in Sydney and local papers on 29 September and 6 October 1989 respectively.
- The Company lodged its Development Application with the Council on Thursday 2 November.
- Singleton Shire Council advertised receipt of Development Application in local, Newcastle and Sydney papers on 10 and 11 November.
- The EIS and other material relating to the development were on display at the Council Chambers from Friday 10 November to Monday 11 December.
- Camberwell Coal advertised its intention in the local press on Friday 10, Tuesday 14 and Friday 17 November to hold public discussion days on 17, 18 and 19 November at the site office. Fifty seven people attended over the three days.
- Letter dated 9 November sent by Singleton Shire Council to the owners of nearby land which might be affected by the proposed development.
- Letter dated 7 December from Camberwell Coal inviting residents along Bridgman Road to an additional discussion day on 9 December. Fifteen people attended on this day including Mr and Mrs Cox.

***(b) The Company has Neglected Residents to the East***

The Company has at all times given special regard to all residents in the area, and particularly those along Bridgman Road to the east of the mine. For example

- The eastern limit of the overburden dump was selected to minimise the impact of dust, noise and visual effects.
- In Year 1 dumping at night will be carried out 500m further west to reduce noise impacts until the eastern dump face is established as a shield.
- The method of overburden dumping in Year 1 has been designed to allow the eastern face of the dump to be rehabilitated as quickly as possible so that an effective screen is provided to reduce the impact of ongoing mining and dumping operations in the North Pit.
- The surface facilities have been sited to the west of a ridge running parallel to Bridgman Road which effectively acts as a shield to minimise dust, noise and visual impacts.
- The turn off point for the Mine Access Road has been moved to satisfy a specific request from Mr and Mrs Cox.
- There is a commitment by the Company to plant tree screens on the eastern side of the mine to reduce dust, noise and visual impacts.

***(c) Dust Control***

The Cox residence lies approximately 2.3km south east of the eastern edge of the overburden dump and approximately 2.3km east south east of the coal washery, stockpiles and workshop/office infrastructure area.

The predicted long term (annual average) deposition levels and concentration levels measured at the Cox residence are not expected to exceed the SPCC long term criteria of

- a permissible increase in the annual average deposition level of 2g/m<sup>2</sup>/month, with one or two months at 5g/m<sup>2</sup>/month (refer EIS Section 7.4.4 p.165)
- a maximum permissible annual average concentration of 90µg/m<sup>3</sup>.

Similarly for short term episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of 260 and 150µg/m<sup>3</sup> respectively even with wind speeds averaging 17m/s for the full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

As stated in our EIS (Section 7.4.8 Health Criteria, p.181) our consultant Nigel Holmes and Associates has assessed that *"the mine will have no implications for impact on public health"* when evaluated in the context of the SPCC criteria based on the recommendations of the NH&MRC and the USEPA.

As stated by Dr Thomas (an expert witness at the Rixs Creek Inquiry) it is not possible to predict the effect that changes in air quality will have on any specific individual. However because of the Cox's particular situation with one of their children, the Company would consider a request to install air conditioning in the house should the child's medical condition be adversely effected by our development.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust. Provision has been made in the mine design for a spare water truck to ensure that roads and overburden dumps are well watered.

**(d) Location of Access Entry**

Following discussions with Mr and Mrs Cox they nominated two alternative turn off points for our Mine Access Road. Their first preference was to relocate it approximately 400m to the south, however advice we received indicated that its proximity to the crest of a hill would then represent a safety hazard. We have therefore agreed to relocate the turn off to their second choice, some 84m to the south. The Access Road is approximately 500m away from the residence at its closest point and about 275m from their property entrance.

The Company will also plant a tree screen along the eastern edge of the road to reduce noise and the impact of car lights at night.

**(e) Location of Overburden Site**

As discussed in Section (ii)(c) above the Cox residence is approximately 2.3km away from the eastern edge of the overburden dump, the coal washery, stockpiles and workshop/office infrastructure area. The mining areas in the North Pit and South Pit are approximately 4km from the residence.

Modelling for dust deposition shows that the predicted increase in the annual dust deposition level is less than  $1\text{g}/\text{m}^2/\text{month}$  at the Cox residence well below the level of  $2\text{g}/\text{m}^2/\text{month}$  at which it is considered a significant degradation in air quality has occurred.

The mine therefore does not expect to contaminate drinking water collected from the roofs of houses in the area. However should this become a problem then the Company would offer to fit a water filtration unit to the supply system.

**(f) Blasting and Vibration**

A structural survey will be conducted of residences along Bridgman Road prior to the commencement of blasting. Blasts will be designed to ensure that ground vibration and air blast over pressure standards are not exceeded.

Ground vibration levels of up to a maximum of  $1.1\text{mm}/\text{sec}$  are predicted when blasting in the North Pit measured at the "Bellevue" ruins on the western side of Bridgman Road approximately 2.6km from the North Pit. The Cox residence is approximately 0.9km further away from the North Pit so ground vibration levels there will be lower than the levels predicted at "Bellevue". The distance of the Cox residence to the South Pit is approximately 3.8km and ground vibration levels are expected to be about  $1.0\text{mm}/\text{sec}$ .

The "comfort criteria" for ground vibration is  $5\text{mm}/\text{sec}$  and the criteria allows for  $10\text{mm}/\text{sec}$  for up to 5% of the total number of blasts.



With regard to air blast overpressure, predicted levels are approximately 105dB compared with the SPCC "comfort criteria" of 115dB.

The impact of blasting on the Cox residence is therefore expected to be minimal.

Blasting will be monitored and damage which is demonstrated to have been caused by the mine's blasting operations will be compensated and/or repaired.

*(g) Traffic Noise and Rail Noise*

As the residence lies approximately 2.3km from the closest point of the overburden dump, the coal washery, stockpiles and workshop/infrastructure area, predicted noise levels are not expected to exceed the recommended "acceptable" outdoor background levels of 45dB(A) for day-time (maximum 50dB(A)) and 35dB(A) for night-time (maximum 40dB(A)). During construction of the eastern end of the overburden dump exceedance of night-time noise levels will be avoided by dumping 500m west of the edge of the dump.

Traffic noise will be generated during construction (morning and late afternoon) as employees travel to and from work. Similarly during the operational phase there will be traffic noise at shift change. However the residence is approximately 500m away from the Access Road at its closest point and therefore the impact of this noise will be minimal and will be reduced by the planting of a tree screen along the eastern edge of the Access Road.

Our EIS states that rail traffic noise should not exceed the SPCC noise criteria (Section 7.5.4 p.186). For our total saleable production of 1.35Mtpa approximately 210 trips of an 84 wagon train will be required each year, that is an average of 4 trains per week. Assuming that shipments are made in say 30,000-50,000 tonne lots then it could be expected that up to 7 trains could be loaded in one day with then a substantial break before the next shipment is due.

*(h) Traffic Safety for Children*

As mentioned above we have agreed to move the turn off point for our Access Road 84m further to the south. As the turn off to the Mine Access Road will then be some 275m south of the Cox's entry mine, traffic coming from Singleton will turn off Bridgman Road well before reaching the bus drop off and pick up points thereby resolving any potential traffic safety hazard.

Bridgman Road is a well constructed local road able to safely handle the predicted increase in traffic volume. During the construction phase up to 20 heavy vehicle and 173 light vehicle trips per day could be expected. During the operating phase up to 68 vehicles could be expect to arrive and a further 68 depart at shift change. Only at the afternoon shift change will this occur during school bus travel time.

The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

*(i) Devaluation of Land*

Surveys in areas surrounding new mine developments in the 1980's have shown that land values return to their original levels (after a temporary slump) once the permanent workforce is established in the area.

*(7) Public Discussion Day*

The Company believes that this point of objection has already been satisfied through the holding of public discussion days on 17, 18 and 19 November which were advertised in the local press during the preceding week. Fifty seven people attended over the three days.

To fulfil its obligations under the legislation, Council wrote to certain residents surrounding the lease area and along Bridgman Road informing them of the proposed development. When the Company became aware that some of these residents had missed seeing the advertisements for the public discussion days held in November, the Company obtained the Council's circulation list and sent on 7 December by courier a letter to all residents not previously contacted directly by the Company to offer them the opportunity of discussing the Project on 9 December at the site office. Fifteen residents along Bridgman Road visited the site office on this day to discuss the Project including Mr and Mrs Cox.

*(8) Mitigation of Impact*

The Company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

"In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith."

### 1.3. J.B. and M.F. Bradford

- (i) Mr Bradford's main points of objection were
  - (a) That the Council should insist on the application of the same environmental conditions to the Camberwell Project as were applied to the Rixs Creek Mine.
  - (b) Accumulative effect of dust, noise and traffic when the two mines adjoining Camberwell start production.
- (ii) The Company's response to this submission is as follows:

#### *(a) Application of Rixs Creek Conditions to Camberwell*

Approval conditions are selected and applied to meet the particular characteristics of each mine, taking into account its location and the proximity of adjoining properties and residents.

Some conditions applied to the Rixs Creek Mine are not necessary for the Camberwell Project and some are simply not applicable to the Project.

For example

- 3 Heritage Items (Coke ovens)
- 5 (c) Application of surface sealant
- 8 (i) Modification of Thornton rail facility
- 12 (i) Maison Dieu bund wall
- 12 (ii) Hours of operation for coal haulage
- 13 Tailings Dams
- 14 Rixs Creek Diversion
- 15 (i) Blasting – reference to New England Highway
- 15 (ii) Blasting – reference to NONEL or equivalent
- 15 (iii) Blasting – reference to NONEL or equivalent
- 15 (vii) Blasting – Coke ovens
- 16 Coal Transportation
- 17 Roads
- 22 (iii) Environmental Monitoring – modify operations
- 23 (i) Air Quality – Cease all operations at wind speed of 10m/sec
- 23 (ii) Air Quality – Cease certain operations at wind speed of 5.6m/sec
- 23 (iii) Air Quality – reference visibility
- 26 Hours of Operation
- 27 Joint Rail Facility
- 28 (i) Road Access – Rixs Creek Lane
- 28 (iii) Road Access – Road haulage of coal
- 29 Water Management
- 31 Offsite Effects – should include option for Company to purchase residences
- 32 Working Areas
- 33 (i) Production Levels – restriction on ROM production level.

The Company is happy to discuss with the Council and Department of Planning a set of approval conditions which address the specific requirements for the Camberwell Project and which ensure that the operation meets its obligations to the community but at the same time allows a productive and efficient operation to be carried out which is competitive with other producers in the Hunter Valley.

*(b) Accumulative Effects*

• **Dust**

The accumulative effect of mining on the Rixs Creek and Camberwell sites is discussed on page 170 of the Camberwell EIS where it is assumed that both projects are operating simultaneously at the common boundary and the results are shown in Figures 7.4.11 and 7.4.12. Dust levels predicted along Bridgman Road are well within the SPCC long term and short term criteria.

• **Noise**

The noise impact and accumulative effects with the Rixs Creek mine will not be a problem because of the distance of the Bradford residence from mining operations.

• **Traffic**

Access to the Rixs Creek mine is from the New England Highway so that the accumulative effect of the two mines on traffic along Bridgman Road is negligible.

The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances.

An Environmental Impact Statement for the proposed Glennies Creek underground mine adjoining the northern boundary of the Camberwell lease is not available for the assessment of cumulative effects of this development.

In general the location of Mr Bradford's residence some 3km east of the eastern edge of the overburden dump, 3.6km east of the coal washery and stockpile and 4.8km east of the closest mining operations makes it unlikely that he will be effected by dust, noise and vibration. However because of his high elevation he will be able to see overburden and mining operations in the North Pit and the rail bin, stockpiles, washery/infrastructure area. He already has a well established tree screen protecting the western side of his residence, and the Company would be prepared to provide additional trees to further assist in screening the residence from visual impacts.

*(c) Mitigation of Impact*

The Company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approved viz.

In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith.



#### 1.4. K. and M. Murray

(i) Mr and Mrs Murray's main points of objection were:

- (a) Time limit to submit a detailed submission to Council.
- (b) No previous knowledge of plans for a mine in the area.
- (c) Camberwell Coal has neglected to take into account residents on the eastern side of the mine.
- (d) Dust.
- (e) Location of North Pit overburden dump site and visual impact.
- (f) Blasting and vibration.
- (g) Noise.
- (h) Traffic safety.
- (i) Devaluation of land.

Mr and Mrs Murray also requested inclusion of a compensation clause and a further public discussion day.

(ii) Mr Murray attended the discussion day organised on 9 December. The Company's response to this submission is as follows:

##### *(a) Time*

The time limit for response to an EIS is set by Council in accordance with current legislation. The Development Application was lodged with the Council on 2 November and the Council advertised receipt of the Company's Development Application in local, Newcastle and Sydney papers on 10/11 November setting 11 December 1989 as the closing date for submissions in line with the normal time allowed for these matters.

##### *(b) No Previous Knowledge of Plans for a Mine*

The proposed development was well advertised

- Authorisations 81 and 308 (Coal) have been held by the Company since 1977 and 1983.
- Department of Minerals and Energy advertised their intention to invite Camberwell Coal to apply for a lease in Sydney and local papers on 29 September and 6 October 1989 respectively.
- The Company lodged its Development Application with the Council on Thursday 2 November.
- Singleton Shire Council advertised receipt of Development Application in local, Newcastle and Sydney papers on 10 and 11 November.
- The EIS and other material relating to the development were on display at the Council Chambers from Friday 10 November to Monday 11 December.

- Camberwell Coal advertised its intention in the local press on Friday 10, Tuesday 14 and Friday 17 November to hold public discussion days on 17, 18 and 19 November at the site office. Fifty seven people attended over the three days.
- Letter dated 9 November sent by Singleton Shire Council to the owners of nearby land which might be affected by the proposed development.
- Letter dated 7 December from Camberwell Coal inviting residents along Bridgman Road to an additional discussion day on 9 December. Fifteen people attended on this day including Mr and Mrs Murray.

*(c) The Company has Neglected Residents to the East*

The Company has at all times given special regard to all residents in the area, and particularly those along Bridgman Road to the east of the mine. For example

- The eastern limit of the overburden dump was selected to minimise the impact of dust, noise and visual effects.
- In Year 1 dumping at night will be carried out 500m further west to reduce noise impacts until the eastern dump face is established as a shield.
- The method of overburden dumping in Year 1 has been designed to allow the eastern face of the dump to be rehabilitated as quickly as possible so that an effective screen is provided to reduce the impact of ongoing mining and dumping operations in the North Pit.
- The surface facilities have been sited to the west of a ridge running parallel to Bridgman Road which effectively acts as a shield to minimise dust, noise and visual impacts.
- The turn off point for the Mine Access Road has been moved to satisfy a specific request from Mr and Mrs Cox.
- There is a commitment by the Company to plant tree screens on the eastern side of the mine to reduce dust, noise and visual impacts.

*(d) Dust Control*

The Murray residence lies approximately 2.5km south east of the eastern edge of the overburden dump and approximately 2.8km east south east of the coal washery, stockpiles and workshop/office infrastructure area.

The predicted long term (annual average) deposition levels and concentration levels measured at the Murray residence are not expected to exceed the SPCC long term criteria of

- a permissible increase in the annual average deposition level of  $2\text{g}/\text{m}^2/\text{month}$ , with one or two months at  $5\text{g}/\text{m}^2/\text{month}$  (refer EIS Section 7.4.4 p.165)
- a maximum permissible annual average concentration of  $90\mu\text{g}/\text{m}^3$ .

Similarly for short term episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of  $260$  and  $150\mu\text{g}/\text{m}^3$  respectively even with wind speeds averaging  $17\text{m}/\text{s}$  for a full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

As stated in our EIS (Section 7.4.8 Health Criteria, p.181) our consultant Nigel Holmes and Associates has assessed that "the mine will have no implications for impact on public health" when evaluated in the context of the SPCC criteria based on the recommendations of the NH&MRC and the USEPA.

As stated by Dr Thomas (an expert witness at the Rixs Creek Inquiry) it is not possible to predict the effect that changes in air quality will have on any specific individual.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust. Provision has been made in the mine design for a spare water truck to ensure that roads and overburden dumps are well watered.

#### *(e) Location of Overburden Site*

As discussed in Section (ii)(d) above the Murray residence is approximately 2.5km away from the eastern edge of the overburden dump and 2.8km from the coal washery, stockpiles and workshop/office infrastructure area. The mining areas in the North Pit and South Pit are approximately 4km and 4.5km from the residence respectively at their closest points.

Modelling for dust deposition shows that the predicted increase in the annual dust deposition level is less than  $1\text{g}/\text{m}^2/\text{month}$  at the Murray residence well below the level of  $2\text{g}/\text{m}^2/\text{month}$  at which it is considered a significant degradation in air quality has occurred.

The mine therefore does not expect to contaminate drinking water collected from the roofs of houses in the area. However should this become a problem then the Company would offer to fit a water filtration unit to the supply system.

Regarding visual impact the Company acknowledges that the view from the Murray residence will be disturbed. The rail bin, stockpiles, washery and North Pit overburden dump will be visible. However, because of the location viewing distances exceed 2.5km and are filtered by existing trees on the property and trees to the west of Bridgman Road.

The design of the North Pit dump has specifically taken into account the need to provide a screen to reduce noise, dust and visual impacts. Overburden is to be dumped in Year 1 at the eastern extremity of the dump, allowing the face to be quickly rehabilitated so as to mitigate the visual impact as dumping operations continue back top the west and as mining operations continue in the North Pit.

The mine rail bin and washery will be designed with a neat and orderly appearance and with a colour scheme selected to blend as far as possible with the surrounding landscape to reduce the visual impact.

Any particular tree planting that would further assist screening of the operation from the Murray's view would be considered by the Company as part of the trees planting program.

#### *(f) Blasting and Vibration*

A structural survey will be conducted of residences along Bridgman Road prior to the commencement of blasting. Blasts will be designed to ensure that ground vibration and air blast over pressure standards are not exceeded.

Ground vibration levels of up to a maximum of 1.1mm/sec are predicted when blasting in the North Pit measured at the "Bellevue" ruins on the western side of Bridgman Road approximately 2.6km from the North Pit. The Murray residence is approximately 1.4km further away from the North Pit so ground vibration levels there will be lower than the levels predicted at "Bellevue". The distance of the Murray residence to the South Pit is approximately 4.5km and ground vibration levels are expected to be less than 1.0mm/sec.

The "comfort criteria" for ground vibration is 5mm/sec and the criteria allows for 10mm/sec for up to 5% of the total number of blasts.

With regard to air blast overpressure, predicted levels are approximately 105dB compared with the SPCC "comfort criteria" of 115dB.

The impact of blasting on the Murray residence is therefore expected to be minimal.

Blasting will be monitored and damage which is demonstrated to have been caused by the mine's blasting operations will be compensated and/or repaired.

### *(g) Traffic Noise and Rail Noise*

As the residence lies approximately 2.5km from the closest point of the overburden dump and 2.8km from the coal washery, stockpiles and workshop/infrastructure area, predicted noise levels are not expected to exceed the recommended "acceptable" outdoor background levels of 45dB(A) for day-time (maximum 50dB(A)) and 35dB(A) for night-time (maximum 40dB(A)). During construction of the eastern end of the overburden dump exceedance of night-time noise levels will be avoided by dumping 500m west of the edge of the dump.

Traffic noise will be generated during construction (morning and late afternoon) as employees travel to and from work. Similarly during the operational phase there will be traffic noise at shift change. However the residence is approximately 1.6km away from the Access Road at its closest point and therefore the impact of this noise will be minimal and will be reduced by the planting of a tree screen along the eastern edge of the Access Road.

Our EIS states that rail traffic noise should not exceed the SPCC noise criteria (Section 7.5.4 p.186). For our total saleable production of 1.35Mtpa approximately 210 trips of an 84 wagon train will be required each year, that is an average of 4 trains per week. Assuming that shipments are made in say 30,000-50,000 tonne lots then it could be expected that up to 7 trains could be loaded in one day with then a substantial break before the next shipment is due.

