

IN THE MATTER OF The Resource Management
Act 1991

AND

IN THE MATTER OF Application CRC101880 by
Wright Marble Limited for a
discharge permit.

Decision of the Hearing Commissioner

Appointment

This is the decision of Hearing Commissioner Barry Loe, appointed by Canterbury Regional Council (CRC, Environment Canterbury) to hear and decide the application by Wright Marble Limited (the Applicant) for resource consent to discharge contaminants to air under Section 15 of the Resource Management Act 1991 (RMA).

Decision Summary

The application is granted, subject to conditions for a term of 15 years.

Hearing

The Hearing of the application and submissions was held at Lincoln on Thursday 10 November 2011.

Appearances at the Hearing

For the Applicant:

Mr John Iseli, Air Quality Consultant

Mr Julian Crawford, Managing Director and Co-owner, Wright Marble Ltd

For the Submitters:

Mr Wayne Hawker, Trustee Phillipstown Community Centre Charitable Trust

Ms Maryanne Bell, Manager Phillipstown Community Centre

CRC Consent Reporting Officer:

Mr Kevin Swete

I made a visit to the site and surrounding area following the conclusion of the Hearing on 10 November 2011. Subsequently, I requested from CRC a copy of the complaints record relating to the Phillipstown School area from 1 January 2010. I then asked some

questions of Mr Nathan Dougherty, Team Leader, Compliance Monitoring, Industrial at CRC about responses of CRC to complaints of odour in the Phillipstown area, particularly those attributed to Wright Marble Ltd. The Hearing was closed on 22 November 2011.

Background to this Application

The Applicant commenced manufacturing composite resin bench tops for the domestic and commercial building industry on the site at 464 St Asaph Street, Christchurch in August 2008. The Applicant did not, at that time, hold resource consent for the discharge to air from the manufacturing process. Complaints that odours from the Applicant's property were affecting people on adjacent properties, especially the Phillipstown School, were received by Environment Canterbury from September 2008.

An application, CRC091986 to discharge contaminants to air was made by Wright Marble Ltd in November 2008. That application was notified, submissions received and a hearing held. The application was granted in June 2009, but for a period of one year only.

The current application, CRC101880 was lodged in December 2009, within the RMA s124 time limit that allows the activity to continue under the terms of the expiring consent until the new application is determined and any appeals resolved.

The Applicant's site is located in the Business 3B (Inner City Industrial Buffer) zone in the Christchurch City Plan. This zone is intended to buffer the Business B3 (Inner City Industrial) zone from the Living 3 (Inner City Medium Density) residential zone. The Applicant's operation on this site is a permitted activity under the rules of the City Plan. There is a small area of Living 3 Zone 30 metres to the south-west of the site. The Phillipstown School site that commences 20 metres from the Applicant's site, is zoned Cultural 3 (Schools). The Business 3B zone continues to the south of the school, with Business 3 to the west and Living 3 to the east.

Affected Parties and Written Approvals to the Application

Canterbury Regional Council, pursuant to RMA s95E, determined that the activity will have, or is likely to have, adverse effects that are minor, or more than minor, on people in the immediate vicinity of the discharge. Therefore, pursuant to RMA s95B, the application was to be limited notified to the affected parties, being owners and occupiers of 10 neighbouring land parcels. These included adjacent businesses and residences, Phillipstown School, the Ministry of Education and the Phillipstown Community Centre which is located on the school property.

Before the application was notified the Applicant obtained written approvals for the application from most affected parties including the Phillipstown School Board of Trustees. Written Approvals were not obtained from; one property owner on Phillips Street, the Ministry of Education, and the Phillipstown Community Centre.

Notification and Submissions

Notice of the application was sent on 8 September 2011 to the three parties who had not given written approval. One submission was received, from the Phillipstown Community Centre Charitable Trust. The submission opposes the application and sought a hearing.

