

**BEFORE AN INDEPENDENT HEARINGS PANEL  
OF THE WAIKATO DISTRICT COUNCIL**

**IN THE MATTER** of the Resource  
Management Act 1991

**AND**

**IN THE MATTER** of the proposed Waikato  
District Plan (Stage 1)  
Hearing 25

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**EVIDENCE OF LAURIE COOK ON BEHALF OF HYNDS PIPE SYSTEMS LIMITED  
AND THE HYNDS FOUNDATION IN OPPOSITION TO REZONING REQUESTS**

**LIGHTING**

**17 March 2021**

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## 1. INTRODUCTION

1.1 My name is Laurie Cook.

1.2 I am an Illumination Design Executive employed by the Independent Electrical and Illumination Engineers LDP Ltd. I have been working in the lighting industry for more than 43 years.

1.3 I have completed the IES Illumination Engineering Course and passed my lighting examinations at AIT, later AUT, in 1994. I trained under national and international illumination engineers from Thorn and Philips Lighting and have held the position of specialist illumination lead for engineering consultants, Beca Ltd before joining LDP. I am a Fellow (FIES) and Registered Lighting Practitioner (RLP) of the Illuminating Engineering Societies of Australia and New Zealand.

1.4 I have been involved with numerous lighting environmental assessments as an expert. These include the Christchurch Stadium Development, Growers Stadium Counties Manukau, Diocesan School for Girls with their Erin Street Development, Stevenson Group for the Drury South Structure Plan Area and representing Tainui Group Holdings Ltd with their Ruakura Inland Port Development.

1.5 I have read the Code of Conduct for Expert Witnesses (**Code**) outlined in the Environment Court's Consolidated Practice Note 2014 and confirm that I will comply with it in preparing my evidence. I confirm that the issues I will address are within my area of expertise, except where I state that I rely upon the evidence of other expert witnesses. I also confirm that I will not omit to consider material facts known to me that might alter or detract from my opinions.

## 2. SCOPE OF EVIDENCE

2.1 In October 2020 I was engaged by Hynds Pipe Systems Limited and the Hynds Foundation in relation to their submissions/further submissions on the Proposed Waikato District Plan (**Proposed Plan**). Hynds Pipe Systems Limited and the Hynds Foundation are referred to collectively as **Hynds** in this evidence unless the distinction is made between the two organisations.

2.2 I have been involved with the preparation of evidence in support of Hynds' request to zone part of its land at 62 Bluff Road Heavy Industrial.

**2.3** I have now been asked to provide evidence on behalf of Hynds in relation to rezoning requests made with respect to sites other than those owned by Hynds.

**2.4** The focus of this evidence is Havelock Village Limited (**HVL**)'s submission seeking that its land that is elevated above Hynds' existing factory site (**Hynds Factory Site**) be rezoned from Rural (as notified) to Residential. I also comment on Steven and Teresa Hopkins' submission seeking that their land on Pioneer Road, part of which also overlooks the Hynds Factory Site, be rezoned to Village zone.

**2.5** My evidence will cover the following matters:

- (a) Lighting effects from Hynds' operations;
- (b) Comments on rezoning proposals;
- (c) Comments on evidence filed by HVL;
- (d) Comments on the Council Reporting Officer's s42A Framework Report;  
and
- (e) Conclusions.