### *(h) Traffic Safety for Children*

As the turn off point for our Access Road will now be approximately 500m south of the entrance to the Murray's lane way, mine traffic coming from Singleton will turn off Bridgman Road well before reaching the bus drop off and pick up points thereby resolving any potential traffic safety hazard.

Bridgman Road is a well constructed local road able to safely handle the predicted increase in traffic volume. During the construction phase up to 20 heavy vehicle and 173 light vehicle trips per day could be expected. During the operating phase up to 68 vehicles could be expect to arrive and a further 68 depart at shift change. Only at the afternoon shift change will this occur during school bus travel time.



The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

*(i) Devaluation of Land*

Surveys in areas surrounding new mine developments in the 1980's have shown that land values return to their original levels (after a temporary slump) once the permanent workforce is established in the area.

*(j) Public Discussion Day*

The Company believes that this point of objection has already been satisfied through the holding of public discussion days on 17, 18 and 19 November which were advertised in the local press during the preceeding week. Fifty seven people attended over the three days.

To fulfil its obligations under the legislation, Council wrote to certain residents surrounding the lease area and along Bridgman Road informing them of the proposed development. When the Company became aware that some of these residents had missed seeing the advertisements for the public discussion days held in November, the Company obtained the Council's circulation list and sent on 7 December by courier a letter to all residents not previously contacted directly by the Company to offer them the opportunity of discussing the Project on 9 December at the site office. Fifteen residents along Bridgman Road visited the site office on this day to discuss the Project including Mr and Mrs Murray.

*(k) Compensation Clause*

The Company offers a compensation clause by confirmation of its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

"In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith."

## 1.5. C.R. and S.E. Whiting

- (i) Mr and Mrs Whiting's main points of objection were:
  - (a) Noise.
  - (b) Air pollution.
  - (c) Increased traffic flow.
  - (d) Complete opposition to the Project.

Mr and Mrs Whiting also requested that the Council impose "*certain strict conditions regarding dust and noise*".

- (ii) Mr and Mrs Whiting attended the discussion day organised on 9 December. The Company's response to their submission is as follows:

### (a) Noise

As the Whiting residence lies approximately 3km from the closest point of the overburden dump, and approximately 2.7km from the coal washery, stockpiles and workshop infrastructure area, predicted noise levels are not expected to exceed the recommended "acceptable" outdoor background levels of 45dB(A) for day-time (maximum 50dB(A)) and 35dB(A) for night-time (maximum 40dB(A)).

Traffic noise will be generated during construction at morning and late afternoon as employees travel to and from work. Similarly during the operational phase there will be traffic noise at shift change. The impact of this noise will be minimal and will be reduced by the planting of a tree screen along the eastern edge of Bridgman Road if required by the Whitings.

Our EIS states that rail traffic noise should not exceed the SPCC noise criteria (Section 7.5.4 p.186). For our total saleable production of 1.35Mtpa approximately 210 trips of an 84 wagon train will be required each year, that is an average of 4 trains per week. Assuming that shipments are made in say 30,000-50,000 tonne lots then it could be expected that up to 7 trains could be loaded in one day with then a substantial break before the next shipment is due.

With regard to noise from blasting, the predicted levels for air blasting overpressure are approximately 105dB compared with the SPCC "comfort criteria" of 115dB. The impact of blasting on the Whiting residence is therefore expected to be minimal.

### (b) Dust Control

The Whiting residence lies approximately 3km south east of the eastern edge of the overburden dumps and approximately 2.7km east south east of the coal washery, stockpiles and workshop/office infrastructure area.

The predicted long term (annual average) deposition levels and concentration levels measured at the Whiting residence are not expected to exceed the SPCC long term criteria of

- a permissible increase in the annual average deposition level of 2g/m<sup>2</sup>/month, with one or two months at 5g/m<sup>2</sup>/month (refer EIS Section 7.4.4 p.165)
- a maximum permissible annual average concentration of 90µg/m<sup>3</sup>.

Similarly for short term episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of 260 and 150µg/m<sup>3</sup> respectively even with wind speeds averaging 17m/s for a full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

As stated in our EIS (Section 7.4.8 Health Criteria, p.181) our consultant Nigel Holmes and Associates has assessed that "*the mine will have no implications for impact on public health*" when evaluated in the context of the SPCC criteria based on the recommendations of the NH&MRC and the USEPA.

As stated by Dr Thomas (an expert witness at the Rixs Creek Inquiry) it is not possible to predict the effect that changes in air quality will have on any specific individual.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust. Provision has been made in the mine design for a spare water truck to ensure that roads and overburden dumps are well watered.

#### *(c) Traffic*

Bridgman Road is a well constructed local road able to safely handle the predicted increase in traffic volume.

The Camberwell EIS estimates that during the construction phase the Project will generate an additional 20 heavy vehicle trips and 173 light vehicle trips per day along Bridgman Road. During the operational phase up to 68 vehicles could be expected to arrive and a further 68 depart at shift change. Only at afternoon shift change will this occur during school bus travel time.

The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

The Company is prepared to plant a tree screen to assist in shielding the Whiting residence from the road if so desired.

#### *(d) Opposition to the Project*

The Company notes that Mr and Mrs Whiting "*are against the Project completely*" but wishes to assure the Whitings that it intends being a good corporate citizen in the area, mindful of the needs and aspirations of local residents, so that the economic benefits of the Camberwell Project are enjoyed by the community in a way which does not adversely effect the lifestyle of local residents.

#### *(e) Strict Conditions Regarding Dust and Noise*

The Company is happy to discuss with the Council and Department of Planning a set of approval conditions which address the specific requirements of the Camberwell Project and which ensure that the operation meets its obligations to the community but which at the same time allows a productive and efficient operation to be carried out which is competitive with other producers in the Hunter Valley.

*(f) Mitigation of Impact*

The Company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

“In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith.”



## 1.6. G. Wilton

(i) Mrs Wilton's main points of objection were:

- (a) Dust.
- (b) Noise.
- (c) Traffic.

Mrs Wilton requested that strict regulations be imposed on the mine regarding dust, noise and traffic.

(ii) Mrs Wilton's husband attended the discussion day organised on 9 December. The Company's response to this submission is as follows:

### (a) *Dust Control*

The Wilton residence lies approximately 2.0km south east of the eastern edge of the overburden dump and approximately 2.5km east of the coal washery, stockpiles and workshop/office infrastructure area.

The predicted long term (annual average) deposition levels and concentration levels measured at the Wilton residence are not expected to exceed the SPCC long term criteria of

- a permissible increase in the annual average deposition level of 2g/m<sup>2</sup>/month, with one or two months at 5g/m<sup>2</sup>/month (refer EIS Section 7.4.4 p.165)
- a maximum permissible annual average concentration of 90µg/m<sup>3</sup>.

Similarly for short term episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of 260 and 150µg/m<sup>3</sup> respectively even with wind speeds averaging 17m/s for a full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

As stated in our EIS (Section 7.4.8 Health Criteria, p.181) our consultant Nigel Holmes and Associates has assessed that "*the mine will have no implications for impact on public health*" when evaluated in the context of the SPCC criteria based on the recommendations of the NH&MRC and the USEPA.

As stated by Dr Thomas (an expert witness at the Rixs Creek Inquiry) it is not possible to predict the effect that changes in air quality will have on any specific individual.

Because of its proximity to the eastern edge of the overburden dump, the major impact on the Wilton residence will be felt in Year 1 while the eastern face of the dump is constructed and rehabilitated. To mitigate affects, overburden would be dumped 500m further west in periods of high wind from the west during the construction period. Once the eastern face of this dump has been rehabilitated it will act as an effective shield to minimise the impact of dust.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust. Provision has been made in the mine design for a spare water truck to ensure that roads and overburden dumps are well watered.

### *(b) Noise*

As the residence lies approximately 2.0km from the closest point of the overburden dump and 2.5km from the coal washery, stockpiles and workshop/infrastructure area, predicted noise levels are not expected to exceed the recommended "acceptable" outdoor background levels of 45dB(A) for day-time (maximum 50dB(A)) and 35dB(A) for night-time (maximum 40dB(A)). The major impact from noise will be felt during construction and rehabilitation of the eastern face of the overburden dump in Year 1. At night the noise impact will be reduced during this period by ensuring that dumping takes place 500m west of the dump face and at lower levels. We expect that both day-time and night-time design goals can be satisfied during this phase of operations.

Traffic noise will be generated during construction at morning and late afternoon as employees travel to and from work. Similarly during the operational phase there will be traffic noise at shift change. However the residence is approximately 1.3km away from the Access Road at its closest point and therefore the impact of this noise will be minimal and will be reduced by the planting of a tree screen along the eastern edge of the Access Road.

Our EIS states that rail traffic noise should not exceed the SPCC noise criteria (Section 7.5.4 p.186). For our total saleable production of 1.35Mtpa approximately 210 trips of an 84 wagon train will be required each year, that is an average of 4 trains per week. Assuming that shipments are made in say 30,000-50,000 tonne lots then it could be expected that up to 7 trains could be loaded in one day with then a substantial break before the next shipment is due.

With regard to noise from blasting, the predicted levels for air blast overpressure are approximately 105dB compared with the SPCC "comfort criteria" of 115dB. At its closest point blasting will be approximately 3.6km away so the impact of blasting on the Wilton residence is therefore expected to be minimal.

Blasting will be monitored and damage which is demonstrated to have been caused by the mine's blasting operations will be compensated and/or repaired.

### *(c) Traffic*

Bridgman Road is a well constructed local road able to safely handle the predicted increase in traffic volume. The Camberwell EIS estimates that during the construction phase the Project will generate an additional 20 heavy vehicle trips and 173 light vehicle trips per day along Bridgman Road. During the operational phase up to 68 vehicles could be expected to arrive and a further 68 depart at shift change. Only at afternoon shift change will this occur during school bus travel time.

The turn off point to the Mine Access Road is approximately 1.3km south of the Wilton residence so that vehicles travelling from Singleton will not have to pass the Wilton property.

The Company has agreed with a Council request not to transport coal by truck Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

*(d) Strict Regulations*

The Company is happy to discuss with the Council and Department of Planning a set of approval conditions which address the specific requirements of the Camberwell Project and which ensure that the operation meets its obligations to the community but which at the same time allows a productive and efficient operation to be carried out which is competitive with other producers in the Hunter Valley.

*(e) Mitigation of Impact*

The Company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

“In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith.”

## 1.7. L. and W. Cox

(i) Mr and Mrs Cox's main points of objection were:

- (a) Dust.
- (b) Noise.
- (c) Devaluation of property.
- (d) Increase in traffic.

(ii) Mr and Mrs Cox attended the discussion day on 9 December. The Company's response to the submission is as follows:

### (a) *Dust*

The Cox residence lies approximately 3.0km south south east of the eastern edge of the overburden dump and approximately 2.6km south east of the coal washery, stockpiles and workshop/office infrastructure area.

The predicted long term (annual average) deposition levels and concentration levels measured at the Cox residence are not expected to exceed the SPCC long term criteria of

- a permissible increase in the annual average deposition level of 2g/m<sup>2</sup>/month, with one or two months at 5g/m<sup>2</sup>/month (refer EIS Section 7.4.4 p.165)
- a maximum permissible annual average concentration of 90µg/m<sup>3</sup>.

Similarly for short term episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of 260 and 150µg/m<sup>3</sup> respectively even with wind speeds averaging 17m/s for a full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

As stated in our EIS (Section 7.4.8 Health Criteria, p.181) our consultant Nigel Holmes and Associates has assessed that "*the mine will have no implications for impact on public health*" when evaluated in the context of the SPCC criteria based on the recommendations of the NH&MRC and the USEPA.

As stated by Dr Thomas (an expert witness at the Rixs Creek Inquiry) it is not possible to predict the effect that changes in air quality will have on any specific individual.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust. Provision has been made in the mine design for a spare water truck to ensure that roads and overburden dumps are well watered.

The mine does not expect to contaminate drinking water collected from the roofs of houses in the area. However should this become a problem then the Company would offer to fit a water filtration unit to the supply system.



*(b) Noise*

As the Cox residence lies approximately 3km from the closest point of the overburden dump, and approximately 2.6km from the coal washery, stockpiles and workshop infrastructure area, predicted noise levels are not expected to exceed the recommended "acceptable" outdoor background levels of 45dB(A) for day-time (maximum 50dB(A)) and 35dB(A) for night-time (maximum 40dB(A)).

Traffic noise will be generated during construction (morning and late afternoon) as employees travel to and from work. Similarly during the operational phase there will be traffic noise at shift change. The impact of this noise will be minimal and will be reduced by the planting of a tree screen along the eastern edge of Bridgman Road if required by Mr and Mrs Cox.

Our EIS states that rail traffic noise should not exceed the SPCC noise criteria (Section 7.5.4 p.186). For our total saleable production of 1.35Mtpa approximately 210 trips of an 84 wagon train will be required each year, that is an average of 4 trains per week. Assuming that shipments are made in say 30,000-50,000 tonne lots then it could be expected that up to 7 trains could be loaded in one day with then a substantial break before the next shipment is due.

With regard to noise from blasting, the predicted levels for air blasting overpressure are approximately 105dB compared with the SPCC "comfort criteria" of 115dB. The impact of blasting on the Cox residence is therefore expected to be minimal.

*(c) Devaluation of Land*

Surveys in areas surrounding new mine developments in the 1980's have shown that land values return to their original levels (after a temporary slump) once the permanent workforce is established in the area.

*(d) Increase in Traffic*

Bridgman Road is a well constructed local road able to safely handle the predicted increase in traffic volume. The Camberwell EIS estimates that during the construction phase the Project will generate an additional 20 heavy vehicle trips and 173 light vehicle trips per day along Bridgman Road. During the operational phase up to 68 vehicles could be expected to arrive and a further 68 depart at shift change.

The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

The Company is prepared to plant a tree screen to assist in shielding the Cox residence from the road if so desired.

*(e) Mitigation of Impact*

The Company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

“In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith.”

## 1.8 D. Cox

(i) Mr D. Cox's main points of objection were:

- (a) No official notification.
- (b) Desire to keep family property operating.
- (c) Dust
  - health effects
  - water supply.
- (d) Noise.
- (e) Traffic.

(ii) The Company's response to this submission is as follows:

### *(a) Official Notification*

Mr Cox would not have received official notification of the development because as he notes in his second paragraph he is not yet officially a land owner.

However the planned development of the Project has been well advertised.

- Authorisations 81 and 308 (Coal) have been held by the Company since 1977 and 1983.
- Department of Minerals and Energy advertised their intention to invite Camberwell Coal to apply for a lease in Sydney and local papers on 29 September and 6 October respectively.
- The Company lodged its Development Application with the Council on Thursday 2 November.
- Singleton Shire Council advertised receipt of Development Application in local, Newcastle and Sydney papers on 10 and 11 November.
- The EIS and other material relating to the development were on display at the Council Chambers from Friday 10 November to Monday 11 December.
- Camberwell Coal advertised its intention in the local press on Friday 10, Tuesday 14 and Friday 17 November to hold public discussion days on 17, 18 and 19 November at the site office. Fifty seven people attended over the three days.
- Letter dated 9 November sent by Singleton Shire Council to the owners of nearby land which might be affected by the proposed development.
- Letter dated 7 December from Camberwell Coal inviting residents along Bridgman Road to an additional discussion day on 9 December. Fifteen people attended on this day including Mr Cox's parents (Mr and Mrs L. and W. Cox) and brother and sister-in-law (Mr and Mrs W. and S. Cox).

### *(b) Continued Operation of Property*

The Company believes that its development will not effect the ongoing operation of the Cox property.

*(c) Dust*

The Company does not know where Mr D. Cox intends to build his home in the future. However it is reasonable to assume that it will be located somewhere between the houses of Mr and Mrs W. and S. Cox and Mr and Mrs L. and W. Cox.

The predicted long term (annual average) dust deposition levels and concentration levels measured at the proposed Cox residence are not expected to exceed the SPCC long term criteria of:

- a permissible increase in the annual average deposition level of  $2\text{g}/\text{m}^2/\text{month}$ , with one or two months at  $5\text{g}/\text{m}^2/\text{month}$  (refer EIS Section 7.4.4. p.165)
- a maximum permissible annual average concentration of  $90\mu\text{g}/\text{m}^3$ .

Similarly for short term, episodic (24 hour) periods the predicted concentration levels are not expected to exceed the SPCC primary (health effects) and secondary (nuisance effects) standards of  $260$  and  $150\mu\text{g}/\text{m}^3$  respectively even with wind speeds averaging  $17\text{m}/\text{s}$  for a full 24 hour period with all equipment operating.

There is no criteria for short term deposition rates.

The Company will manage its operations in an effective manner to ensure that the generation of dust is minimised.

Provision has been made in the mine design for a spare water truck to ensure that roads, dumps and working faces are well watered. Stockpiles, crushing and transfer stations will incorporate water sprays to control dust.

*(d) Noise*

As the assumed future position of the Cox residence lies approximately  $2.5\text{km}$  from the closest point of the overburden dump, and  $2.5\text{km}$  from the coal washery, stockpiles and workshop infrastructure area, predicted noise levels are not expected to exceed the recommended "acceptable" outdoor background levels of  $45\text{dB(A)}$  for day-time (maximum  $50\text{dB(A)}$ ) and  $35\text{dB(A)}$  for night-time (maximum  $40\text{dB(A)}$ ). During construction of the eastern end of the overburden dump exceedance of night-time noise levels will be avoided by dumping  $500\text{m}$  west of the edge of the dump.

Traffic noise will be generated during construction (morning and late afternoon) as employees travel to and from work. Similarly during the operational phase there will be traffic noise at shift change. The impact of this noise will be minimal and will be reduced by the planting of a tree screen along the eastern edge of the Access Road.

Our EIS states that rail traffic noise should not exceed the SPCC noise criteria (Section 7.5.4 p.186). For our total saleable production of  $1.35\text{Mtpa}$  approximately 210 trips of an 84 wagon train will be required each year, that is an average of 4 trains per week. Assuming that shipments are made in say  $30,000$ - $50,000$  tonne lots then it could be expected that up to 7 trains could be loaded in one day with then a substantial break before the next shipment is due.

With regard to noise from blasting, the predicted levels for air blasting overpressure are approximately  $105\text{dB}$  compared with the SPCC "comfort criteria" of  $115\text{dB}$ . The impact of blasting on the Whiting residence is therefore expected to be minimal.

*(e) Traffic*

Bridgman Road is a well constructed local road able to safely handle the predicted increase in traffic volume. The Camberwell EIS estimates that during the construction phase the Project will generate an additional 20 heavy vehicle trips and 173 light vehicle trips per day along Bridgman Road. During the operational phase up to 68 vehicles could be expected to arrive and a further 68 depart at shift change.

The Company has agreed with a Council request not to transport coal by truck along Bridgman Road under any circumstances. A rail loop is being constructed for coal transport to the Port of Newcastle.

The Company is prepared to plant a tree screen to assist in shielding the Cox residence from the road if so desired.

*(f) Mitigation of Impact*

The company confirms its commitment to comply with Section 7(d) of the Rixs Creek conditions of approval viz.

“In the event that the owner or occupier of a dwelling situated on land in the area of affectation which the Applicant is not required to acquire under this clause 7 requests the Applicant to carry out measures to mitigate the impact of dust and/or noise and/or blasting upon the dwelling, the Applicant shall forthwith carry out such measures at its own expense. In the event that within three months of such request by an owner or occupier, the Applicant and the owner or occupier cannot agree upon the measures to be carried out, either party may refer the matter for determination by the Council's Health and Building Surveyor. The Applicant shall bear the costs of such determination and shall carry out the measures which may be required by the Surveyor, forthwith.”

## Section 2 – New England Highway Property

### 2.1. A.S. Bowman

(i) Mr Bowman's main points of objection were:

- (a) Accumulative effect of Rixs Creek and Camberwell mines on viability of dairying enterprise.
- (b) Accumulative dust.
- (c) Accumulative noise.
- (d) Water pollution.

(ii) The Company's response to this submission is as follows:

#### *(a) Viability of Dairying Enterprise*

There is no evidence to suggest that dust fallout will effect crop growth. Also the water management systems of both mines are carefully designed to ensure that downstream pollution or loss of water supply does not occur.