Statutory provisions & Assessment

The Resource Management Act 1991 (RMA)

Section 15 (1)(c) of the RMA states:

“No person may discharge any-

(a)...

(b)...

(c) Contaminant from any industrial or trade premises into air;

(d)...

unless the discharge is expressly allowed by a national environmental standard or other regulations, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one) or a resource consent.

National Environmental Standards (NES)

NES regulations for air quality came into effect in September 2005, and these were in force when the application was accepted. However, the regulations were amended in June 2011 to revoke the 2005 regulations that may have applied to this discharge, and it is the 2011 regulations that apply to a decision on this application.

The NES does not expressly allow this discharge.

The 2011 regulations direct that, *“A consent authority must decline an application for a resource consent ... to discharge PM₁₀ if the discharge to be expressly allowed by the consent would be likely, at any time, to increase the concentration of PM₁₀ (calculated as a 24-hour mean under Schedule 1) by more than 2.5 micrograms per cubic metre in any part of a polluted airshed other than the site on which the consent would be exercised.”*

While Christchurch is a polluted airshed, the discharge of PM₁₀ from Wright Marble Ltd would not exceed the threshold that would require the application to be declined. Therefore the NES regulations do not prevent a decision to grant this application.

Natural Resources Regional Plan (NRRP)

The Natural Resources Regional Plan (NRRP) Chapter 3 Air Quality became operative in part on 27 October 2009. The provisions made operative at that time included Objective AQL1, Policies AQL5 and AQL8, and Rules AQL38 to AQL57 that apply to discharges to air from industrial or trade premises. The remainder of NRRP became operative on 11 June 2011.

There is no rule that specifically authorises the discharge proposed in the application, therefore the discharge falls within the scope of Rule AQL57, *Industrial or trade premises and processes not complying with Rules AQL38 to AQL56 or not otherwise identified anywhere in Canterbury – discretionary activity*.

This application is for a **discretionary** activity.

Evidence & Information provided

The application and the evidence presented by the applicant and submitters to the Hearing is a matter of public record. Where evidence or information relates to the principal issues and my findings on these I have referred to it.

Complaints Record

Environment Canterbury has continued to receive complaints about odour attributed to the Applicant's site, since the flue heights were increased at the end of 2009, however the number of complaints has reduced over 2011. Between 1 February 2010 and 22 February 2011 more than 90 complaints were recorded by Environment Canterbury relating to about 80 instances of odour being detected, predominately in the school grounds and buildings. There were 7 complaints recorded since February 2011. Despite earthquakes, there were complaints recorded in March, April and May 2011, but no complaints were recorded in the 5 months from June to November 2011.

Environment Canterbury officers visited 37 times in response to complaints since February 2010, and on 12 occasions the officer noted that VOC-type odour was detected by them, but the odour was never assessed by them to be at a level, or was occurring for a sufficiently long period, which they would consider the odour to be offensive or objectionable. Therefore the discharge was on each occasion considered

to not breach the condition of the discharge permit that prevents the discharge causing offensive or objectionable odour beyond the site boundary.

Department Of Labour Investigations

A copy of the Department of Labour Report, *Phillipstown School Investigation: Final Report* was tabled at the Hearing by the Applicant. This report provides information about a separate but related process conducted by the Department investigating air quality and associated health and safety issues at Phillipstown School. I have included this information in the decision because it was referred to in the evidence of the Applicant and in the Officer's report from Mr Swete, and is relevant to the decision on this application.

The Department of Labour has undertaken two investigations relating to air quality at the Phillipstown School. The first in September 2008 concluded that odour from Wright Marble Ltd was an issue but did not constitute a hazard to staff or pupils of Phillipstown School. A decision by the Department in March 2010, however, to conduct a review of the initial inquiry and a second investigation into air quality at the school was based on further information available to the Department, including from Environment Canterbury. The second investigation included examination of the case by the Department's Chemical Review Panel to determine what health symptoms reported by staff of the school were linked to chemical exposure on site. The report and recommendations of the second investigation was delayed until June 2011, partly due the major earthquakes.