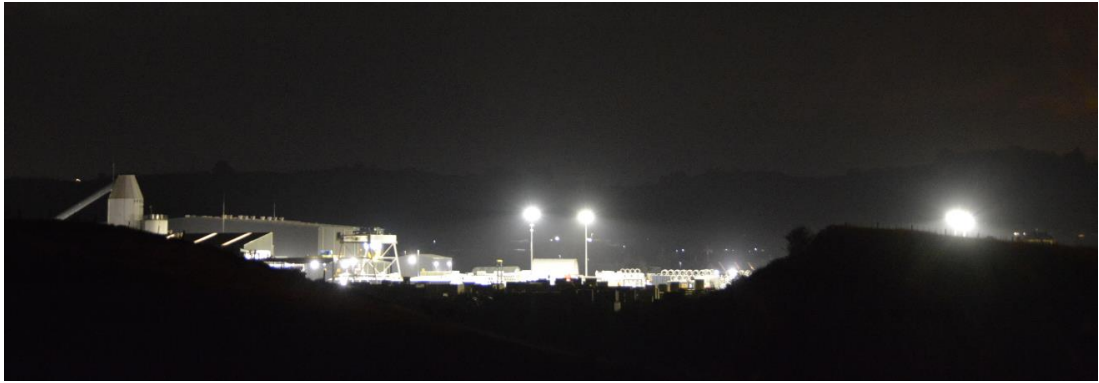
### **3. SUMMARY OF EVIDENCE**

**3.1** Whilst the Hynds Factory Site itself complies with existing resource consents and the district plan rules with respect to lighting, and the proposed buffer areas as suggested by HVL will reduce the number of dwellings that overlook the Hynds Factory Site, the lighting within the Hynds site will still be visible from parts of the proposed HVL development and the land owned by the Hopkins where houses will overlook the Hynds Factory Site.

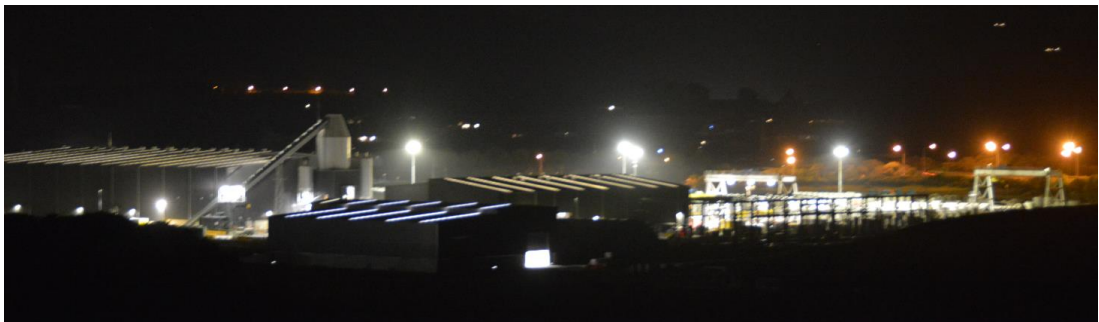
**3.2** Those residents with a view of the Hynds Factory Site will, in my opinion, experience (and potentially complain about) the lighting effects of Hynds' operations.

#### **4. LIGHTING EFFECTS FROM HYNDS' OPERATIONS**

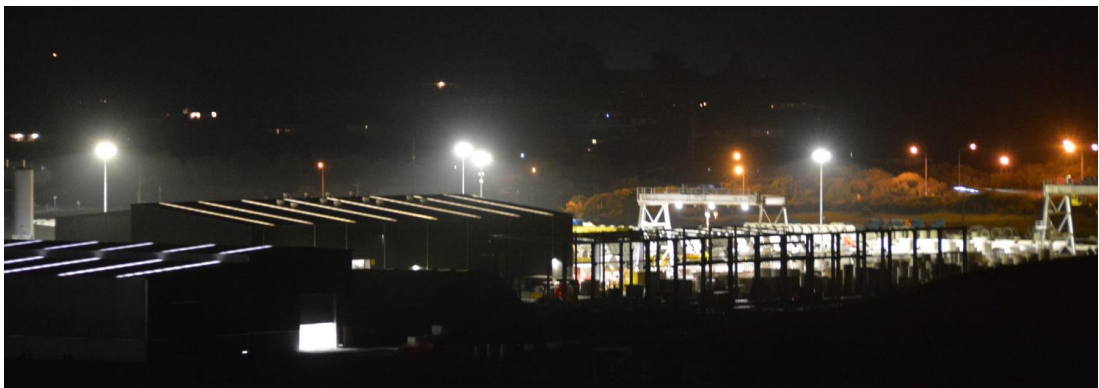
- 4.1** In my evidence in support of Hynds' rezoning proposal I describe the Hynds Factory Site, including its location and key components. I rely on that description and do not repeat it here.
- 4.2** I also described the three main lighting effects that could have varying degrees of obtrusiveness to vehicles and residents adjacent to the Hynds' properties. They are spill light, glare and sky glow. Again, I rely on the explanation of these effects in my earlier evidence and do not repeat it here.
- 4.3** The Hynds Factory Site carparks are lit with LED streetlights, similar to those now increasingly seen throughout the national road networks. The lights are mounted on approximately 10 metre high columns and are installed with zero tilt. Zero tilt is where the light emitting face of the light fitting is parallel to the ground, minimising the glare, spill light and sky glow that a tilted light would be more likely to generate. The light distribution and intensity (light output) is appropriate for the identification and safety of occupants within the area.
- 4.4** The northeastern storage yard is illuminated by LED floodlight technology. Four floodlight columns are located centrally about the yard. They are arranged approximately in an 80m x 80m square layout. Each column is approximately 17 metres in height with four floodlights mounted on each column. The floodlights are tilted by approximately 30 degrees. The light emitted from the floodlights provides appropriate illumination levels for 'safe' operations within the yard. In addition, six LED floodlights are located on each of two gantry cranes. For night operations when the gantry is not in use, 3 of the gantry floodlights are in operation. Once the gantry moves the remaining 3 gantry floodlights become operational to provide appropriate illumination levels within the immediate area of operations.
- 4.5** Hynds has supplied me with a number of photos that show the nighttime illumination of the Hynds Factory Site.