Therefore the Company considers that the viability of Mr Bowman's property as a dairying enterprise will not be effected by the Camberwell Project nor by the accumulated effect with the Rixs Creek mine.

#### *(b) Accumulative Dust*

The cumulative dust impact from existing, new and proposed mines in the district will be monitored and reviewed regularly by all relevant government bodies. Until these results begin to be analysed it will be difficult to generate confidence in the community. The Company is happy to co-operate with this programme and to manage its operation in such a way as to ensure that additional dust generated controls on the Project will not be warranted. Figures 7.4.11 and 7.4.12 in our EIS show that the annual increase in dust deposition and annual average dust concentration in Year 10, including the contribution from Rixs Creek do not exceed SPCC quidelines at the Bowman dairy.

#### *(c) Accumulated Noise Impact*

The noise impact from the Camberwell Project and the accumulative effects with the Rixs Creek mine will not be a problem because of the distance of the property from the two operations at least 3.5km to the west of the New England Highway.

The Company apologies to Mr Bowman for the mistake in ownership of the dairy (No 118 Fig 7.9.1).



## Section 3 – Middle Falbrook Road Residents

### 3.1 L.H. Thorley

(i) Mr Thorley's main points of objection were:

- (a) Effect on lifestyle and plans for the future.
- (b) Difficulty in finding suitable replacement property.

(ii) Mr Thorley attended the public discussion day on 18 November. The Company's response to the submission is as follows:

#### *(a) Effect on Lifestyle, Purchase of Property*

The Company accepts that the Thorley property will be impaired by the development, and this is unavoidable if the development is to proceed. Purchase of the property by the Company is the only practical solution if mining is to proceed. The Company offered by letter in September 1989 to purchase the property under two different purchase arrangements:

- a negotiated cash offer
- an offer to purchase *“under arrangements which are similar to those which may apply in the case of the Rixs Creek mine”*.

At a meeting on 23 November with the Company's land agent, the Company's cash offer for purchase was refused. Negotiations throughout the balance of the year were unsuccessful.

On 4 January 1990 the company again confirmed by letter its desire to negotiate a mutually acceptable price for the purchase of the property.

Alternatively with Mr Thorley's agreement the Company offered to immediately refer the matter to an independent valuer appointed by the President of the Institute of Valuers in accordance with Clause 7(c)(i) of the Rixs Creek conditions of approval. A copy of the entirety of Clause 7 was included for his reference and the Company confirmed its commitment to comply with other relevant sections of Clause 7.

Negotiations have resumed with Mr Thorley and the Company is hopeful of reaching a successful conclusion by the end of January.

Camberwell Coal has difficulty in understanding Mr Thorley's logic that the detrimental impact on his lifestyle in Singleton Heights he perceives originating from the Rixs Creek Mine can be lessened by him constructing a new residence on his rural land within the next 12 months. Mr Thorley's Singleton residence is 3 to 5km southeast of the Rixs Creek development. His rural land is 2 to 3km northwest of the mine. The dominant wind direction is northwest or southeast across the Rixs Creek development.

### 3.2 A.V. and M.A. Andrews

(i) Mr and Mrs Andrews' main points of objection were:

- (a) Poor assessment of the quantity of water which can flow down Station Creek.
- (b) Risk of pollution from Station Creek at flood time.
- (c) Inability to reach acceptable terms for purchase of property.
- (d) Blasting, noise and dust levels exceed SPCC levels, property is in a zone of maximum affectation.

(ii) Mr and Mrs Andrews attended the public discussion day on 18 November. The Company's response to their submission is as follows:

#### (a) *Water Flows in Station Creek*

Water flow modelling has included flood level estimates from the 1955 (1 in 100 year) flood as indicative of flood potential.

#### (b) *Pollution in Station Creek*

The water management system is designed as a storage and diversion system to replace Station Creek. The waste water component is a segregated system and the primary source of water for the Project thereby eliminating the likelihood of overflow of this component into the clean water system. Overflow of the water management system will only occur after sustained rain periods when the dilution factor will be high. Potential pollution will only be a minor factor in such a situation.

No tailings dam is proposed and any potential pollution contained in the water system will be primarily suspended sediment from surface run off in the catchment areas upstream of the mine water management dams (ie. areas unaffected by mining) operations.

#### (c) *Purchase of the Property*

The Company accepts that the Andrews property will be impaired by the development, and this is unavoidable if the development is to proceed. Purchase of the property by the Company is the only practical solution if mining is to proceed. The Company offered by letter in September 1989 to purchase the property under two different purchase arrangements:

- a negotiated cash offer
- an offer to purchase "*under arrangements which are similar to those which may apply in the case of the Rixs Creek mine*".

At a meeting on 23 November with the Company's land agent, the Company's cash offer for purchase was refused. Negotiations throughout the balance of the year were unsuccessful.

On 4 January 1990 the company again confirmed by letter its desire to negotiate a mutually acceptable price for the purchase of the property.

Alternatively with Mr and Mrs Andrews' agreement the Company offered to immediately refer the matter to an independent valuer appointed by the President of the Institute of Valuers in accordance with Clause 7(c)(i) of the Rixs Creek conditions of approval. A copy of the entirety of Clause 7 was included for his reference and the Company confirmed its commitment to comply with other relevant sections of Clause 7.

Negotiations have resumed with Mr and Mrs Andrews and the Company is hopeful of reaching a successful conclusion by the end of January.

*(d) Blasting, Noise, Dust Levels Exceed SPCC Levels*

The Company acknowledges that the Andrews' property is in the "zone of affectation" as identified in our EIS. Unfortunately in a development of this nature the impacts cannot be confined to the mining area alone. Therefore the Company wishes to incorporate the Andrews' property in a "buffer zone" around the mining development.

### 3.3. D.E. Andrews

- (i) Mrs D.E. Andrews' main points of objective were:
- (a) Exceedance of acceptable levels for dust, light, noise and blasting and resulting effect on lifestyle.
  - (b) Risk of pollution from Station Creek at flood time.
  - (c) Lack of stock water from Station Creek in times of no flow.
  - (d) Effect on crops and expense to purchase stock feed.
  - (e) Effect on household water supply.
  - (f) Damage caused by blasting (rupturing of dams).
  - (g) No plan for relocation of Middle Falbrook Road.
  - (h) Inadequate price offered for purchase of property.
- (ii) The Company's response to this submission is as follows:

**(a) *Exceedance of Acceptable Levels for Dust, Light, Noise and Blasting***

The Company accepts that the Andrews property will be impaired by the development, and this is unavoidable if the development is to proceed. Purchase of the property by the Company is the only practical solution if mining is to proceed. The Company offered by letter in September 1989 to purchase the property under two different purchase arrangements:

- a negotiated cash offer
- an offer to purchase "*under arrangements which are similar to those which may apply in the case of the Rixs Creek mine*".

Alternatively with Mrs Andrews' agreement the Company offered to immediately refer the matter to an independent valuer appointed by the President of the Institute of Valuers in accordance with Clause 7(c)(i) of the Rixs Creek conditions of approval. A copy of the entirety of Clause 7 was included for her reference and the Company confirmed its commitment to comply with other relevant sections of Clause 7.

Negotiations have resumed with Mrs Andrews and the Company is hopeful of reaching a successful conclusion by the end of January.

**(b) *Pollution in Station Creek***

The water management system is designed as a storage and diversion system to replace Station Creek. The waste water component is a segregated system and the primary source of water for the Project thereby eliminating the likelihood of overflow of this component into the clean water system. Overflow of the total water management system will only occur after sustained rain periods when the dilution factor will be high. Potential pollution will only be a minor factor in such a situation.

No tailings dam is proposed and any potential pollution contained in the water system will be primarily suspended sediment from surface run off in the catchment areas upstream of the mine water management dams (ie. areas unaffected by mining) operations.

*(c) Water Supply to Downstream Users*

Water supply to the downstream users of Station Creek for stock watering purposes will be an element of the water management strategy.

The Glennies Creek Dam which was purposely built to regulate the flow of Glennies Creek and supplement the level of the Hunter River will adequately cater for stock watering and irrigation requirements in the area. This development will not normally interfere with water flow in Glennies Creek and has the support of the Department of Water Resources with regard to licenced extraction of water from that Creek.

*(d) Effect of Dust on Crops*

There is no evidence to suggest that dust fallout will effect crop growth. The Company therefore considers the cost to purchase stock feed to replace lost crops will not be necessary.

*(e) Household Water Supply*

Installation of a water filtration unit for the household water supply would be favourably considered by the Company if requested.

*(f) Damage Caused by Blasting*

An assessment of the Andrews' residence and farm improvements would be carried out before the commencement of mining. A blast monitoring program will be used and damage shown to have been caused by the Company's blasts will be compensated or repaired.

*(g) Alternative Route for Middle Falbrook Road*

An alternative route to Middle Falbrook Road (or relocation of it) will be determined in association with the Council after determining the needs of residents (and through travellers) who use the road at the time when relocation is necessary (in Year 5 before mining commences in the South Pit in Year 6).

*(h) Negotiation for Purchase of the Property*

The Company confirms its commitment to negotiate a mutually acceptable price for the purchase of the property. Alternatively the Company is prepared to immediately seek appointment of an independent valuer and resolve the land purchase in accordance with Clause 7 of the Rixs Creek approval conditions.

Negotiations for the purchase of Mrs Andrews' property have resumed and the Company is hopeful of reaching a successful conclusion by the end of January.

### 3.4 B. Wilmott

- (i) Mr Wilmott's main points of objective were:
  - (a) Property lies within "zone of affectation".
  - (b) Timing of lodgement of Development Application and release of EIS..
  - (c) Disruption to water supply provided by Station Creek and potential pollution in Station Creek.
  - (d) Dust and deterioration in air quality.
  - (e) Noise.
  - (f) Blasting.
  - (g) Visual impact.
  - (h) No plan for relation of Middle Falbrook Road.
  - (i) Risk to security of family and loss of stock
  - (j) Stress imposed by development.
  - (k) Context of EIS.
  - (l) Land acquisition policy.
  - (m) Seeking more stringent safeguards than provided by Rixs Creek approval conditions because of closer proximity.

However Mr Wilmott concludes by stating "*I do not want to prevent the Camberwell Coal Company's mine inception, and being a realist know full well that is it not possible anyhow, but what I do want is a fair and equitable reference made to my right to exist in an environment of my choice.*".

- (ii) Mr Wilmott attended the public discussion day on 18 November. The Company's response to the submission is as follows:

#### *(a) Zone of Affectation*

The Company accepts that the Wilmott property will be impaired by the development, and this is unavoidable if the development is to proceed. Purchase of the property by the Company is the only practical solution if mining is to proceed. The Company offered by letter in September 1989 to purchase the property under two different purchase arrangements:

- a negotiated cash offer
- an offer to purchase "*under arrangements which are similar to those which may apply in the case of the Rixs Creek mine*".

At a meeting on 23 November with the Company's land agent, the Company's cash offer for purchase was refused. Negotiations throughout the balance of the year were unsuccessful.

On 4 January 1990 the company again confirmed by letter its desire to negotiate a mutually acceptable price for the purchase of the property.



Alternatively with Mr Wilmott's agreement the Company offered to immediately refer the matter to an independent valuer appointed by the President of the Institute of Valuers in accordance with Clause 7(c)(i) of the Rixs Creek conditions of approval. A copy of the entirety of Clause 7 was included for his reference and the Company confirmed its commitment to comply with other relevant sections of Clause 7.

Negotiations have resumed with Mr Wilmott and the Company is hopeful of reaching a successful conclusion by the end of January, 1990.

**(b) Submission of EIS**

Government legislation requires that an EIS be submitted at the same time as lodging a Development Application. Council controls the period of display for an EIS and in this case the display period was set in accordance with normal practice.

**(c) Water Management**

The Project's water management system will ensure that a reliable clean water supply is maintained along Station Creek and indeed for all users of existing surface and underground sources of water.

Protection of the irrigated cropping land along Glennies Creek will be an essential element of water management strategy. The Glennies Creek Dam was designed for the purpose of maintaining water in Glennies Creek and the Hunter River as well as flood mitigation. This development will not normally interfere with water flow in Glennies Creek and has the support of the Department of Water Resources with regard to licenced extraction of water from that Creek.

**(d) Dust and Deterioration of Air Quality**

The Wilmott property will be adversely effected by dust. Personal tolerance is a significant factor once dust deposition levels rise above an increase of  $2\text{g}/\text{m}^2/\text{month}$ .

Purchase of the property by the Company is the only practical situation.

**(e) Noise**

The noise impact will indeed be unacceptable and the only practical solution is for the Company to purchase the property.

**(f) Blasting**

Actual damage from ground vibration is a possibility but not a necessary outcome. The Wilmott residence and farm improvements will be assessed before the commencement of mining and any damage shown to have been caused by blasting will be compensated or repaired.

**(g) Visual Impact**

The visual impact is inescapable if the development proceeds. However mitigating measures would be implemented where possible (eg. mounding, planting tree screens).

*(h) Relocation of Middle Falbrook Road*

An alternative route to Middle Falbrook Road (or relocation of it) will be determined in association with the Council after determining the needs of residents (and through travellers) who use the road at the time when relocation is necessary (in Year 5 before mining commences in the South Pit in Year 6).

*(i) Security*

Access to the mine during the construction and operating phases is by the Main Access Road off Bridgman Road. The Company does not consider that the development of the Project will affect the security of Mr Wilmott's family.

*(j) Stress*

It is uncertain which is the main contributing factor to the stress described. Experience in these matters has shown that the sooner the Development Application is processed then the sooner the uncertainty is removed and the stress relieved. Even if this results in property purchase, the landowner can then move to making a decision on the future at the earliest possible time.

*(k) Content of EIS*

The primary concern of a Development Application and attendant EIS is to identify the impacts of the Project and how these may be addressed to meet regulatory requirements.

It is impractical to consider that an EIS should address the subjective concerns of all individuals.

*(l) Land Acquisition Policy*

This has been addressed in (a) above.

*(m) Safeguards*

The matter of safeguards to be applied to the Project will be addressed by the Council and various Government authorities and Departments. The Company recognises its responsibility to act as a good corporate citizen, mindful of the needs and aspirations of local residents and will ensure that it meets its obligations to the community. However the approval conditions when determined must take into account the ability of the company to run an efficient and productive operation which is competitive with other Hunter Valley producers and able to generate economic benefits which can then be enjoyed by the community.

### 3.5 R. and D. Hall

- (i) Mr and Mrs Hall's main points of objection in their letter to Council dated 7 November 1989 (December?) were:
- (a) Notice of intention to invite the partners in Camberwell Coal Pty Ltd to apply for a lease, published in the Gazette and local newspapers, does not make mention of the rights of people to object, correct method of objection, etc.
  - (b) Objections lodged were not recognised by DME due to various technicalities.
  - (c) Public discussion and consideration of issues is being prevented by "anomalously quick processing".
  - (d) Objections in letter of 25 October should be taken as valid where they still apply (Refer Appendix A).
  - (e) Concern about other possible changes in scope of project, considering planned output has increased by 30% since Planning Focus meetings.
  - (f) Specifically excluded from invitation list to attend discussion meetings held at the site office early in 1989.
  - (g) Need for replacement reserve for Bellbird Colliery is no longer applicable.
  - (h) The Company has declined previous opportunities to purchase Dulwich offered by the previous owner in 1984.
  - (i) Concern about the nature of Southland Coal Pty Ltd.
  - (j) Worst case dust scenario is not realistic – concern that this is a *"deliberate attempt to falsely indicate much lower dust levels than would otherwise be indicated"*.
  - (k) Dust desposition levels.
  - (l) Dust concentration levels.
  - (m) Episodic events.
  - (n) Concern that project will gain development approval even though guidelines for dust are exceeded.
  - (o) Air overpressure, ground vibration and general noise levels exceed guidelines.
  - (p) Development consent should not be granted because the Company does not own all the land within the mining area nor have the necessary Section 62 approvals.
  - (q) Project is being pushed too quickly and an unjustified decision to proceed will compound the problem.
  - (r) Relocation of Middle Falbrook Road.
  - (s) Local community and its social amenity is being destroyed.
  - (t) Visual impact.
  - (u) Depth of final void.
  - (v) Insignificance of the project, inferior aspects of coal quality, markets are not secured and could be taken by others with less environmental impact .

(ii) Mr and Mrs Hall attended the public discussion day on 19 November 1989. The Company's response to Mr and Mrs Hall's objections are as follows:

**(a) *Administrative Matters Relating to Notice of Intention to Invite CCJV Partners to Apply for a Lease***

This is a matter that should properly be addressed by the Department of Minerals and Energy. However it is the Company's understanding that this matter was handled in accordance with normal procedures and in accordance with the legislation.

**(b) *Non-recognition of Objections to "Notice of Intention"***

The Company's response is the same as in (ii)(a) above.

**(c) *Public Discussion Being Prevented by Quick Processing***

The Company has followed the required steps necessary for gaining a lease and development approval. Planning focus meetings were held in October and December of 1988 and local residents were invited to a series of discussion days on 6, 7, 8 and 9 April 1989 and on 17, 18 and 19 November and 9 December 1989. The Company therefore believes that it has in fact discussed the development with local residents and government departments and authorities over a considerable period of time and has kept them informed of changes as they have occurred.

The Company acknowledges that it is now seeking rapid approval of its development application so that it can take advantage of market opportunities currently available. The Company has been shortlisted for supply of coal to a new complex of power stations being built in Japan. The first station will commence trial burning of coal in early 1991 with the second coming on stream in mid 1992 and the third in mid 1993. The three power stations will consume approximately 4Mtpa of coal and we are confident that our major Japanese shareholder Toyota Tsusho Corporation will be able to win a substantial share of this contract because of its relationships with the power utility. Also our other Japanese shareholder Mitsubishi Mining and Cement is closing some of its underground mines in the next two years and the Company is confident that it can win the right to replace a portion of these sales contacts.

For the Company to be successful in winning these contracts it must be in production by 1 April 1991, and with a 12 month construction period, approvals are required in time to allow construction by mid March 1990.

**(d) *Objections in Letter of 25 October to DME***

These have been addressed by the Company in Appendix 1.

**(e) *Concern About Possible Changes to Scope of Project***

The EIS identifies that the Company intends constructing a coal preparation plant with nominal annual average ROM feed capacity of 2.3Mtpa (350tph). Table 4.1.1 of the EIS shows that production is planned to build up in line with expected sales during years -1, 1 and 2 so that from year 3 ROM production is expected to average approximately 2.02Mtpa for a saleable output of approximately 1.35Mtpa for the sales mix of products nominated (60% steam coal, 30% semi soft coking coal and 10% soft coking coal). The Company will be planning to maximise sales and hence ROM production up to the the nominal design capacity of the plant of 2.3Mtpa.

Actual ROM production in any year will depend on the sales mix of products actually sold (since different coal preparation plant recoveries apply to the various seams washed to produce the three different products), and the ability of the Company to sell its maximum saleable output of about 1.55Mtpa (assuming the plant ROM feed was at the nominal annual average of 2.3Mtpa with a recovery of 67.1%). The build up in production in Year -1, 1 and 2 will depend on the ability of the Company to obtain sales contracts for its full rated production. If this can be achieved before year 3 then production will be increased in these early years to maximise the cash flow from the project and so reduce borrowings by repaying debt earlier than planned.

The in situ mine reserves (Table 2.8.2 in the EIS) are only measured at a total of 41.4Mt. There is some potential to increase this slightly. Therefore the potential to expand the coal preparation plant beyond its nominal ROM design capacity of 2.3 Mtpa is limited because to do so would result in a reduction in project life.

Therefore the changes to the scope of the project would at this stage appear to be limited to optimising performance in the coal preparation plant to at least achieve performance slightly above its ROM design throughput of 2.3Mtpa, maximising coal recovery to maximise total sales revenue and output which, depending on the sales mix actually achieved, could peak at about 1.55Mtpa. The open cut equipment fleet nominated in Table 3.2.1 has the capacity required to achieve the maximum sales output from the project by extending operating hours to a full 7 day per week operation.