The report concluded that there were internal air quality issues in the Technology Centre at the school resulting from inadequate ventilation of these classrooms. Outdoor monitoring for chemicals emitted by Wright Marble showed results that were well below accepted thresholds. However the report also included the conclusion of the Chemical Review Panel, which was "*that under adverse weather conditions some susceptible individuals may experience some short term eye symptoms from irritant chemical discharges for the neighbouring factory, but at levels determined in the environmental data, long term health effects would not be generated.*"

The Officer's report

The Officer's report of Mr Swete is also a matter of public record. My consideration of the application and evidence includes the advice provided in Mr Swete's report, and where it is relevant to the identification and analysis of the principal issues, I have referred to it.

The Applicant's Right of Reply

The Applicant's reply was presented verbally, and addressed a range of matters that are included in the summary of the principal issues.

Principal issues in contention and summary of the evidence

The principal issue in contention in this application is whether the discharge of contaminants to air from Wright Marble Ltd will continue to have adverse effects on amenity values and health of people using facilities at Phillipstown School.

The contaminants discharged are volatile organic compounds (VOCs); predominantly styrene with relatively smaller amounts of methyl methacrylate (MMA) and acetone, and particles from sanding and grinding operations. While methyl ethyl ketone peroxide (MEKP) is used in the composite bench top manufacturing process at the site, this compound is bound in the resin and not discharged to air.

The discharge of VOCs to air occurs from three extraction systems located in separate sealed working areas of the Applicant's building. The discharge of particles from sanding and grinding operations inside the building may occur via doors or small openings.

The extraction systems discharge through three flues that are now 17.5 metres high above the ground. The height of these flues was increased to the present height in late 2009, and the extraction speed in one flue increased, to ensure that the discharge would not be affected by 'down-wash' effects caused by the height of the Applicant's or adjacent buildings. The peak rate of discharge of each VOC discharged was calculated using industry data and the results of emissions monitoring at the site undertaken in 2008 and 2009. The calculated peak discharge rates were used in AUSPLUME, a computer-based dispersion model, to predict the concentrations of the VOCs discharged that could be expected at ground level in the surrounding area. This model is widely regarded to produce reliable predictions.

The predicted concentrations were then compared to a range of air quality guidelines from the USA, Canada and Australia, as New Zealand has not independently developed guidelines for these substances. These guidelines predominately relate to the detection of odour of the VOCs, as these are much lower concentrations than standards to protect against adverse health effects from these substances. The dispersion modelling predicted maximum ground level concentrations of styrene of 107 $\mu\text{g}/\text{m}^3$ over a 3 minute averaging time in two locations, the school grounds to the south, and across St Asaph Street to the north, of the Applicant's site. The 3 minute

averaging time indicates the highest predicted concentration of VOCs. Mr Iseli said that the conditions needed to bring about the maximum ground level concentrations - maximum discharge output from the 3 flues combined with light winds, could be expected to occur for about 10 to 20 hours per year.

The predicted maximum concentration of styrene of 107 µg/m³ is about 50% of the State of Victoria, Australia air quality guideline for detection of odour by sensitive persons in residential areas. People of average sensitivity to styrene detect its odour at concentrations over 600 µg/m³. The predicted concentrations of styrene, over longer averaging times, and the predicted concentrations of MMA and acetone are all considerably lower than any of the guidelines cited to protect against odour nuisance or adverse health effects.

The predicted results would indicate that VOCs discharged by the Applicant should not be detectable at ground level, even by sensitive persons in the school property, or result in any adverse health effects.

These predicted results appear to be at odds with the complaints record at Environment Canterbury, the reported experiences of people at the Community Centre and the conclusion of the Chemical Review Panel included the Department of Labour investigation report.