*Image 1: As taken from Pioneer Road looking north across the southwest yard.*



*Image 2a: As taken from the proposed sculpture park hill on 62 Bluff Road looking northwest.*



*Image 2b: This image is zoomed in from image 2a showing the southeast yard. Road lights (not part of Hynds Factory Site) lighting SH1 in the background.*



*Image 3a: Looking towards north, showing:*

- ≡ - Foreground illuminated Synlait tank;
- ≡ - Dark area between Synlait and Hynds Buildings southeast yard under development;
- ≡ - Northeast yard further north; and
- ≡ - Road lights (not part of Hynds Factory Site) lighting SH1 in the background.



*Image 3b: Looking towards north west, showing:*

- Two factory sites. Synlait to the left Hynds to the right; and
- Dark area between Synlait and Hynds Buildings southeast yard under development.

**4.6** Once completed, I understand that the southwestern storage yard will be operated in a similar manner as for the north - northeast yard, albeit with newer floodlight technology incorporated. The expected illumination levels will be similar to that of the southwestern yard. When compared to the southwest yard, it is expected that this will require more than double the number of poles in order to allow sufficient quantity of floodlights to provide a safe operating environment

for factory operations. It is also expected that the lit areas will be situated closer to the western neighbours.

- 4.7** The exterior lighting within the Hynds Factory Site provides for safe work operations in the hours of darkness. The lighting technology utilised, minimises as far as practicable any adverse effects of light such as skyglow, or glare and spill light at the Hynds Factory Site boundary or existing residential property boundaries located beyond the present Hynds Factory Site boundary.
- 4.8** In my opinion the lighting equipment location and luminaire arrangements are kept to a minimum, and offer practically, the necessary and appropriate illumination levels within the operational site boundaries to maintain a safe working environment for operations within the site, whilst satisfying the compliance requirements with existing resource consents and the Operative and Proposed Plans.
- 4.9** Notwithstanding Hynds' compliance with the applicable limits, and ongoing attention to keep lighting at the minimum required for safe operations and to minimise obtrusive light effects, at night the light emanating from Hynds' operations will be conspicuous, and potentially obtrusive to sensitive observers, when viewed from land above the Hynds' sites due to the larger viewable area as seen from the elevated position.
- 4.10** I understand that Hynds has already received complaints about the lighting effects of its operations. The residents of 10 Bluff Road complained about light entering their bedroom windows at night. Hynds' made adjustments to seek to satisfy the residents. Ultimately Hynds resolved the issue by purchasing the property in question.
- 4.11** The area that includes Synlait, Hynds, other industrial operations, the state highway, and Pokeno township, represents a large urban space with associated lighting effects. In my opinion this will contrast with the darker backdrop of the wider rural area to the east when viewed from the proposed HVL residential development.