*(f) Exclusion from Invitation List to Attend Discussion Meetings in April 1989*

Mr and Mrs Hall were not specifically excluded from the invitation list for discussion meetings in April 1989. They were one of three parties to whom letters were not sent because of a clerical error and a letter of explanation and apology was sent to the Halls dated 14 April 1989 and an invitation was extended to them to contact the Project Manager, Mr Stan Coffey so that another meeting could be arranged. The Halls did not avail themselves of this opportunity.

Mr and Mrs Hall were specifically invited to attend the discussion days in November 1989.

*(g) Need for Replacement Reserves for Bellbird Not Applicable.*

It is true that the area adjacent to Bellbird Colliery has been purchased by Southland Coal Pty Ltd from Coal and Allied Operations.

However to say that this now negates the need for Authorisation 81 as a replacement reserve is incorrect for the following reasons:

- Southland Coal Pty Ltd is unable at this point in time to find markets for Greta Seam coal (high sulphur, low ash, high energy coal) in sufficient quantities to justify the development of the reserves purchased from Coal and Allied.
- Markets are available for the coal which can be won from Authorisation 81, and partners are keen to participate in its development, contributing capital which in turn allows Southland to fund its share of development costs.
- Capital is not currently available to allow Southland Coal to develop its Cessnock reserves.

*(h) Southland Refused Previous Offers to Purchase Dulwich*

It is true that offers to purchase Dulwich in 1983/84 were refused by Southland. At the time prospects for new mining developments in the coal industry were not good, little was known of the geology of the Authorisation and markets and capital were not available to Southland Coal Pty Ltd. With the formation of the Camberwell Coal Joint Venture and the change in outlook, prices and markets for the industry, the situation has improved dramatically. Also much more work has been done since then to explore the deposit and to accurately model its geology.

A feasibility study has recently been completed which shows that the deposit can now be developed on a sound economic basis and plans have been prepared for development. As Dulwich is in the "zone of affectation" of the proposed development the Company has now expressed its desire to purchase the property to allow development to proceed.

It is not the first time that a deposit with limited geological data available has been classed as non economic or marginal during a period of poor market conditions. Additional geological data, a change in market conditions, changes in the industrial awards, restructuring of the industry and the use of the most modern and productive equipment and work practices have led to a re-evaluation of many coal prospects in the second wave of planned coal developments.

The Company is prepared to negotiate a price for the purchase of Dulwich which recognises the financial investment, time and effort put in to the restoration of the property by the Halls since 1984.

*(i) Concern About Southland Coal*

As stated above Southland was not in a position to purchase Dulwich in 1983/84 because of its lack of knowledge of the deposit, the market conditions prevailing at the time and its shortage of capital at the time. It did not at any stage intend to operate an open cut mine without due regard to its obligations to offer to purchase properties likely to be affected by the development.

Since the formation of the Camberwell Coal Joint Venture, the Company has acted in a responsible manner and awaited the outcome of the Rixs Creek Commission of Inquiry before proceeding to complete land acquisition because it was seen that this Inquiry would provide guidelines to assist both the Company and potential vendors.

*(j) Worst Case Scenario is Unrealistic and a Deliberate Attempt to Falsify Data*

The Company cannot accept this criticism. It has retained the services of Nigel Holmes and Associates to do the assessment of dust impacts, who was an expert witness at the Rixs Creek Inquiry.

The statement seems to be based on Mr Hall's lack of knowledge of the data presented and his unfamiliarity with the dust modelling methods used.

The assessment of dust impacts is normally done on the basis of a comparison against established air quality criteria which are explained on page 165 Section 7.4.4. of our EIS. The long term impacts are usually assessed on the basis of **average annual** goals for example:

- concentration     90µg/m<sup>3</sup> annual average goal
- deposition         2g/m<sup>2</sup>/month annual average increase in dust deposition levels for semi rural areas (one or two months up to 5g/m<sup>2</sup>/month are acceptable)



## Hall response

Short term impacts are normally assessed on the basis of 24 hour primary and secondary standards for dust concentration in ambient air. NSW has no regulations concerning acceptable concentrations however the SPCC usually refers to the USEPA primary and secondary ambient 24 hour air quality standards which are 260 and 150 $\mu\text{g}/\text{m}^3$  respectively. The primary standard is designed to protect the public against adverse health effects with an adequate margin of safety whilst the secondary standard is designed to protect against nuisance effects. There are no criteria for dust <sup>disposition</sup> rates under short term impact.

The main concern expressed by the Halls is that in the analysis of episodic impacts it was assumed that mining had stopped and that the only dust considered was that generated by wind erosion from stockpiles and exposed areas. It is true that the analysis was performed under these assumptions. However it is also important to point out that in the analysis for worst case concentrations the wind speed of 17m/sec (61kph) was assumed to continue for each hour in a full 24 hour period. In the data sets analysed for 1985/86/87 this has never been achieved and in fact in 1985 the highest average wind for a **one** hour period was 15.8m/sec. Therefore the wind speed used in the analysis over the 24 hour period generally exceeds the actual wind speeds recorded and the duration assumed greatly exceeds recorded durations.

The Hall's concern is based on a misunderstanding of the analysis that has been used. The table they present on page 3 of their letter suggests that the dust generation from the operation of mining equipment is 6.5 to 9 times the dust that occurs from wind erosion. This is true on an **annual** average basis, but under episodic conditions (ie very high wind speeds) wind erosion becomes the dominant source (wind erosion rate, increase roughly as the cube of the wind speed).

To illustrate the point it is instructive to look at Table 7.4.9 of the EIS and take Year 13 (for no reason other than it has the highest estimated dust emission rate). The **annual** dust emission from non-wind erosion sources is 3247.9t (3749.0-501.1) as noted by the Halls. This gives a daily dust generation rate of 8898kg. In Nigel Holmes' analysis of the amount of dust generated under episodic conditions he estimates that 33425kg of dust would be generated under the episodic day. Thus if equipment were to keep operating under these conditions there would be an additional 8898kg of dust or 26% more than assumed in the analysis, not the 650 to 900 percent that the Halls' submission states will occur. Exclusion of dust generated by equipment during the worst case scenario is compensated for by the fact that the wind speed of 17m/s (61kph) is assumed to continue each hour during a 24 hour period.

The analysis has since been repeated to include the effect of the mine equipment continuing to operate when there is a wind blowing at 17m/sec from the north west and from the south east in Years 1, 5, 10 and 13 (see attached report from Nigel Holmes and Associates, Appendix 2).

The Hall's comment about the use of the wind speeds of 16m/sec and 17m/sec needs to be clarified. The worst case analysis was carried out using the erosion potential for uncrushed stockpiles at a wind speed of 17m/sec (61kph) and the erosion potential of sources for exposed mine areas and waste dumps at a wind speed of 16m/sec (58kph) because the USEPA data happens to be published for the two different types of sources at different wind speeds, and for no other reason. As noted in Mr Holmes' report, in 1985 there were **no** hours when the wind speed exceeded 16m/sec and only 8 hours when it was between 15 and 16m/sec, 2 hours between 14 and 15m/sec, 5 hours between 13 and 14m/sec and 11 hours between 12 and 13m/sec.

## Hall response

Contrary to the Hall's statement the Company contends that its assessment of dust emissions and impacts is acceptable, that the area of affectation is **not** larger than stated and that the dust levels for deposition and concentration are not higher than those stated. The Company believes that the impacts have been fairly assessed.

Table 7.4.11 as published in the EIS was not correct. A copy of the correct table which was circulated to the Council and various Government Departments and authorities is included as Appendix 3.

### (k) Dust Deposition Levels

The Company recognises that the estimated increase in annual average dust deposition levels is above the SPCC criteria for long term impacts at the Hall residence. As stated in the EIS the Company wishes to negotiate the purchase of the Halls' property or to reach some other mutually acceptable arrangement to compensate for loss of amenity.

X  
X  
X  
The Halls are incorrect in their statement that "there appears to be no statement as to existing dust deposition". Reference to pages 165, 166 and 167 shows that the annual average rates for deposition in the area vary from 0.3 to 2.1g/m<sup>2</sup>/month. Background dust deposition levels can therefore be taken as having an upper limit of 2g/m<sup>2</sup>/month and according to the discussion in Section 7.4.4 of our EIS an acceptable increase in annual average deposition rate due to the generation of the mine would be 2.0g/m<sup>2</sup>/month. 2

### (l) Dust Concentration Levels

In attempting to estimate the existing annual average dust concentration level it is not correct to take a mean of the range of values recorded for the existing 24 hour average. At the Rixs Creek Inquiry a value of 30µg/m<sup>3</sup> was accepted as a reasonable estimate of the existing annual average dust concentration in the area.

No actual data is available for this value as to correctly calculate it, sampling would have to be carried out 365 days/year 24 hours/day with high volume samplers.

It is correct that we have estimated the increase in annual average dust concentration level at the Hall residence to be in the range 40-60µg/m<sup>3</sup> depending on the year. Added to the background level of 30µg/m<sup>3</sup> the total average annual dust concentration level is estimated to be less than or equal to the long term criteria of 90µg/m<sup>3</sup>.

Contrary to the statements made by the Halls, Figures 7.4/6/8/10/12 do include the effect of operating equipment since they relate to the assessment of long term impact not short term impact (refer Section 7.4.2, 7.4.6 and 7.4.7).

### (m) Episodic Events

As stated above Table 7.4.11 included in the EIS was incorrect. The correct table is included as Appendix 3.

The worst case scenario discussed in the EIS was for a wind speed of 17m/sec blowing for a 24 hour period from the north north west, over the North Pit workings and on over the coal stockpiles to the south-south east. This particular wind direction was selected to assess the cumulative impact of a wind gathering dust from both the mine workings and the coal stockpiles.

Paragraph 2 in page 181 is misleading and for this we apologise. It was meant to convey the meaning that for a wind blowing in this direction no **additional** residences would be effected above those already impacted in the "zone of affectation" (Figure 7.4.13) by an increase in the dust deposition rate or dust concentration level.

Paragraph 4 on page 181 is to be read in context against the USEPA primary standard for acceptable short term concentration levels of  $260\mu\text{g}/\text{m}^3$ , which is designed to protect the public against adverse health effects with an "adequate margin for safety" and the NH&MRC annual average goal of  $90\mu\text{g}/\text{m}^3$  when assessing long term dust impacts.

The dust levels and concentrations at the Hall residence and other residences not currently owned by the Company will have no implications for impact on public health when assessed in accordance with these standards. However as stated they are in the "zone of affectation" determined from the increased in the annual average dust depositions rate and because of this the Company seeks to purchase the properties.

*(n) Concern that Development will be Approved*

The Company recognises that the levels for noise, dust and vibration will be exceeded at certain properties and seeks to purchase these properties to create a "buffer zone". Alternatively the Company is prepared to negotiate a suitable compensation package which recognises the loss of amenity suffered by these people.

Unfortunately in a development of this nature it is impossible to contain the impact of the development entirely within the boundaries of the actual mining areas. Hence the Company's desire to purchase land in the "zone of affectation" to establish a buffer zone.

*(o) Air Overpressure, Ground Vibration and General Noise*

The Company recognises that air overpressure, ground vibration and general noise levels may be exceeded at some properties within the "zone of affectation", particularly at Dulwich. This is an added reason why the Company is keen to negotiate the purchase of these properties.

*(p) Land Acquisition, Section 62 Consents*

The properties within the zone of affectation which are still be to be acquired by the Company are:

- D.E. Andrews
- A. and M. Andrews
- L. Thorley
- G. Thurlow
- B. Wilmott
- R. and D. Hall

Negotiations are almost finalised for the purchase of the properties owned by D.E. Andrews, A. and M. Andrews and L. Thorley. A condition of purchase is that the vendor give all necessary approvals to the development proceeding and also agree to withdraw their objections.

Negotiations are to be resumed with G. Thurlow shortly on his return from holidays. Negotiations are continuing with B. Wilmott and the Company is seeking to commence negotiations for the purchase of the Hall's property (or compensation package).

The Company is confident that a successful settlement of these matters can be concluded.

*(q) Development Being Pushed Too Quickly*

The Company is confident that it can manage its operations in a responsible manner to minimise the impact on the local residents so that the wider community can enjoy the economic benefits which can be provided by a development of this nature.

For a discussion of the reasons the Company is now seeking rapid development of the Project please refer to (c) above.

*(r) Relocation of Middle Falbrook Road*

An alternative route to Middle Falbrook Road (or relocation of it) will be determined in association with the Council after determining the needs of residents (and through travellers) who use the road at the time when relocation is necessary (in Year 5 before mining commences in the South Pit in Year 6).

The Company believes that this is a sound approach to this issue.

*(s) Local Community/Social Amenity Destroyed*

The Company recognises that its development does have a significant impact on the lifestyle of local residents, particularly those along Middle Falbrook Road.

It is therefore seeking to negotiate mutually satisfactory prices for the purchase of properties in the area which recognise the value of the land, the cost of relocation and the investment in effort, time and money made by these people in developing their properties.

*(t) Visual Impact*

The Company on page 243 paragraph 1 and Table 7.10.2 recognises that the visual impact on Dulwich would be significant and stated that selective tree planting, subject to agreement of the owners, would be required to reduce the impact.

The Halls state that in their opinion the South Pit will be visible as well as the North Pit. The Company would be willing to provide tree screens if desired to reduce this impact.

*(u) Depth of Final Void*

A final void with a depth of 120m is left at the end of the life of the project to provide access to potentially three seams which could be mined by underground methods. Further work is required to evaluate this future development.

Also there is some as yet undefined potential to continue open cut operations further to the west. Because of land access difficulties this potential has not been able to be evaluated.

(v) *Insignificance of the Project*

The project has the ability to generate an annual sales revenue of \$75-85M and capital investment required is of the order of \$120M. It will employ 250-300 people and because of the strength and business contacts of its Japanese partners may bring to the Hunter Valley additional coal sales which might not otherwise have been gained. Therefore the Company contends that it is not an insignificant project, despite its relatively small scale.

Its low ash soft coking coal (6.5%) is a very desirable product on the market and considerable interest has already been expressed in it by the JSM. The fluidity and dilatation stated in previously published data sheets were inferior compared with competitive coals produced in the area. This was because the analysis had been performed on old samples. Recent tests on fresh core indicate that these values are at least competitive with other producers of soft coking and semi-soft coking coals.

As discussed in (c) above, we believe that the strength and business contacts of our Japanese partners will bring us a share of markets which existing and other new mines perhaps could not tap.

## Section 4 – Other Objections

### 4.1. Singleton Bus Service Pty Ltd

(i) The Bus company's main points of objection were:

- (a) Statement made by Company that Middle Falbrook Road would be closed.
- (b) Reduced numbers of children along Middle Falbrook Road.
- (c) Extra distance that must be travelled to transport remaining children.
- (d) Case for compensation for loss of earnings.
- (e) Replacement of Middle Falbrook Road is required.

(ii) Mr Bartrop attended the public discussion day on 18 November. The Company's response to this submission is as follows:

#### (a) *Closure of Middle Falbrook Road*

It was explained to Mr Bartrop when he attended the public discussion day that Middle Falbrook Road in its existing location has to be closed in about Year 5 of operations because it passes directly through the proposed South open pit workings. However we also explained that four alternatives would be evaluated with regard to replacement or relocation of Middle Falbrook Road.

- relocation of it immediately to the west of the south pit which would still provide a direct link from the main railway crossing to the New England Highway.
- replacement of it by upgrading Nobles Crossing to provide access to the New England Highway via Glennies Greek Road.
- replacement of it by upgrading Stony Creek Road to provide direct access to Bridgman Road and Singleton.
- combination of an upgrade of Nobles Crossing and Stony Creek Road.

We stated that because the relocation or replacement of Middle Falbrook Road was not required until about Year 5 of operations, the selection of the best option should be left until then and should take into account the needs of local people still living in the mine area along Middle Falbrook Road, the needs of people living north of the mine for direct access back to the New England Highway or direct to Singleton (Stony Creek Road and Bridgman Road would offer the shortest route) and planned mining activity on the Rixs Creek and Maitland ~~main~~ leases.

#### (b) *Reduced Number of Children Along Middle Falbrook Road*

The Company accepts that there may be some effect on the numbers of children living along Bridgman Road, depending on the future occupancy of the remaining houses which are not directly in the way of mining operations.

However due to the general increase in population in the Singleton Shire caused by the project then it could be expected that additional business could be generated for the bus company which could offset any decrease in the numbers of children along Middle Falbrook Road.

From past figures it is estimated that about 40% of the workforce will live in the Singleton Shire and that a small proportion of these will elect to live in semi rural areas creating a demand for services from the bus company.

*(c) Extra Distance Travelled*

This will be a major factor considered when determining the most appropriate alternative for the replacement or relocation of Middle Falbrook Road. Depending on the option selected there may not be any increase in distance travelled.

*(d) Compensation for Loss of Earnings*

As discussed in (b) above the Company considers that there will be a general increase in business activity created by the development of the mine and the bus company should be able to participate in this.

For example the bus company may create business by offering employees a bus service to transport them between Singleton and the mine at shift change, which could have the potential to more than offset any earnings lost as a result of the mining activity along Middle Falbrook Road.

Also new residents are attracted to the district by developments of this nature and a small proportion elect to live in a semi rural area, which again would offset lost earnings.

The Company therefore does not believe that compensation for the Singleton Bus company is an issue.

*(e) Replacement of Middle Falbrook Road*

The Company acknowledges its obligations to suitably relocate Middle Falbrook Road or to replace it with an alternative route which provides the same level of service to residents in the area without them being required to travel large additional distances.

However as stated in (a) above the Company believes that the decision is best left closer to the time when Middle Falbrook Road will be disrupted, which is expected to be in about Year 5 of operations (ie late in 1995 assuming production commences in April 1991).



**Appendix 1**

**Points of Objection in letter dated 25 October from R. and D. Hall to DME  
Camberwell Coal Response to these Points of Objection**

## Appendix 1

### Points of Objection in letter dated 25 October to Director General Department of Minerals and Energy

- (i) Mr & Mrs Hall's main points of objection were:
- (a) Company does not own all the land in the mining area nor have all the necessary Section 62 consents.
  - (b) Planned production could easily be taken up by existing operations.
  - (c) Coal quality – maximum fluidities and dilatation are poor
  - (d) Difficulty in obtaining markets and disadvantageous effect on coal price.
  - (e) Underground reserves and development.
  - (f) Conservation of architectural and historical features of interest particularly Dulwich.
  - (g) Previously advised by Southland that they had no interest in purchasing the property and that mining would be well to the east of the railway.
  - (h) Geological data reviewed in 1983 indicated deposit was not viable or marginal at best
    - coal quality is poor
    - underground reserves are steeply dipping, are thin and close together and underlie Glennies Creek alluvium
    - open cut reserves are comprised of several thin coal seams averaging ~~1m~~ with thickest seam only 2.7m
- X (i) Technical assumptions are questioned
- under estimation of coal losses and dilution when mining thin seams
  - blasting in thin overburden will cause excessive air overpressure and ground vibrations and consequently damage buildings in the area.
- (j) Effect of blasting and dust on rural activities.
  - (k) Poor public image of Southland Coal.
  - (l) Flow of water in Station Creek will be stopped.
  - (m) North Pit overburden dump will raise surface by 40m.
  - (n) Relocation of Middle Falbrook Road.
  - (o) Safeguards against non-performance.

(ii) The Company's response to this letter is as follows:

**(a) Land Acquisition, Section 62 Consents**

This point of objection has been addressed in Section (p) of the response to the letter of objection dated 7 November.

**(b) Planned Production Could be Taken up by Others**

As noted in other sections the Company believes that its Japanese partners bring special marketing strengths to our project because of their business contacts in Japan and because in the case of Mitsubishi Mining and Cement it is likely to take Camberwell Coal to offset a decline in coal production as some of its underground mines are closed.

Consumers wish to diversify their sources of supply so that it is unlikely that existing producers could capture all the markets planned for our development.