Mr Iseli, and Mr Swete, identified that while there is no other major discharge of styrene known to be in this area, there are a number of other discharges from near-by industrial or trade premises, such as vehicle spray painting operations, that could cause VOC-type odours to be detected at Phillipstown School, but are attributed to the Applicant. Some of these premises had been operating for a long time before the Applicant established here, but Mr Hawker pointed out that, in his long-standing association with the school, odours had not been an issue before the Applicant established in 2008.

Mr Iseli rebutted the conclusion of the Chemical Review Panel, saying that there did not appear to be any justification for that conclusion, as all the monitoring data and modelling predictions available to both the Department of Labour and Environment Canterbury showed that styrene would not be present in concentrations that would cause eye irritation even to 'susceptible individuals'.

Mr Dougherty, Environment Canterbury Compliance Officer Team Leader has responded to many of the complaints at this site since 2008, and has undertaken site visits himself or despatched other officers in response. He advised me that he believed that the frequency and strength of odour on the site had reduced significantly since the

flue heights were raised, but that there continued to be a high level of sensitivity to odour for some people at the site. His experience was that on occasions when he had been on the school grounds accompanied by a complainant and odour was detected, the complainant had a much stronger adverse response to the odour than he did.

The Department of Labour report identifies outcomes that can manifest for people who are exposed to odours at concentrations below which the substances could cause direct health effects. These are;

- the development of physiological effects due to the perception that if there is a smell it must be doing physical harm – ‘odour worry’,
- a belief that an odour contains harmful chemicals may cause a person to consider the odour objectionable or offensive even if the concentration in the odour is too low to cause direct health effects, and
- an incident with a significant adverse effect can change a person’s threshold of acceptability for an odour resulting in a high level of complaint over a long term and a general distrust within the community of those perceived as responsible for the odour.

Main findings

Complaints to CRC about odour at the school site commenced suddenly in 2008, just after the Applicant commenced operating on their site. At that time the discharge from the Applicant’s building occurred much closer to ground level than now, and the discharge was highly likely to have been a source of the odour complained of.

The Applicant has increased the flue heights to an extent that the combined evidence from;

- measurement of concentrations of VOCs emitted by the Applicant,
- the predictive modelling of the concentrations that could be expected at ground level on adjacent land with the current height of the discharge flues,
- the comparison of this information with international guidelines for odour and health effects,
- the monitoring data collected from passive and active sampling programmes on the school site, and
- the response to and assessment of complaints undertaken by Environment Canterbury,

shows that the discharge of contaminants to air should not cause any significant adverse health effects or nuisance effects for people on adjacent land.

The discharge of VOCs from the Applicant's operations in the past may have resulted in odours being detected on adjacent land that have caused some people who detected the odour to develop on-going perceptions about odour at the site, that has made these people more sensitive to odours and therefore experience a higher level of response to odours detected, from whatever source. It is possible that sources other than the Applicant's generate odours that were not noticed in the past, but are now responded to by sensitised people.

The concern expressed by the submitters is about the odour effects of the discharge and possible other long-term health effects. None of the complaints records from the past 2 years, or descriptions of the effects of the discharge given by submitters, reported or described eyes being affected or other effects of acute exposure to styrene, MMA or acetone.

The Applicant's discharge flues are starkly visible from the Community Centre and may present to some people a constant reminder of past odour experiences and the perception that more odour is expected. The close proximity of industrial and trade premises with the school and community centre property is an unfortunate consequence of the city plan provisions – each has been given a right to locate in their respective area but the values of the areas can be incompatible. In this case the Applicant has taken the appropriate steps to avoid future adverse effects, but there remains a legacy of past adverse effects for some people.

There has been little contact between the Community Centre and the Applicant, however at the Hearing there was willingness expressed by both parties to communicate over this matter on-going. In particular, for the Community Centre to contact the Applicant directly in the event of odour being experienced, to enable better understanding of the nature and likely source of odour. These efforts are to be encouraged as they may prove to be a more effective response to odours being detected than contacting Environment Canterbury, who, due to distance and resources, may take much longer to mount a response.