## **5. COMMENTS ON REZONING PROPOSALS**

**5.1** I understand that HVL is seeking to rezone the hills above Hynds' Factory Site for residential purposes. An "industrial buffer" area has been proposed, but this only extends partway up the hill. The result of this rezoning proposal would be a substantial number of new dwellings that directly overlook Hynds' operations.

**5.2** Similarly, the Hopkins are seeking to rezone their land to the east of Hynds' Factory Site and 62 Bluff Road Site for Village development (1:3000m<sup>2</sup>). The northern portion of this land also overlooks Hynds' existing and future operations (refer to image 1 above which is taken from Pioneer Road (near to the Hopkins land)).

**5.3** Notwithstanding the efforts of Hynds to minimise any adverse effects of light at the Hynds Factory Site boundary and existing residential property boundaries, in my opinion it would not be appropriate or good practice to locate new residential dwellings in such close proximity to, and overlooking, a heavy industrial operation with lighting effects of this nature. Even though Hynds is operating lawfully in accordance with the Operative and Proposed Plan requirements and its resource consent, in my experience industrial operations that use lighting of this nature and scale are likely face complaints from residents who live in proximity to the operation, regardless of whether the lighting is compliant with the relevant consents and planning rules.

**5.4** While lighting may not on its own constitute a nuisance in this situation, once somebody experiences perceived nuisance effects from other aspects of operations (e.g. noise, odour, etc), they tend to become more aware of/sensitised to other factors, such as lighting. As I have noted above Hynds has already experienced complaints about lighting from existing residents.

## **6. COMMENTS ON EVIDENCE SUBMITTED BY HVL**

**6.1** I have read the sections of Mr Tollemache's evidence on behalf of HVL that address reverse sensitivity effects, and wish to comment on his suggestion at paragraph 7.25 that the buffer proposed by HVL will be appropriate to address the reverse sensitivity issues associated with the lighting effects of Hynds' operations. In my view the buffer proposed by HVL will not be adequate.



**6.2** This is because, as I have noted above, it is my experience that industrial operations that use lighting of this nature and scale are likely face complaints from residents who live in proximity to the operation, regardless of whether the lighting is compliant with the relevant consents and planning rules. Residents living behind the buffer proposed by HVL will still have views of the Hynds Factory Site and therefore, in my opinion, they will find the lighting from Hynds' operations to be obtrusive (and will potentially complain about it), even though Hynds is complying with the Operative and Proposed Plan requirements and the conditions of its resource consent.

**6.3** In my opinion, the buffer proposed by HVL will not be sufficient to prevent complaints about the lighting effects of Hynds' operations.

## **7. COMMENTS ON THE COUNCIL REPORTING OFFICER'S SECTION 42A FRAMEWORK REPORT**

**7.1** I have read the relevant sections of the Council Reporting Officer's s42A Framework Report, in particular, the best practice guidance set out at paragraph 162. Under the 'industry' heading it refers to best practice guidance that industrial zones should have "good buffering from residential and environmental areas and other areas likely to be sensitive to magnetic radiation, noise and vibration".

**7.2** As I have noted above, in my opinion from a lighting effects perspective HVL's proposed buffer does not provide adequate separation between future residential uses and the Hynds Factory.

## **8. CONCLUSIONS**

**8.1** In my opinion, the lighting distribution and intensity (light output) is appropriate and the minimum necessary for the operations, identification and safety of occupants within the area the Hynds Factory Site.

**8.2** The lighting equipment location and luminaire arrangements, are kept to a minimum and offer practically the necessary and appropriate illumination levels within the operational site boundaries to maintain a safe working environment for operations within the Hynds Factory Site.

- 8.3** Residents living on the hill behind the buffer proposed by HVL, and on parts of the land owned by the Hopkins, will still have views of the lighting within the Hynds Factory Site and therefore, in my opinion, will experience (and potentially complain about) Hynds' operations, even though Hynds is complying with the Operative and Proposed Plan requirements and the conditions of its resource consent.
- 8.4** In my opinion, the buffer proposed by HVL will not be sufficient to prevent complaints about the lighting effects from Hynds' operations.

**Laurie Cook**

**17 March 2021**