**(c) Coal Quality**

Recent analysis for maximum fluidity and diltation from fresh core indicate that these results will be competitive with other Hunter Valley soft coking and semi-soft coking producers. With an ash level of only 6.5% for soft coking coal our product will have a definite market edge.

**(d) Markets and Effect on Price**

We believe that our project will have no difficulty in obtaining markets for its full output. We already have been short listed for one major power supply contract and have expressions of interest from two other Japanese power utilities, the JSM and as a replacement for coal lost by Mitsubishi Mining and Cement as some of its underground mines are closed.

There will be no adverse effect on prices since our sales contracts will be negotiated at the market rate. All export prices require Commonwealth Government approval.

**(e) Underground Reserves**

The Company acknowledges that much additional work is required to evaluate the significant underground resources in its ~~Authority to Prospect~~ *Authorisation*.

**(f) Conservation of Architectural & Historical Features**

The Company is not aware of any early coal mining and related structures which may warrant preservation on its Authorisation.

The Company recognises its responsibility to conserve and preserve the Dulwich homestead. Open cut mining of the property on which the homestead is situated is not planned as part of this development. The major impact on the homestead which could damage it will be from blasting, either by air overpressure or ground vibration. Trial blasts will be carried out to provide data for blast design. Blasts will be designed so as to keep air overpressure and ground vibration levels to the lowest practical levels. An assessment of the structural condition of the Dulwich homestead will be undertaken before blasting commences and any damage resulting from blasting will be repaired. A blast monitoring program will be implemented to help in the assessment of the impact of blasting.

The predicted "worst case" levels of air blast overpressure are well below the recommended damage criterion of 132dB Linear.

The predicted ground vibration levels exceed the damage criterion of 2mm/s for historic buildings by up to 5.3mm/s however this exceedance is expected to lead to only minor damage without any progressive deterioration.

The Company will repair damage shown to have been caused by blasting.

*(g) Previous Advice from Southland about Purchase*

This point of objection has been addressed in Section (h) of the response to the letter of objection date 7 November.

*(h) Geological Data Indicates Deposit is Not Viable or Marginal at Best.*

As discussed in (c) above recent analysis of fresh core samples indicates that maximum fluidity and dilatation will be competitive with other Hunter Valley producers. The superior quality low ash soft coking coal (6.5%) gives Camberwell a competitive advantage.

Underground reserves require more exploration and evaluation before a true assessment can be made of their development potential. While it is true that there appears to be some steeply dipping areas in the south west, there appears to be good potential for underground development of these seams in other areas at some point in the future.

In the open cut more than 72% of the coal reserves (tonnage) are contained in seams thicker than 1m. A further 21% is contained in seams 0.5-1.0m thick and about 7% is contained in seams 0.3-0.5m thick. More than 84% of the overburden and interburden is greater than 5.0 metres thick. Therefore while the project is a complex multi seam deposit it is amenable to mining by a large productive shovel truck operation supported by a small fleet of front end loaders and medium size trucks for the coal and partings removal.

The feasibility study indicates that an adequate return can be made on the capital invested.

*(i) Technical Assumptions are Questioned*

The coal loss and dilution criteria used in the preparation of mining plans for the Camberwell deposit are consistent with established mining practices at other multi seam operations required to mine thin seams in the Hunter Valley.

The thin overburden and interburden will be ripped with large Caterpillar D11 type bulldozers where economically practical. In the event that blasting of thin overburden is required, a small drill rig particularly sited to this type of application will be utilised (provision is made for this in the equipment listing). By use of small diameter blastholes, individually delayed using NONEL type initiation systems, blast vibration and air overpressure levels can be contained below the required SPCC levels when mining thin interburdens as practised at some small gold mining operations in the Forbes/Oberon/Blayney areas of NSW.

*(j) Effect of Blasting and Dust on Rural Activities*

Camberwell Coal is unaware of any evidence suggesting that blasting and dust levels are likely to affect the Hall's rural activities.

*(h) Poor Public Image of Southland Coal*

Southland Coal has attempted to project a positive public image since the appointment of Mr Stan Coffey as Acting Project Manager in 1988. With the formation of the Camberwell Joint Venture in mid 1989 and the appointment of a General Manager, Mr Rick Gazzard, in October 1989, Camberwell Coal Pty Ltd has become the operating company acting on behalf of the joint venture partners which include Southland Coal.

Camberwell Coal Pty Ltd has attempted to improve the public image of the project through the holding of public discussion days and briefing sessions for Councillors during the period of display of its EIS. It recognises that some mistakes may have been made in the past and undertakes to be more pro-active in the future in its relationships with the local community.

*(l) Flow of Water in Station Creek*

The water management system is designed as a storage and diversion system to replace Station Creek. The waste water component is a segregated system and the primary source of water for the Project thereby eliminating the likelihood of overflow of this component into the clean water system. Overflow of the total water management system will only occur after sustained rain periods when the dilution factor will be high. Potential pollution will only be a minor factor in such a situation.

No tailings dam is proposed and any potential pollution contained in the water system will be primarily suspended sediment from surface run off in the catchment areas upstream of the mine water management dams (ie. areas unaffected by mining operations).

The Project's water management system will ensure that a reliable clean water supply is maintained along Station Creek and indeed for all users of existing surface and underground sources of water.

*(m) North Pit Overburden Dump*

It is correct that the land surface will be raised by up to 40m by the creation of the out of pit dump. However the dump is located up against an east west trending ridge line so after restoration has been completed will in fact blend in against the hill. The final finished level of the dump is approximately the same as this ridge line further reducing the visual impact.

*(n) Relocation of Middle Falbrook Road*

This point of objection has been addressed in Section (r) of the response to the Halls letter of objection dated 7 November 1989.

*(o) Safeguards Against Non Performance*

Finalisation of approval conditions for the development is made by the Council, the Department of Planning and the Department of Minerals and Energy the company undertakes to comply with the approval conditions when they become known.

## **Appendix 2**

### **Dust**

#### **Supplementary Reports from Nigel Holmes & Associates**

NIGEL HOLMES & ASSOCIATES

80 Curtis Road  
Balmain NSW Australia 2041  
Telephone: (61-2) 810 8224  
Facsimile: (61-2) 810 8224

## FACSIMILE MESSAGE

To: Adrian Brett - Sydney  
From: Nigel Holmes - Sydney (Phone 61-2-810-8224  
Fax 61-2-810-8224)  
Date: 7 January 1990  
Subject: Camberwell Dust - Interim Response to Matters Raised by R & D Hall

Number of pages is 1 including this page  
.....

Adrian

This facsimile message provides an interim response to the submission by R & D Hall dated 7 November 1989. As you know I am in the processes of re-running the dispersion modelling simulations for episodic conditions so that dust other than wind erosion dust is taken into account in the assessment. However, this interim response to the main point on dust raised by R & D Hall may be helpful.

The main concern expressed by the Halls is that in the analysis of episodic impacts it was assumed that mining had stopped and that the only dust is that generated by wind erosion from stockpiles and exposed areas. It is true that the analysis was performed under these assumptions. However, their concern is based on a misunderstanding of the analysis that has been used. The table they present on Page 8 of their letter suggests that the dust generated from the operation of mining equipment is 6.5 to 9 times the dust that occurs from wind erosion. This is true on an annual average basis, but under episodic (ie very high wind speeds) wind erosion becomes the dominant source. (Wind erosion rates increase roughly as the cube of wind speed).

To illustrate the point it is instructive to look at Table 7.4.9 of the EIS and take Year 18 (for no special reason except that it has the highest estimated dust emission rate). The the annual dust emission from non-wind erosion sources is 3247.9 t (8749.0-501.1) (as noted by the Halls). This gives a daily dust generation

rate of 8,898 kg. In my analysis of the amount of dust generated under episodic conditions I estimated that 33,423 kg of dust would be generated during the "episodic day". Thus if equipment were to keep operating under these conditions there would be an additional 8,898 kg of dust, that is 26 percent more than assumed in the analysis. This is not the same as the 630 to 900 percent that the Hall's submission states will occur.



FACSIMILE MESSAGE

To: Adrian Brett - Sydney  
From: Nigel Holmes - Sydney (Phone 61-2-810-8224  
Fax 61-2-810-8224)  
Date: 19 January 1990  
Subject: Camberwell Dust

Number of pages is 17 including this page

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Adrian

This facsimile message provides the following plots showing the concentration and fallout levels of dust for various years and meteorological conditions for the Camberwell mine.

1. Predicted annual average dust deposition for Year 1 -  $\text{g.m}^{-2}.\text{month}^{-1}$
2. Predicted annual average dust concentration for Year 1 -  $\text{ug.m}^{-3}$
3. Predicted "worst-case" 24-hour average dust concentrations for Year 1, with a  $17 \text{ m.s}^{-1}$  northwest wind
4. Predicted "worst-case" 24-hour average dust concentrations for Year 1, with a  $17 \text{ m.s}^{-1}$  southeast wind
5. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a  $17 \text{ m.s}^{-1}$  northwest wind
6. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a  $17 \text{ m.s}^{-1}$  southeast wind
7. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a  $10 \text{ m.s}^{-1}$  northwest wind
8. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a  $10 \text{ m.s}^{-1}$  southeast wind
9. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a  $5.6 \text{ m.s}^{-1}$  northwest wind
10. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a  $5.6 \text{ m.s}^{-1}$  southeast wind

11. Predicted "worst-case" 24-hour average dust concentrations for Year 10, with a  $17 \text{ m.s}^{-1}$  northwest wind
12. Predicted "worst-case" 24-hour average dust concentrations for Year 10, with a  $17 \text{ m.s}^{-1}$  southeast wind
13. Predicted "worst-case" 24-hour average dust concentrations for Year 13, with a  $17 \text{ m.s}^{-1}$  northwest wind
14. Predicted "worst-case" 24-hour average dust concentrations for Year 13, with a  $17 \text{ m.s}^{-1}$  southeast wind

Please refer to the EIS (Page 163) for acceptable dust fallout levels and concentrations if you are not already familiar with these.

The predicted annual average deposition and concentration contours presented in Figures 1 and 2 for Year 1 supplement the information presented in the EIS, which showed similar predictions for Years 5, 10 and 13. The calculations were performed in the same way as in the EIS.

The "worst-case" impacts represented in Figures 3 to 14 have been estimated differently from the way in which they were estimated in the EIS. Firstly it has been assumed that all equipment on the mine continues to operate despite winds of  $17 \text{ m.s}^{-1}$  which would be classed as gale force winds. Winds of this strength would cause operational difficulties in most outdoor activities. It is certainly difficult for people to move about when the wind is at this strength. Small twigs and branches would be blown off trees etc. Secondly the method of presenting the data is different in that contour plots have been presented rather than a table as was the case in the EIS.

The wind speeds assumed to apply for the windiest of the "worst-case" conditions is  $17 \text{ m.s}^{-1}$  (hourly average). Further it was assumed that winds of this strength applied for each hour of a 24 hour period. An analysis of 1985 winds showed no hours when the hourly average wind speed exceeded  $16 \text{ m.s}^{-1}$  and only 3 hours when it was between 15 and  $16 \text{ m.s}^{-1}$ , 2 hours between 14 and  $15 \text{ m.s}^{-1}$ , 5 hours between 13 and  $14 \text{ m.s}^{-1}$  and 11 hours between 12 and  $13 \text{ m.s}^{-1}$ . Thus the assumption of a day when the hourly average wind speed was around  $17 \text{ m.s}^{-1}$  is extremely conservative.

The results of the "worst-case" days are presented in Figures 3 to 14. This information then responds to the concern expressed by R & D Hall that dust from mining activity was excluded from the "worst-case" assessment as discussed on Page 3 of their letter. It can be seen by comparing the information in Table 7.4.11 (which has been replaced - see errata to the EIS) and the figures showing impacts under  $17 \text{ m.s}^{-1}$  from the northwest, that leaving out dust from mining activity has little effect on the overall impact. This because the dust under episodic conditions is much greater than the annual average wind erosion dust that was listed in the table presented by R & D Hall (Page 3 of their letter). In the case of episodic impacts the dust from wind erosion becomes the dominant source of dust.

This is not to say that the Hall's property lies outside the "zone of affectation", it clearly lies inside this zone as shown in Figure 7.4.13 of the EIS, but it does that respond to the concern about the analysis of "worst-case" impacts.

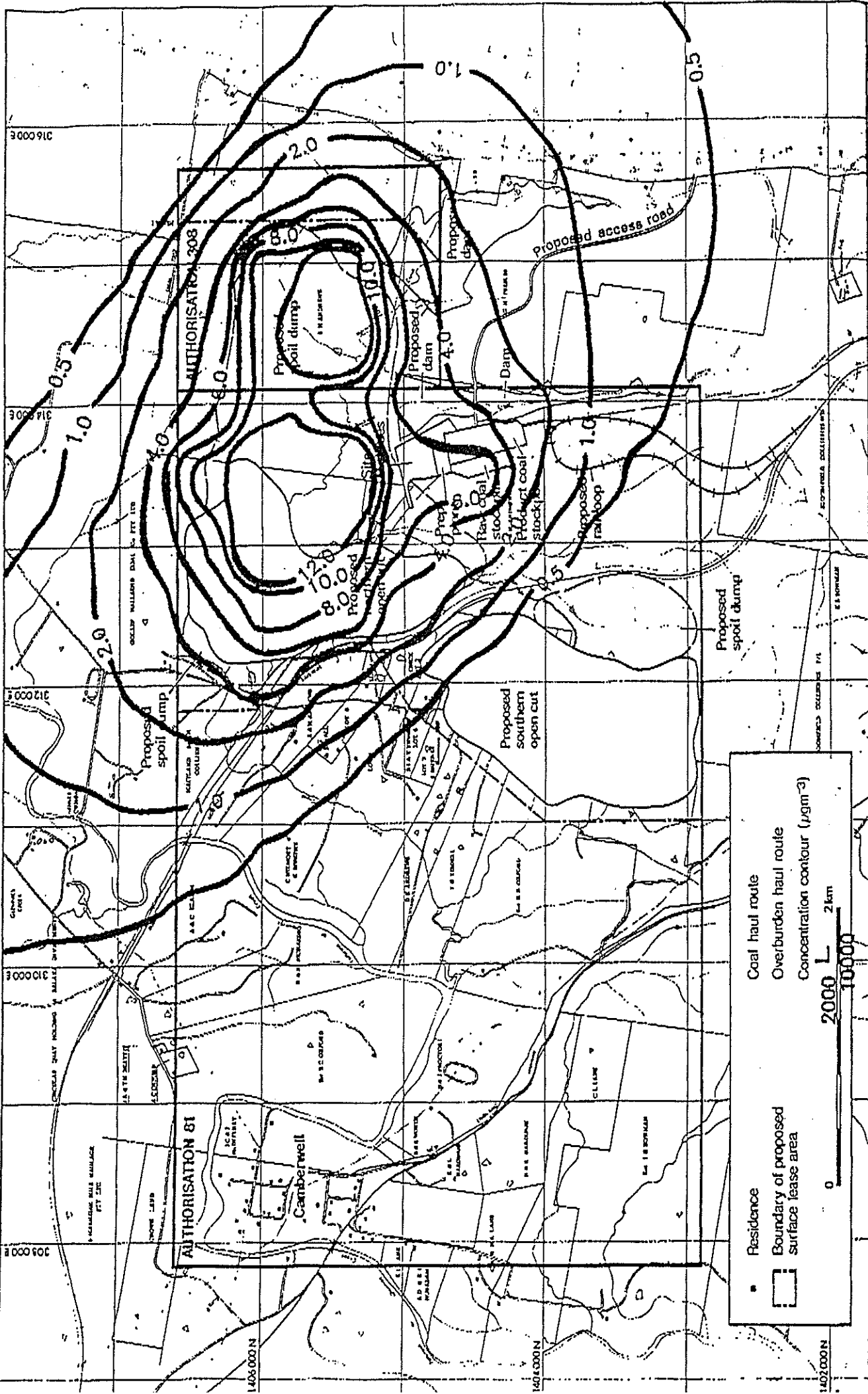
Residences within the "zone of affectation" are taken as being affected by dust.

The EIS states on Page 181 that negotiations are proceeding with affected residents so it appears that we have caused some confusion by stating that no privately owned residents are affected. Clearly the EIS shows that some are and that negotiations are taking place.