I also encourage the submitters to consult with Environment Canterbury Compliance staff about establishing diaries to record odour events so that data is gathered over time that may show trends of events, and these can be reconciled with records of operations kept by the Applicant.

Section 104

Section 104(1)(a) The effects on the environment

Under this section of the RMA I must have regard to the actual and potential effects on the environment of allowing the activity (within the constraint of s104(3)(a)(ii) – see below). These are the actual and potential effects on the health and well-being of affected people from the contaminants discharged to air by the Applicant in the way proposed in the application. I find that there is not likely to be any adverse effects on health from the discharge. It is possible that there may be some infrequent, short-term detection of odour from the Applicant's discharge. While these events may reduce amenity values for some people, these events are not expected to be at a level that causes more than minor adverse effects on people on adjacent properties.

Section 104(1)(b) Policy Statements and Plans

Regional Policy Statements

The policies of the operative Regional Policy Statement and the proposed Regional Policy Statement relevant to this application have been considered. I note the policy outcomes include “no significant localised adverse effects” and “to ensure adverse effects are avoided, remedied or mitigated.” The measures taken by the applicant are consistent with the policies.

Natural Resources Regional Plan (NRRP)

In terms of Policy AQL5 of NRRP, the discharge from the Applicant's site is a ‘new’ activity as the discharge was established after 1 June 2002. The objectives and policies of the NRRP that are relevant to this application enable such activities provided odours discharged are not offensive or objectionable to the extent that they cause adverse effects on the environment beyond the site boundary. The application is consistent with the policies of the Regional Plan.

Section 104(2A) – investment of the existing consent holder

This application is to replace an expiring consent, and is affected by s124 that allows the previous consent to continue in effect until this application is resolved. Therefore I must have regard to the value of the investment of the existing consent holder. The Applicant leases the site but has made considerable investment in plant and machinery, and has spent more than \$200,000 over the past 2½ years on air quality testing and changes to their discharge systems, including raising the flue heights, to

isolate and eliminate odours. This demonstrates the intent of the Applicant to achieve a level of effects on the environment that is acceptable.

Section 104(3)(a)(ii)- consideration of effects on those who gave written approval

There are a number of persons who gave written approval to this application. Under this section of the RMA I must not have regard to any effect on these persons. This includes the Board of Trustees of Phillipstown School representing the staff and pupils, but not the Ministry of Education, owner of the school site, nor the Community Centre Charitable Trust, the submitter. Adjoining land owners, except one, have also given written approval. Therefore I have had regard to effects on the following persons;

- staff and users of the Community Centre,
- any person at Phillipstown School who is not the responsibility of the Board of Trustees,
- the owners and occupiers of 40 Phillips Street, and
- persons beyond the limited notification area.

Section 108 - Conditions

Mr Iseli and Mr Swete both promoted the continuation of the conditions of the existing consent, with amendments to reflect the increased flue heights and to include a condition allowing for Canterbury Regional Council to initiate a review of the consent conditions, should such a review be necessary.

I generally accept these recommendations, but consider that the conditions could be made more certain, particularly around the substances that are authorised to be discharged, and to require records of operations at the factory to be kept by the Applicant.

Section 123 - Duration

The Applicant is seeking a term of 15 years, and having had particular regard to the matters set out in NRRP Section 1.3.5, I have no reason to reduce the term sought.

Part 2 of the Act

I consider that, subject to the conditions proposed, the application is consistent with the sustainable management purpose, and Sections 5, 6, 7 and 8, of the RMA.

Decision

1. Having considered all of the relevant matters under Section 104 and Part 2, as discussed above, it is my decision that the application is granted for 15 years, subject to conditions.
2. The reasons for this decision are:
 - Adverse effects on the environment of the activity will be minor;
 - The activity is in accord with the objectives and policies of the Regional Policy Statements, and the regional plans; and
 - The activity is consistent with Part 2 of the RMA.