Regards

*Nigel*

Nigel



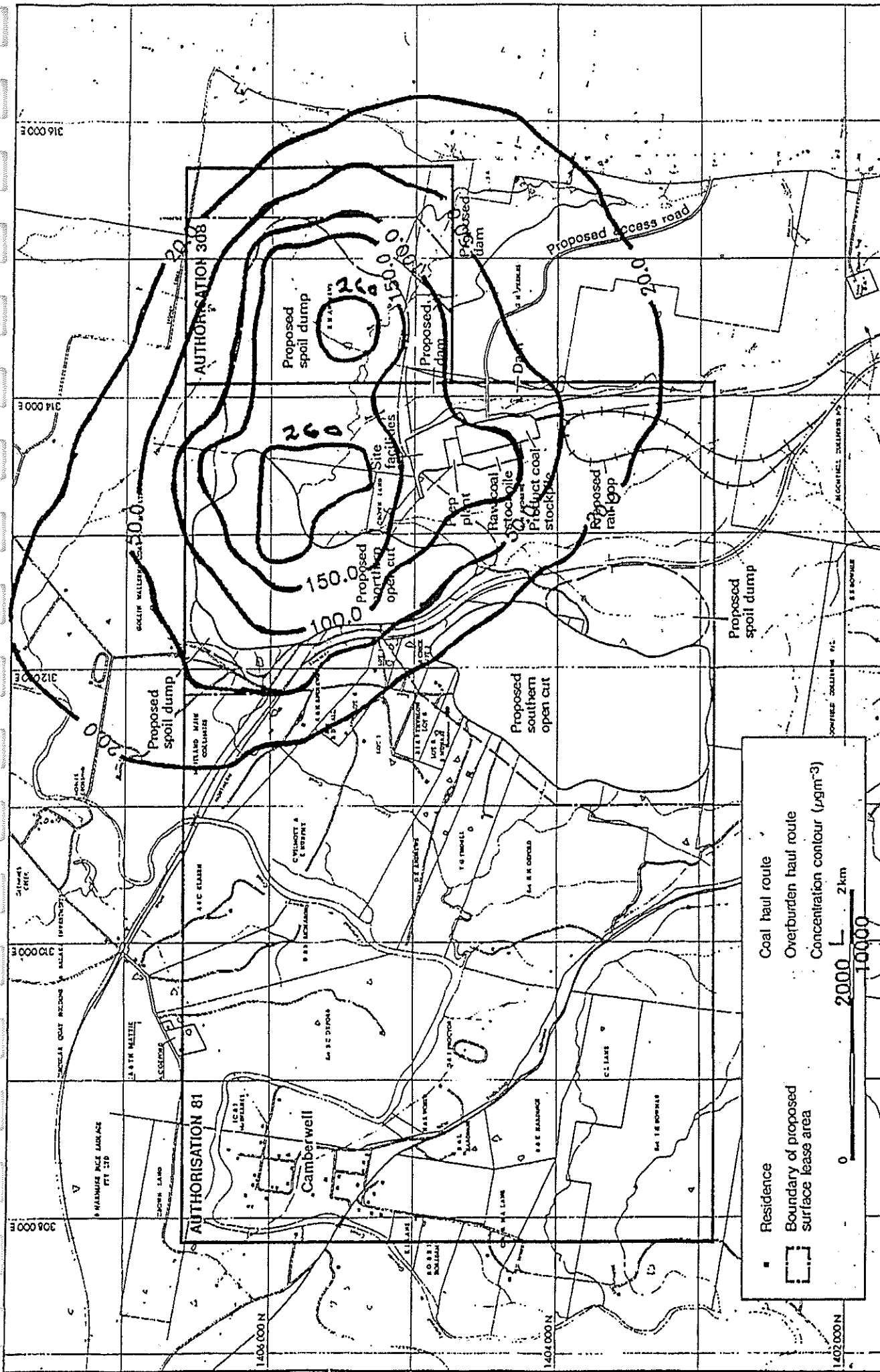
CAMBERWELL COAL PROJECT

1. Predicted annual average dust deposition for Year 1 -  $\text{g}\cdot\text{m}^{-2}\cdot\text{month}^{-1}$

Date October 1989

Figure

Prepared by  
NIGEL HOLMES & ASSOCIATES

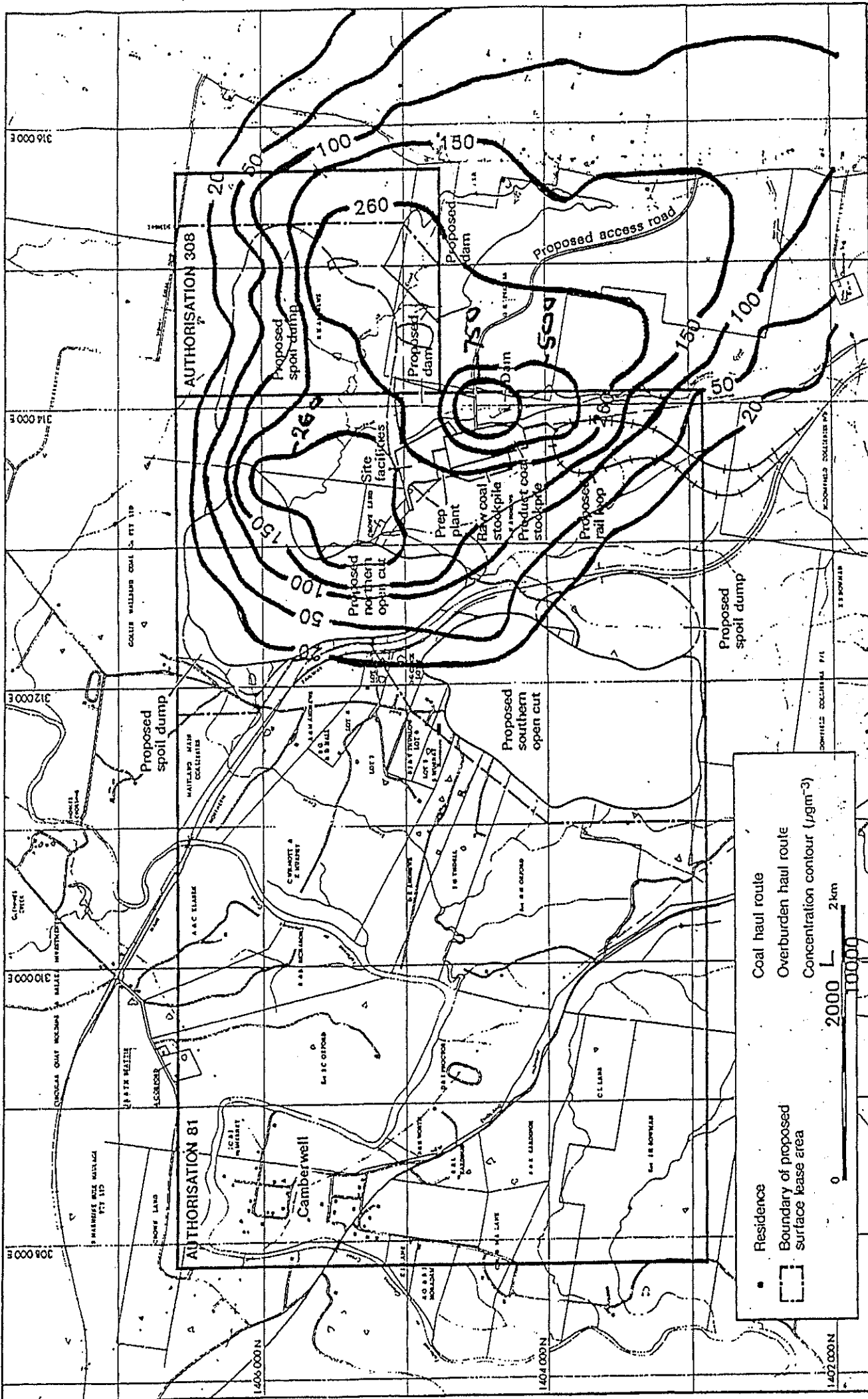


**CAMBERWELL COAL PROJECT**

2. Predicted annual average dust concentration for Year 1 -  $\mu\text{g}\cdot\text{m}^{-3}$

Date October 1989      Figure 1

Prepared by  
NIGEL HOLMES & ASSOCIATES



• Residence  
 □ Boundary of proposed surface lease area  
 — Coal haul route  
 - - - Overburden haul route  
 --- Concentration contour ( $\mu\text{g}/\text{m}^3$ )

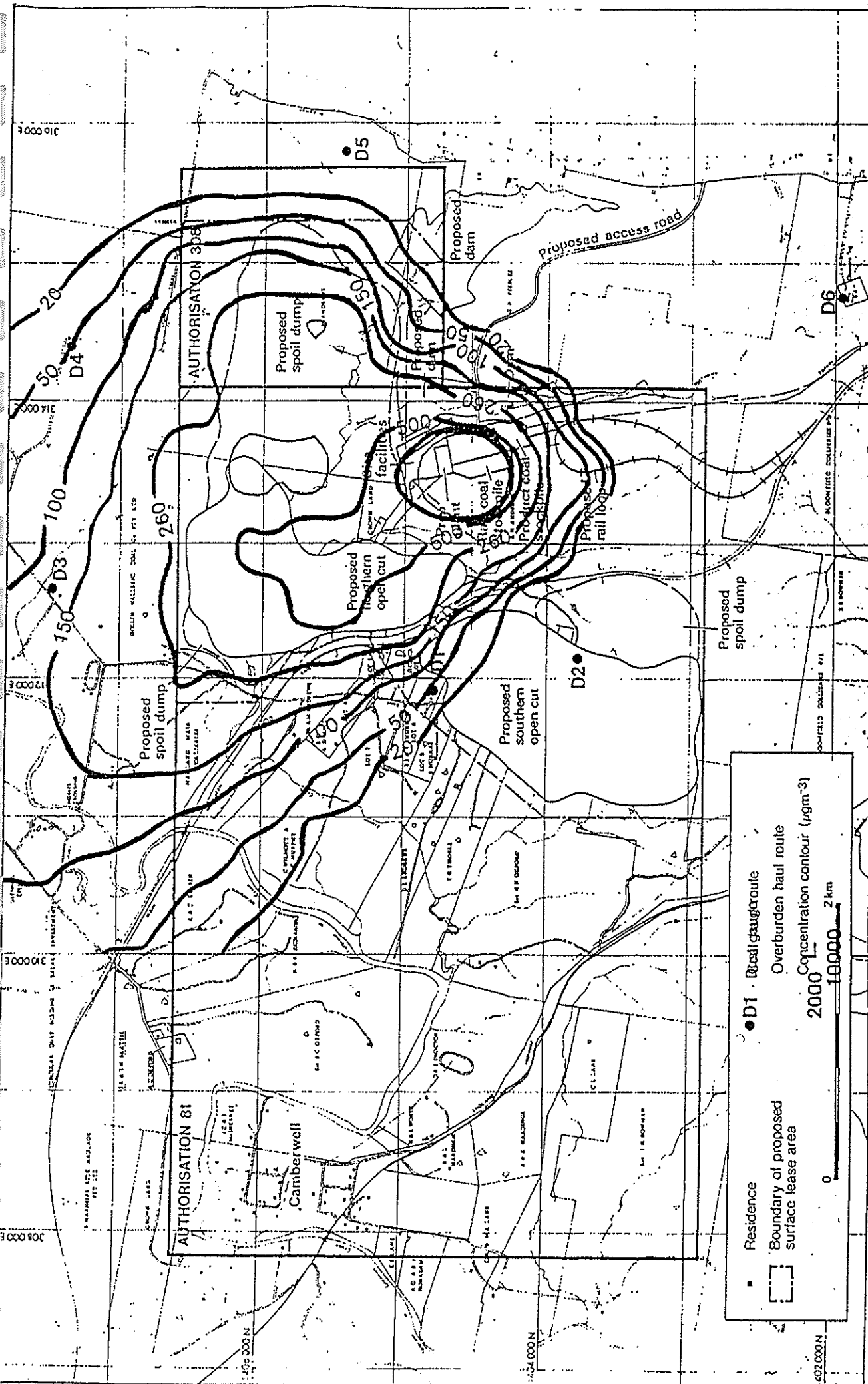
0 2000 10000 2 km  
 Scale bar showing 0, 2000, and 10000 units, with a 2 km scale.

**CAMBERWELL COAL PROJECT**

Date October 1989 Figure

Prepared by  
NIGEL HOLMES & ASSOCIATES

3. Predicted "worst-case" 24-hour average dust concentrations for Year 1, with a 17 m.s<sup>-1</sup> northwest wind

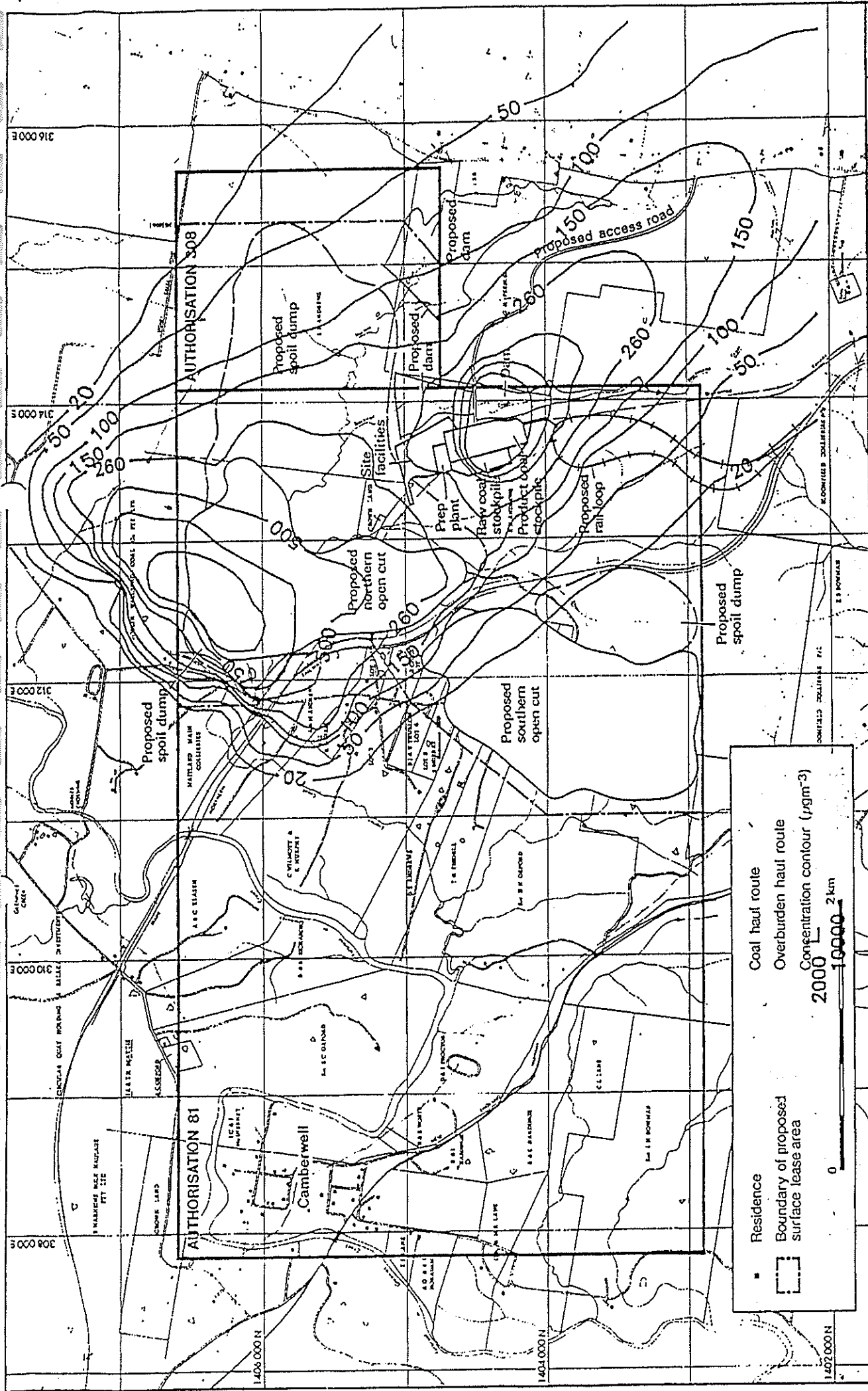


**CAMBERWELL COAL PROJECT**

Date October 1989 figure 2

4. Predicted "worst-case" 24-hour average dust concentrations for Year 1, with a 17 m.s<sup>-1</sup> southeast wind

Prepared by  
NIGEL HOLMES & ASSOCIATES



Date October 1989

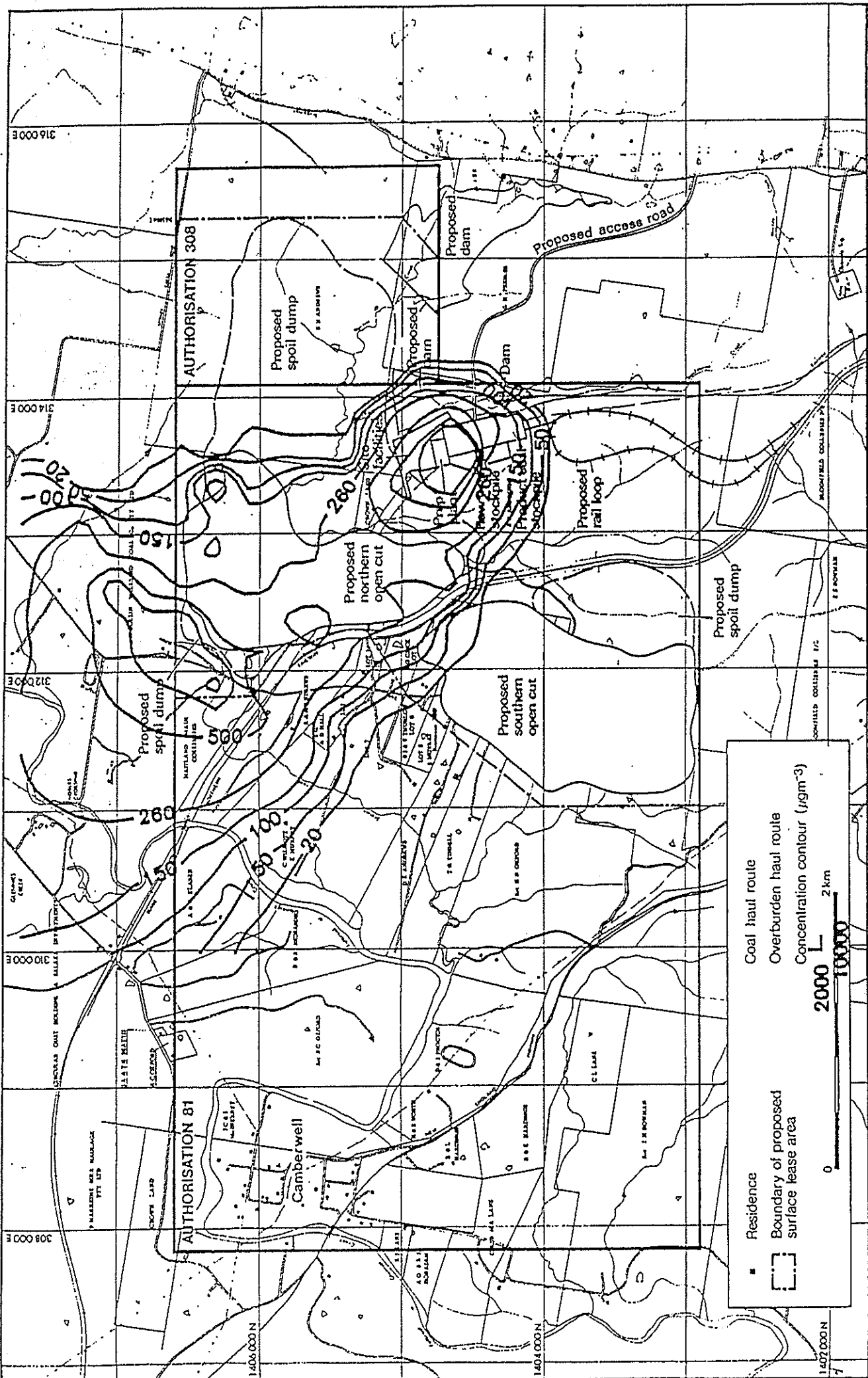
Figure

# CAMBERWELL COAL PROJECT

Prepared by  
NIGEL HOLMES & ASSOCIATES

5. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a 17 m.s.<sup>-1</sup> northwest wind



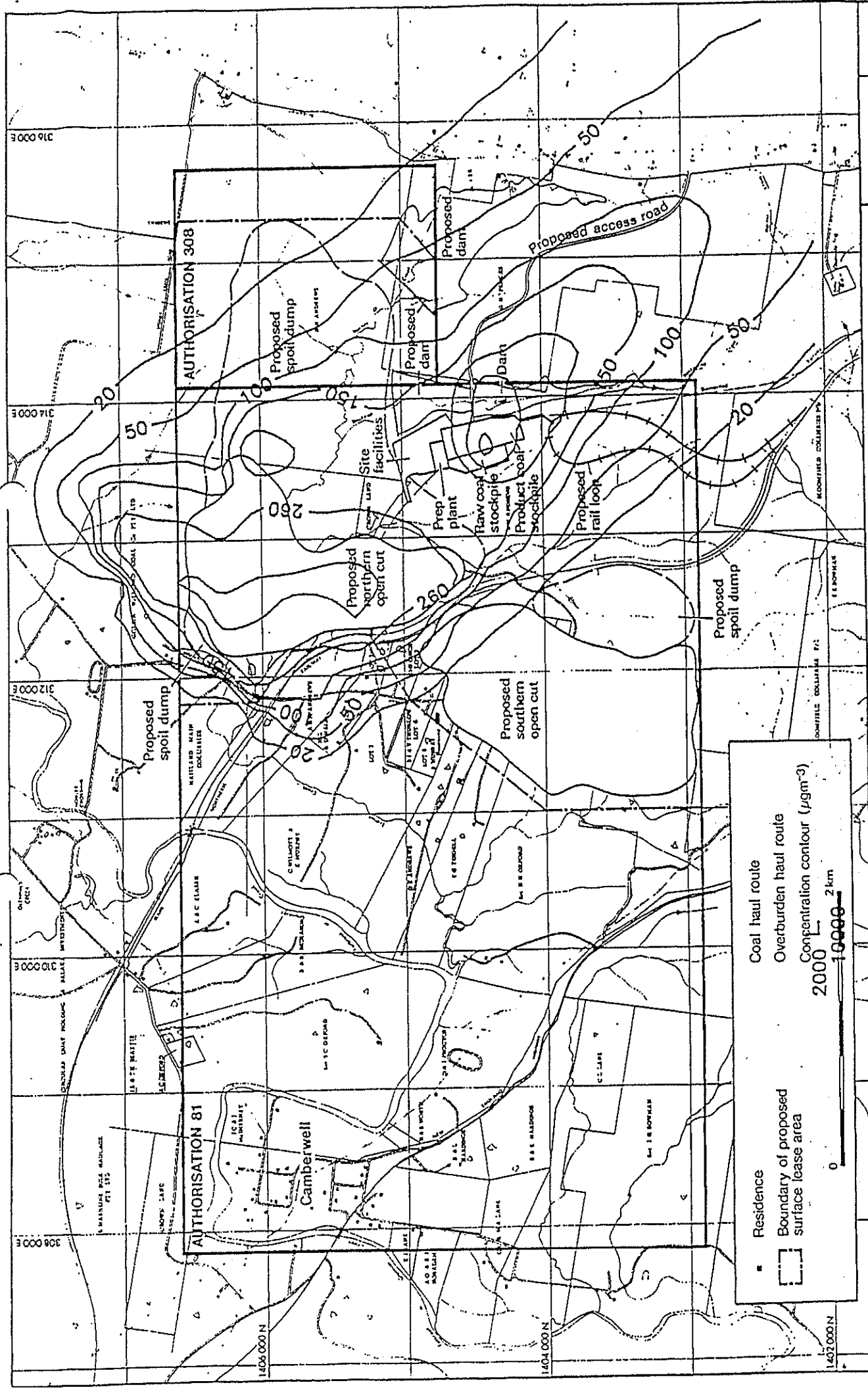


CAMBERWELL COAL PROJECT

Date October 1989 FIGURE 6

Prepared by  
NIGEL HOLMES & ASSOCIATES

6. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a 17 m.s.<sup>-1</sup> southeast wind



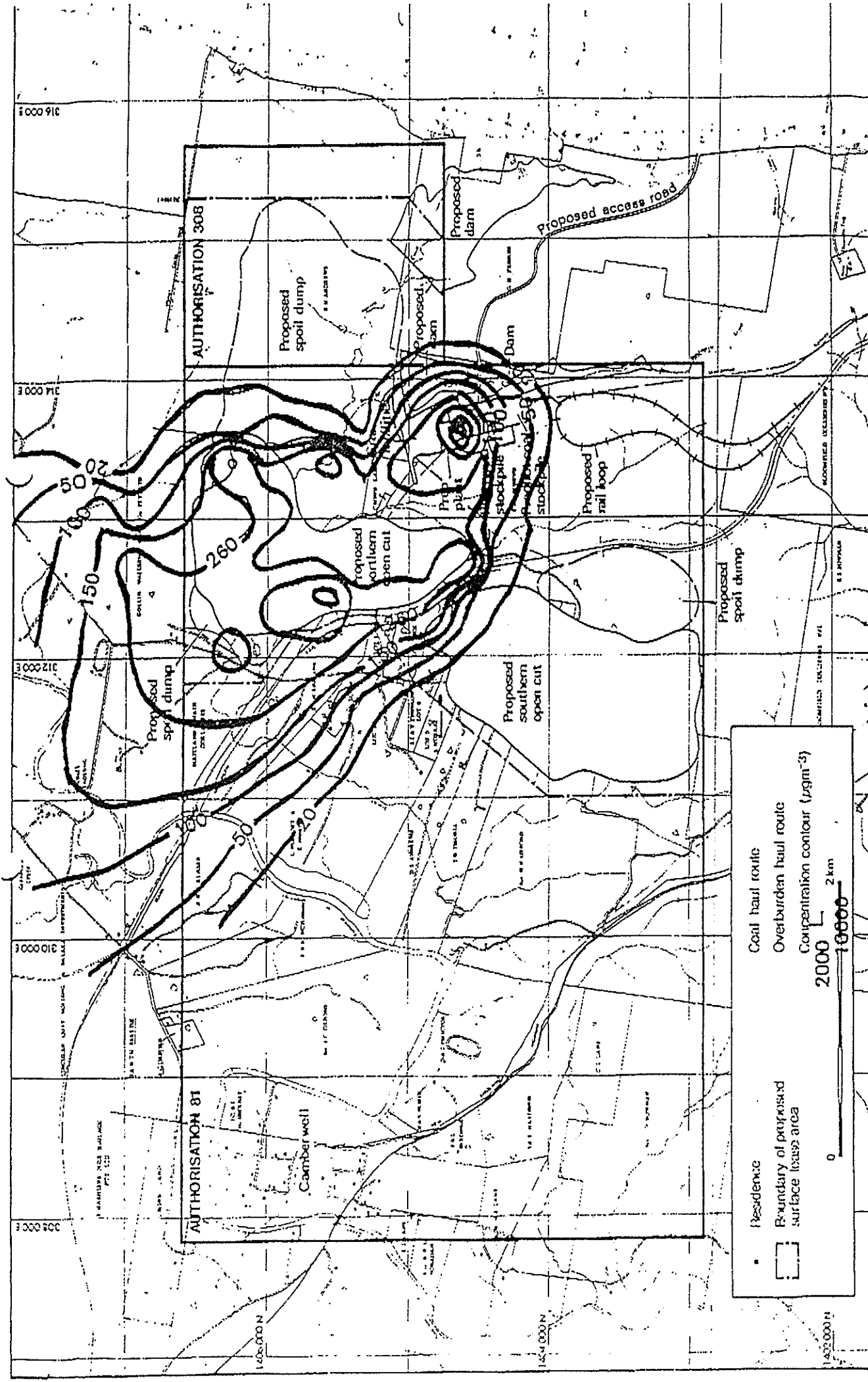
**CAMBERWELL COAL PROJECT**

7. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a 10 m.s<sup>-1</sup> northwest wind

Date October 1989

Figure

Prepared by  
NIGEL HOLMES & ASSOCIATES

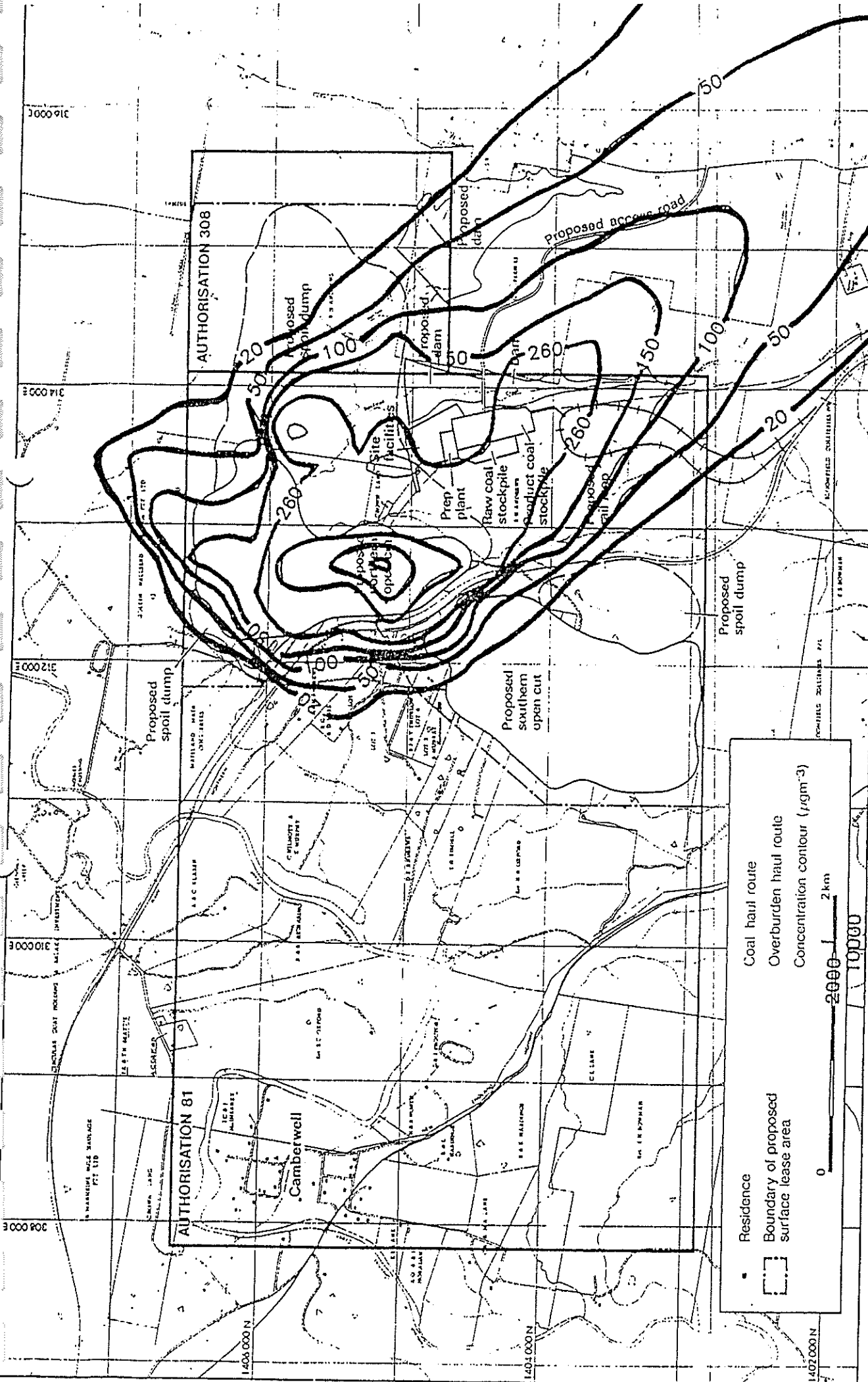


**CAMBERWELL COAL PROJECT**

Date October 1989 Figure 2

8. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a 10 m.s<sup>-1</sup> southeast wind

Prepared by  
NIGEL HOLMES & ASSOCIATES



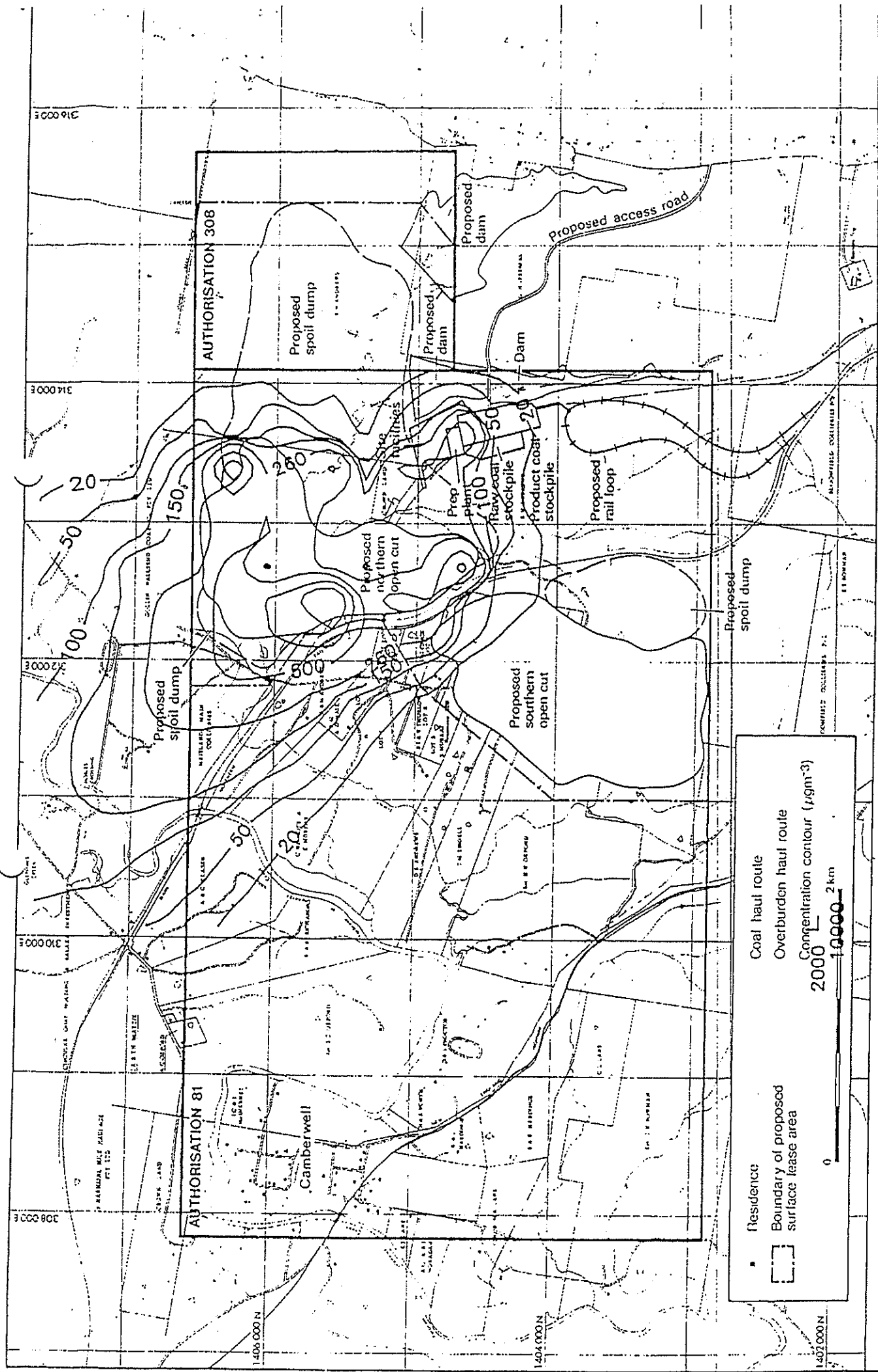
• Residence  
 - - - Boundary of proposed surface lease area  
 — Coal haul route  
 — Overburden haul route  
 — Concentration contour ( $\mu\text{gm}^{-3}$ )  
 0 — 2000 — 10000 — 2 km

### CAMBERWELL COAL PROJECT

9. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a 5.6 m.s<sup>-1</sup> northwest wind

Date October 1989 Figure

Prepared by  
NIGEL HOLMES & ASSOCIATES

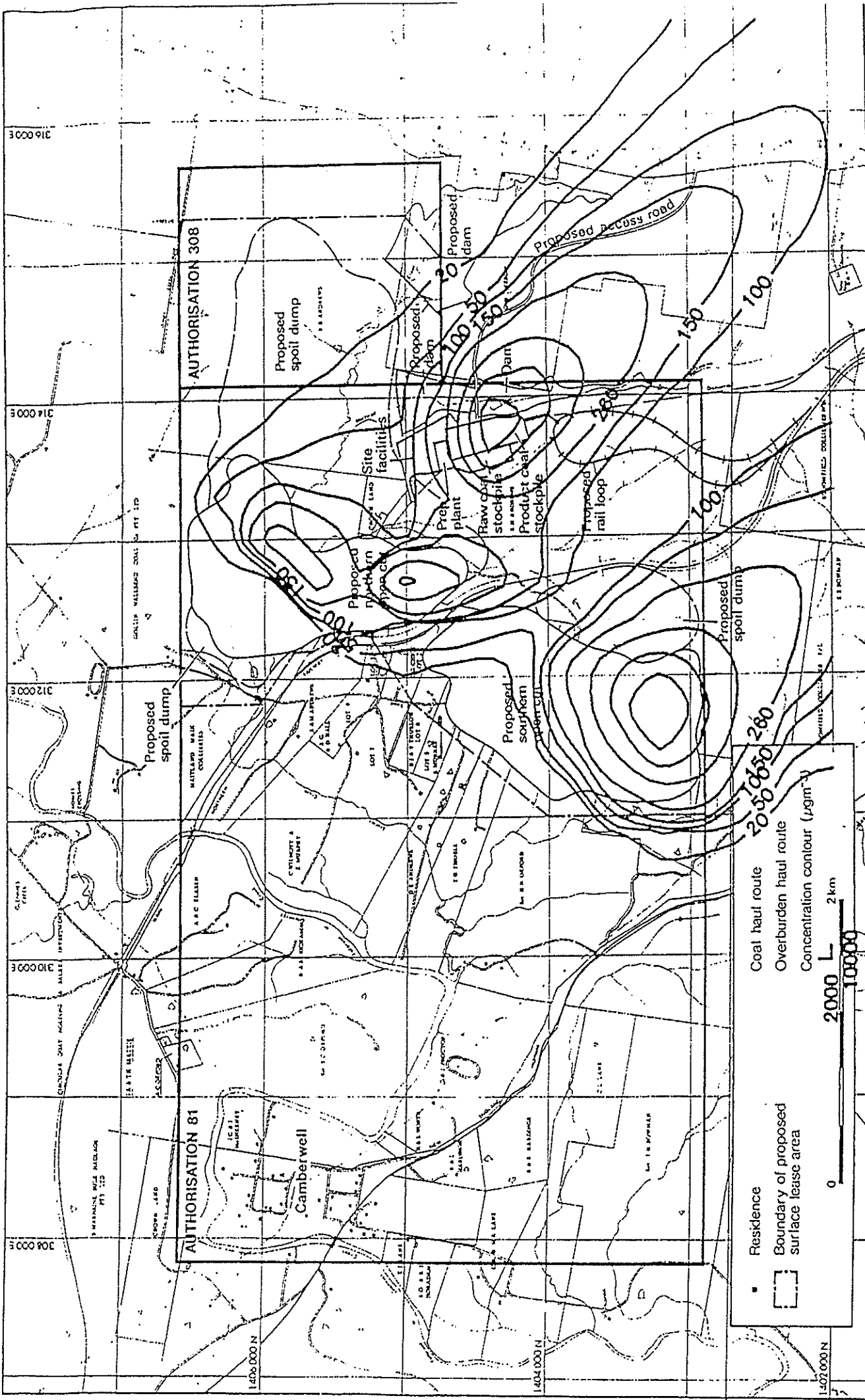


CAMBERWELL COAL PROJECT

Date October 1989 Figure 10

10. Predicted "worst-case" 24-hour average dust concentrations for Year 5, with a 5.6 m.s<sup>-1</sup> southeast wind

Property by NIGEL HOLMES & ASSOCIATES

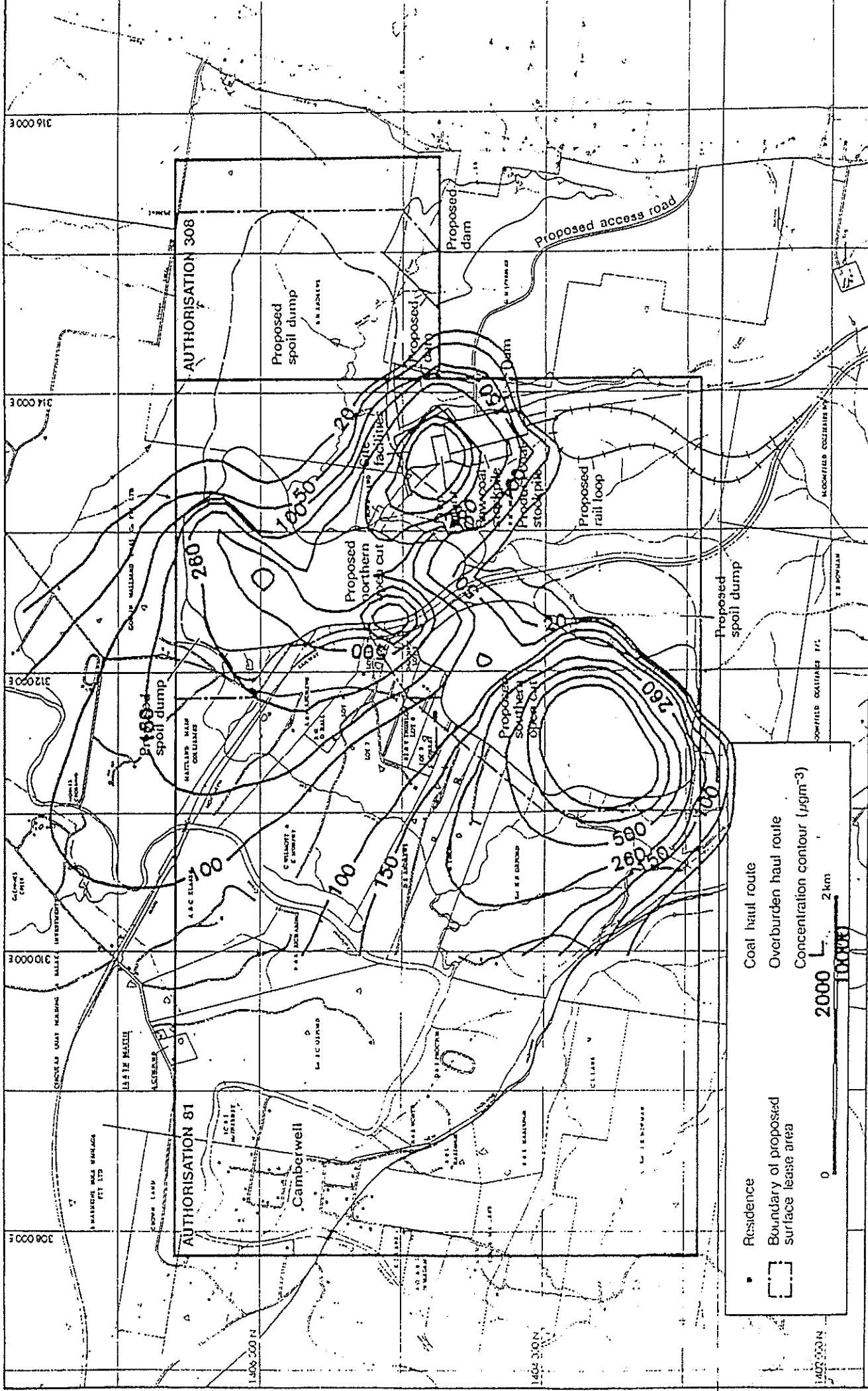


CAMBERWELL COAL PROJECT

11. Predicted "worst-case" 24-hour average dust concentrations for Year 10, with a 17 m.s<sup>-1</sup> northwest wind

Date October 1989 Figure

Prepared by  
NIGEL HOLMES & ASSOCIATES



• Residence  
 □ Boundary of proposed surface lease area  
 — Coal haul route  
 — Overburden haul route  
 — Concentration contour ( $\mu\text{g}/\text{m}^3$ )  
 0 2000 4000 6000 8000 10000  
 0 2 km