Resource Consent

Duration

15 years

CONDITIONS

1. (a) The discharge to air shall be only emissions of gelcoat resin and additives, and particulate matter, from the manufacture of composite bench tops at 464 St Asaph Street, Phillipstown, Christchurch, at or about map reference NZMS 260 M35:8223-4112 [BX24:7223-7951].

(b) The chemicals contained in gelcoat resin shall only be styrene, methyl ethyl ketone peroxide, and methyl methacrylate. Acetone may be used for cleaning purposes.
2. Gelcoat resin shall only be used in the Spraying Room, Casting Room, or Mixing Room, as identified on Plan CRC101880A, which forms part of this consent.
3. (a) The spray application rate of gelcoat resin in the Spraying Room shall not exceed:
 - (i) 24 kilograms per hour; and
 - (ii) 100 kilograms per day.
(b) The casting application rate of gelcoat resin in the Casting Room shall not exceed 20 kilograms per hour.
4. (a) The styrene content of gelcoat resin sprayed in the Spraying Room or cast in the Casting Room shall not exceed 45 percent by weight.

(b) The methyl methacrylate content of gelcoat resin shall not exceed 2 percent by weight.
5. The consent holder shall keep a record of the manufacturer, type, quantity and composition of all gelcoat resins and chemicals used in manufacturing processes on the premises. This record shall be provided to the Canterbury Regional Council upon request.
6. The consent holder shall keep Material Safety Data Sheets for all gelcoat resins and chemicals used in accordance with this consent. These sheets shall be provided to the Canterbury Regional Council upon request.

7. The consent holder shall keep a record of activity occurring in the Mixing Room, the Casting Room or the Spraying Room. This record shall include the date and time that a mixing, casting or spraying activity commences and ceases, and the quantity of material used in the period of activity. This record shall be retained for at least six months, and provided to Canterbury Regional Council upon request.
8.
 - (a) Discharge from the Spraying Room shall occur via a stack at a height of at least 17.5 metres above ground level and at least three metres above the roof ridgeline of any building within a radius from the stack of 35 metres.
 - (b) Discharge from the Casting Room shall occur via a stack at a height of at least 17.5 metres above ground level and at least three metres above the roof ridgeline of any building within a radius from the stack of 35 metres.
 - (c) Discharge from the Mixing Room shall occur via a stack at a height of at least 17.5 metres above ground level and above the roof ridgeline of the building housing the Mixing Room.
 - (d) All discharges shall be directed vertically into air and shall not be impeded by any obstruction above the stack that decreases the vertical efflux velocity below that which would occur in the absence of such obstruction.
9. The consent holder shall ensure that:
 - (i) Sanding and grinding of composite material shall only be undertaken inside the factory building; and
 - (ii) Particulate matter, from sanding and grinding of composite material, shall not be visible outside the factory building.
10.
 - (a) The discharge shall not cause odour, which is offensive or objectionable, beyond the boundary of the property on which the consent is exercised.
 - (b) The discharge shall not cause suspended particulate material or deposited particulate material, which is offensive or objectionable, beyond the boundary of the property on which the consent is exercised.
11. The consent holder shall maintain a record of any complaints received relating to dust, odour or other environmental effects related to the air discharge authorised by this consent. This shall include:

- (a) Location where the dust, odour or other environmental effect was detected by the complainant;
- (b) Date and time when the dust, odour or other environment effect was detected;
- (c) A description of the wind speed and wind direction when the dust, odour or other environmental effect was detected by the complainant;
- (d) The most likely cause of the dust, odour or other environmental effect detected; and
- (e) Any corrective action undertaken by the consent holder to avoid, remedy or mitigate the dust, odour or other environmental effect detected by the complainant.

This record shall be provided to the Canterbury Regional Council upon request.