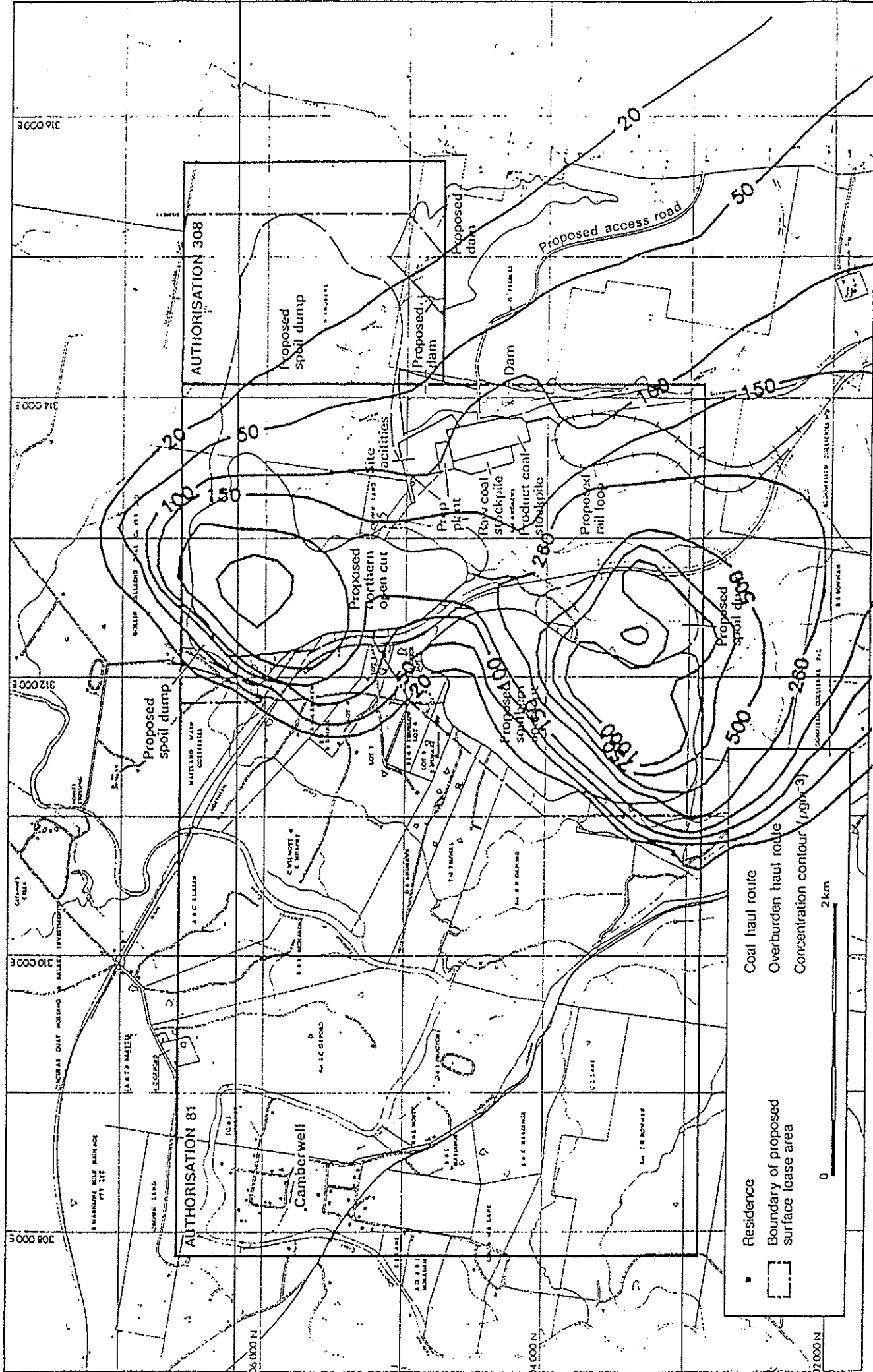
CAMBERWELL COAL PROJECT

Date October 1989 FIGURE

12. Predicted "worst-case" 24-hour-average dust concentrations for Year 10, with a  $17 \text{ m.s}^{-1}$  southeast wind

Prepared by  
NIGEL HOLLMES & ASSOCIATES





CAMBERWELL CO. 308-81

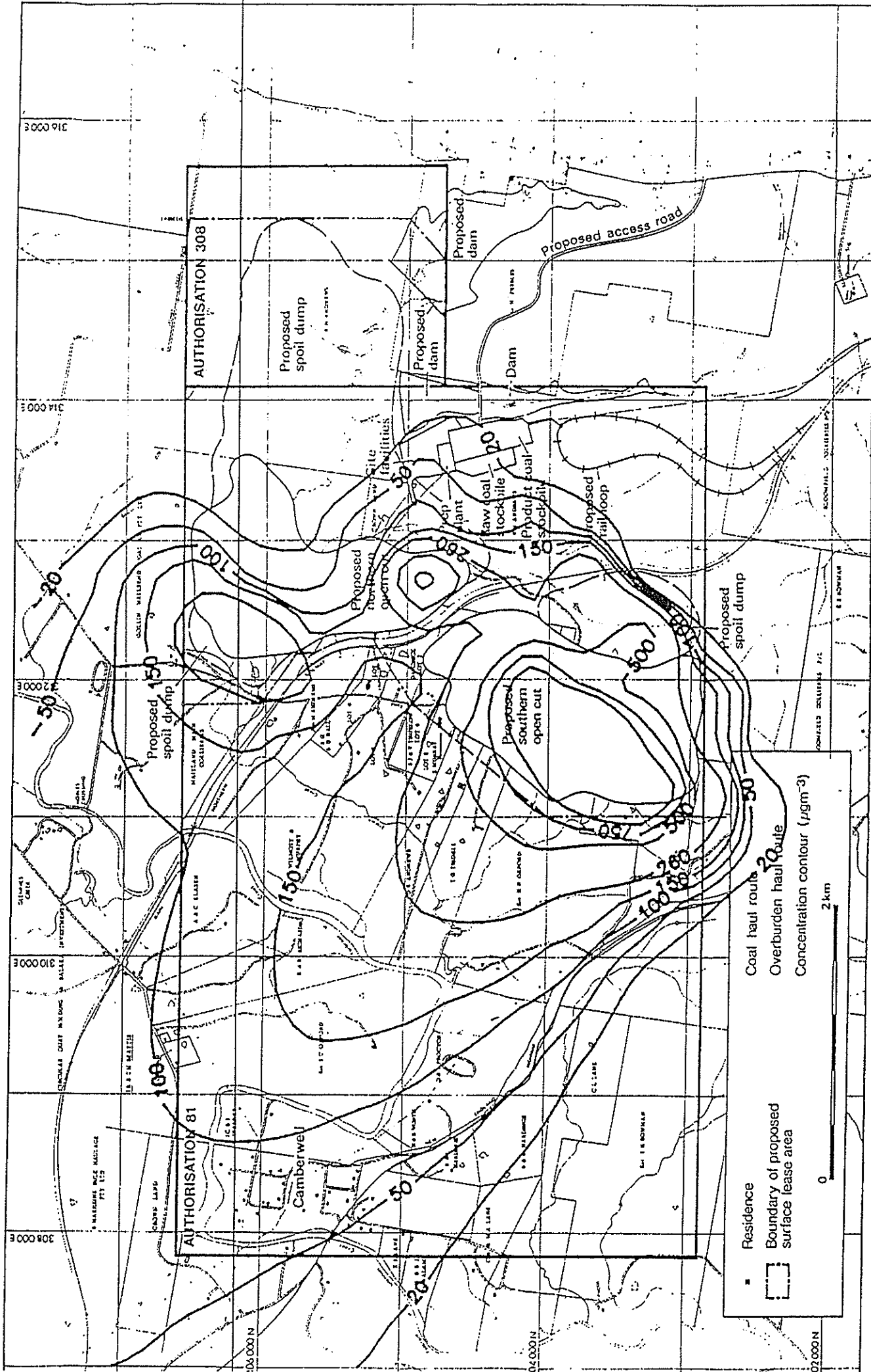
Date October 1989

Figure

13. Predicted "worst-case" 24-hour average dust concentration 13, with a  $17 \text{ m.s}^{-1}$  northwest wind

Prepared by  
NIGEL HOLMES & ASSOCIATES





### CAMBERWELL COAL PROJECT

14. Predicted "worst-case" 24-hour average dust concentrations for Year 13, with a 17 m.s<sup>-1</sup> southeast wind

Date October 1989

Figure

Prepared by  
NIGFL HOLMES & ASSOCIATES

CAMBERWELL COAL PROJECT  
ENVIRONMENTAL IMPACT STATEMENT  
ERRATA

TABLE 7.4.11 should read:

TABLE 7.4.11

ESTIMATED DUST CONCENTRATION UNDER "WORST-CASE" EPISODIC  
CONDITIONS

Downwind distance - m (from edge of stockpile)	Concentration - ug/m <sup>3</sup>
200	575
400	415
600	309
800	242
1000	198
1200	167
1400	143
1600	125
1800	112
2000	101
2200	92
2400	84
2600	78
2800	73
3000	68

Note: The primary 24-hour standard of 260 ug/m<sup>3</sup> would be exceeded out to approximately 800 m. For winds blowing in other directions the re! episodic dust would be less.

p83 Line 11 46m<sup>3</sup> should be 46m<sup>3</sup>/s

p93 Section 5.4.3 Line 6 Figure 5.2.2 should read Figure 5.4.1.



Environmental, Planning  
& Geological Consultants

FACSIMILE TRANSMISSION

TO CAMBERWELL COAL PTY LTD FAX NO: \_\_\_\_\_

ATTN PHIL BROOKS \_\_\_\_\_

FROM ADRIAN BRETT FAX NO: (02) 969 5837

SUBJECT EIS FINAL COSTS - CAMBERWELL COAL PROJECT \_\_\_\_\_

DATE: 14/08 / 91.

NUMBER OF PAGES: 6 (including this page)

MESSAGE:

Signature: \_\_\_\_\_

Receiving Operator - Please advise by phone to (02) 969 4593,  
any incorrect transmission.

Epps & Associates Pty Ltd  
100/106/110  
100/106/367  
Cromwell NSW 2090  
Tel: (02) 969 4593  
(02) 969 4594  
Fax: (02) 969 4593

**SOUTHLAND MINING: CAMBERWELL PROJECT  
BUDGET REPORT TO NOVEMBER 1989**

**SUMMARY OF BUDGET ESTIMATES**

NIGEL HOLMES & ASSOCIATES	11.12.1988	\$13865.00
STUART MILLER & ASSOCIATES	05.12.1988	\$ 4775.00
RICHARD BRIGGIE ASSOCIATES	08.12.1988	
Noise survey and assessment		\$21300.00
Blasting		\$ 4350.00
WAYNE PERRY & ASSOCIATES	09.11.1988	\$15927.00

**MITCHELL McCOTTER & ASSOCIATES.**

Claim 1	27.09.1986	\$ 461.56
Claim 2	23.09.1986	\$ 454.15
Claim 3	28.10.1986	\$ 468.60
Claim 4	25.11.1986	\$ 515.20
Claim 5	24.12.1986	\$ 459.00
Claim 6	28.01.1986	\$ 480.91
Claim 7	28.02.1986	\$ 625.00
Claim 8	21.03.1986	\$ 528.83
Claim 9	21.04.1986	\$ 796.26
Claim 10	26.05.1986	\$ 519.90
Claim 11	23.06.1986	\$1671.70
Claim 12	22.07.1986	\$1122.25
Claim 13	25.08.1986	\$ 904.78
Claim 14	24.09.1986	\$1108.42
Claim 15	28.10.1986	\$ 795.37
Claim 16	24.11.1986	\$ 861.17
Claim 17	23.12.1986	\$ 529.17
Claim 18	28.01.1987	\$ 498.47
Claim 19	25.02.1987	\$ 704.92
Claim 20	23.03.1987	\$1002.95
Claim 21	22.04.1987	\$ 617.61
Claim 22	28.05.1987	\$ 616.61
Claim 23	01.07.1987	\$ 608.17
Claim 24	13.08.1987	\$ 621.67
Claim 25	27.08.1987	\$ 620.27
Claim 26	30.09.1987	\$1930.12
Claim 27	30.10.1987	\$ 537.65
		-----
	Sub-total	\$20048.60

Claim 01	29.11.1988	\$ 468.10
Claim 02	28.12.1988	\$ 408.70
Claim 03	30.01.1989	\$ 197.59
Claim 04	28.02.1989	\$ 443.68
Claim 05	28.04.1989	\$ 331.88
Claim 06	29.05.1989	\$1585.13
Claim 07	07.07.1989	\$1056.00
Claim 08	30.07.1989	\$2485.68

Claim 09 24.08.1989  
 Claim 10 22.09.1989  
 Claim 11 30.10.1989

\$2262.40  
 \$7010.41  
 \$3414.00

Sub Total

\$19659.67 + 20048.60

\$ 39,702.27

AUSTRALIAN GROUNDWATER CONSULTANTS

Claim 1 30.08.1986 \$1320.00  
 Claim 2 25.09.1986 \$1486.58  
 Claim 3 16.10.1986 \$1320.00  
 Claim 4 28.11.1985 \$1486.58  
 Claim 5 25.12.1985 \$ 495.34  
 Claim 6 25.01.1986 \$ 890.00

Sub Total \$6998.50

DAMES & MOORE.

Claim 1 10.10.1986 \$1550.26  
 Claim 2 25.06.1987 \$1499.80

Sub Total \$3050.06

WAYNE PERRY & ASSOCIATES

Claim 1 30.09.1986 \$3966.05  
 Claim 2 30.11.1986 \$6498.22  
 Claim 3 29.05.1987 \$1666.45

Sub Total \$12130.72

Claim 4 30.11.1988 \$2050.70  
 Claim 5 22.12.1988 \$1873.50  
 Claim 5M 21.12.1988 \$7000.00  
 Claim 6 31.01.1989 \$1070.90  
 Claim 7 31.05.1989 \$5339.89  
 Claim 8 28.07.1989 \$4264.58  
 Claim 9 28.08.1989 \$2147.70  
 Claim 10 28.09.1989 \$ 520.50  
 Claim 11 27.10.1989 \$3856.40

Sub Total

\$28124.17 + 12130.72

\$40254.89

EPPS & ASSOCIATES

Claim 1	05.09.1985	\$1321.45
Claim 2	01.10.1985	\$ 708.90
Claim 3	05.11.1985	\$ 615.18
Claim 4	02.12.1985	\$ 389.60
Claim 5	06.01.1986	\$ 236.02
Claim 6	03.02.1986	\$ 145.76
Claim 7	05.03.1986	\$ 71.00
Claim 8	03.05.1986	\$ 164.50
Claim 9	13.06.1986	\$1981.80
Claim 10	09.08.1986	\$2255.65
Claim 11	12.09.1986	\$1082.20
Claim 12	06.11.1986	\$2223.94
Claim 13	05.12.1986	\$ 946.00
Claim 14	14.01.1987	\$ 50.00
Claim 15	05.03.1987	\$ 388.00
Claim 16	06.04.1987	\$ 103.50
Claim 19	03.07.1987	\$ 50.00
Claim 22	31.10.1987	\$ 150.00
Claim 23	20.12.1987	\$ 944.50

Sub Total \$13808.00

Claim 24	03.02.1988	\$ 520.70
Claim 25	03.06.1988	\$1165.30
Claim 26	02.08.1988	\$3326.90
Claim 27	01.09.1988	\$2522.80
Claim 28	05.10.1988	\$3460.70
Claim 29	02.11.1988	\$5678.60
Claim 30	01.12.1988	\$2658.00
Claim 31	04.01.1989	\$4875.60
Claim 32	03.02.1989	\$5081.00
Claim 33	13.03.1989	\$4101.30
Claim 34	31.03.1989	\$ 534.80
Claim 35	02.05.1989	\$9322.00
Claim 36	02.06.1989	\$7751.25
Claim 37	03.07.1989	\$5244.95
Claim 38	07.08.1989	\$6653.65
Claim 39	01.09.1989	\$4299.80
Claim 40	04.10.1989	\$5215.00
Claim 41	31.10.1989	\$19873.00

Sub Total

\$86183.35 + 13808 = \$99,991.3

T J PATCHEN & ASSOCIATES

Claim 1	30.07.1986	\$1904.66
	Sub Total	\$1904.66

STUART MILLER & ASSOCIATES

Claim 1	01.09.1986	\$3710.00
	Sub Total	\$3710.00

Claim 2	31.10.1988	\$1730.00
Claim 3	21.12.1988	\$2300.00
Claim 4	02.06.1989	\$2770.00

\$6800.00 + 3710 = \$10510

RICHARD HIGGLE ASSOCIATES PTY LTD

Claim 1	30.11.1986	\$1673.90
	Sub Total	\$1673.90

Claim 2	28.04.1989	\$7024.96
Claim 3	31.05.1989	\$3813.25
Claim 4	23.08.1989	\$3441.96
Claim 5	21.09.1989	\$6302.62
Claim 6	25.10.1989	\$12680.36
Claim 7	25.10.1989	\$ 689.00

Sub Total \$33962.15

+ 1673 = \$35625

BRAYSHAW & ASSOCIATES

Claim 1	18.09.1986	\$6178.64
	Sub Total	\$6178.64



INTEGRATED WORD PROCESSING SERVICES

Claim 1	18.11.1986	\$ 39.20
Claim 2	01.12.1986	\$ 19.60
	Sub Total	\$ 58.80

Claim 3	28.09.1988	\$ 523.80
Claim 4	20.01.1989	\$ 162.50

Claim 5	23.02.1989	\$1150.00
Claim 6	23.02.1989	\$ 852.00
Claim 7	16.05.1989	\$ 389.00
Claim 8	08.06.1989	\$ 478.00
Claim 9	05.07.1989	\$ 885.00
Claim 10	10.07.1989	\$ 20.00
Claim 11	28.08.1989	\$ 74.00
Claim 12	31.10.1989	\$6623.75

Sub Total \$11158.05

*+ 58.80 \$11,216.85*

**SOIL CONSERVATION SERVICE**

Claim 1 27.08.1987 \$9831.62

Sub Total \$9831.62

**NIGEL HOLMES & ASSOCIATES**

Claim 1 06.11.1989 \$13813.33

Sub Total \$13813.33

**S.G.S. AUSTRALIA PTY LTD**

Claim 1	31.03.1989	\$ 150.00
Claim 2	18.05.1989	\$ 125.00
Claim 3	29.05.1989	\$ 150.00
Claim 4	21.06.1989	\$ 180.00
Claim 5	25.07.1989	\$ 128.00
Claim 6	28.09.1989	\$ 150.00
Claim 7	12.10.1989	\$ 180.00
Claim 8	03.11.1989	\$ 180.00

Sub Total \$1241.00

TOTAL \$79393.39

TOTAL \$200926.62

JANET M. EPPS  
EPPS & ASSOCIATES PTY LTD.