12. The Canterbury Regional Council may, once per year, on any of the last five working days of April or October, serve notice of its intention to review the conditions of this consent for the purposes of:

- (a) dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
- (b) requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

A handwritten signature in blue ink, appearing to read "Barry Lee". The signature is written in a cursive style with a large, sweeping initial 'B'.

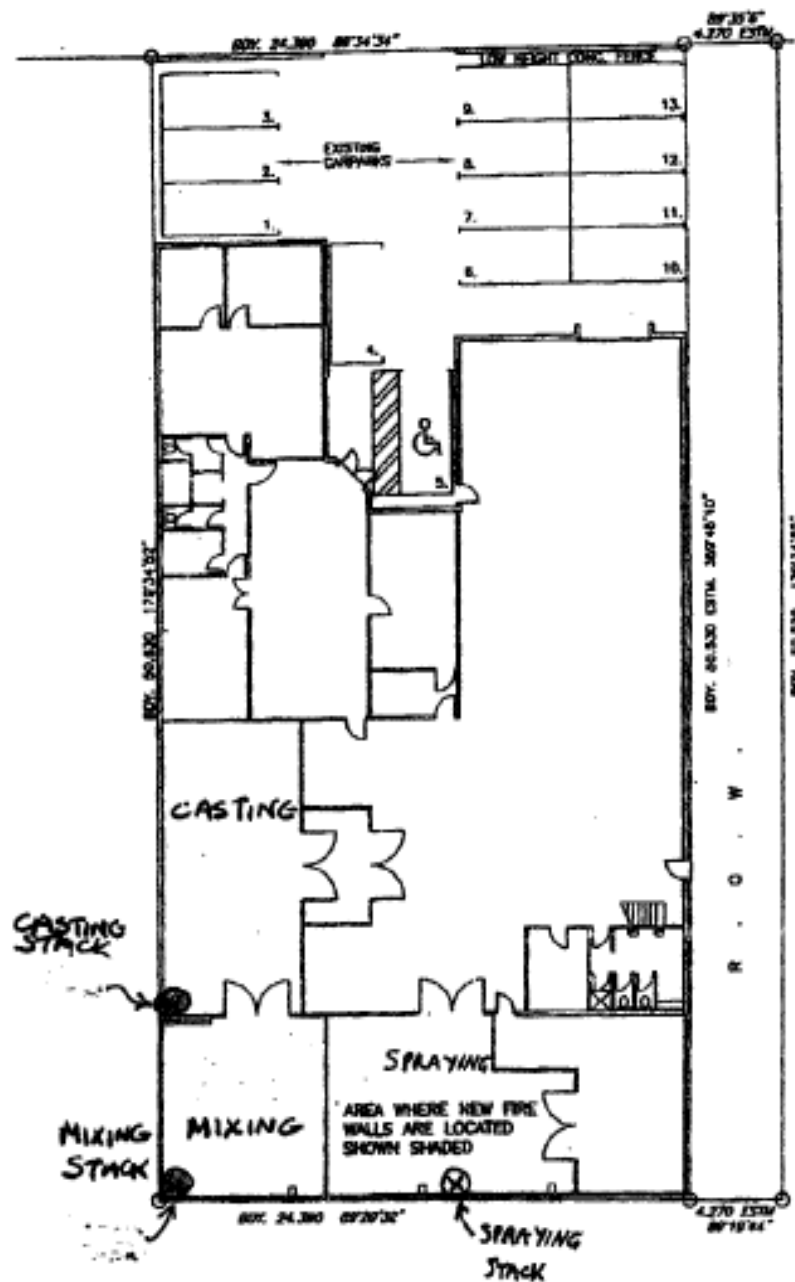
Hearing Commissioner

1st December 2011

CRC101880A

WRIGHT MARBLE LTD

ST. ASAPH STREET



SITE PLAN

LEGAL DESCRIPTION
 Lot 1, of 36205,
 SITE AREA: 1448sq

