

Robyn Burns

From: Philip McKay <Philip.McKay@mitchelldaysh.co.nz>
Sent: Monday, 16 May 2022 7:37 am
To: Campbell, Ian
Cc: Robyn Burns; Burgess, Kelly
Subject: RE: Springhill Subdivision hearing - RM210103

Follow Up Flag: Follow up
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Thanks for those comments Ian that is very helpful in preparing for the hearing.

Kind Regards

Phil

 **Philip McKay**
Associate

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From: Campbell, Ian <Ian.Campbell@stantec.com>
Sent: Friday, 13 May 2022 4:13 pm
To: Philip McKay <Philip.McKay@mitchelldaysh.co.nz>
Cc: 'Robyn Burns' <robyn.burns@chbdc.govt.nz>; Burgess, Kelly <Kelly.Burgess@stantec.com>
Subject: RE: Springhill Subdivision hearing - RM210103

Hi Phil,

I've read through the documents you emailed me and would just like to provide some responses and reiterate what I said in our meeting this morning.

The ultimate responsibility to provide public lighting rests solely with the Road Controlling Authority (RCA) which, in this case, will be the Central Hawke's Bay District Council (CHBDC). The only exception would be a private development not vested in the local council such as a privately owned and operated "gated community".

In Jason Kaye's Brief of Evidence, he refers to Consent Condition 33, which requires lighting to be provided within the internal road network, rather than just the intersections, cul-de-sac heads and low radius curves, as proposed by the Applicant. Mr Kaye's Brief also raises some concerns which I have pasted below (in *italics*) with my responses in red:

Section 9.1 - *I am concerned that if street lighting were installed throughout the development, it would lead to a suburban appearance within the development and create a suburban glow to the area at night, including when viewed by passing traffic on State Highway 50.*

Residential developments (even in rural areas) only require Category P lighting (as per AS/NZS 1158.3.1:2020) which doesn't require high levels of lighting compared to main arterial or highway (Category V) lighting

schemes. Most residential developments in New Zealand require lighting between PR6 (lowest level) and PR3 (highest level). Suburban residential areas in Auckland would typically be PR3/PR4 whereas small residential developments in low density or rural areas would typically be PR5/PR6. A PR3 lighting scheme requires an average illumination of 1.75 Lux and a PR6 lighting scheme requires an average illumination of 0.7 Lux. To put these Lux levels into perspective a full moon during a clear night would typically result in an illumination level of up to 1.0 Lux, so most low end Category P lighting schemes (PR5/PR6) only provide minimal (wayfinding) lighting levels very similar to moonlight during a cloudless night. Refer to the Category P tables (extracted from AS/NZS 1158.3.1:2020) pasted at the end of this email.

I don't believe that this development, if provided with full Category P lighting, will cause any "suburban glow" (upward waste light) or issues to passing vehicles on SH50. The applicable design standard (AS/NZS 1158.3.1:2020) also requires glare control (to a specified level), limitation of spill light (beyond the road reserve) and upward waste light (sky glow).

Section 9.5 - *The appended supplementary statement from Mr. George Eivers of East Cape Consulting provides his view that street lighting beyond the illumination of intersections is not necessary for road safety within the development, particularly as footpaths will be provided to remove pedestrians from the trafficked lane.*

The use of footpaths is not a sole means of providing safety or a method to mitigate lack of adequate lighting. Unlike Category V main road/arterial road lighting (where vehicular safety is the focus) Category P lighting is primarily concerned about the safe movement of pedestrians. Even if no footpaths were provided people will still walk along the edges of the carriageway (within the shoulders or berms) at night, and this will be a safety issue. The design area for all Category P residential lighting schemes encompasses the full length and width of the road reserve so that no matter where a person is (within the road reserve whether on a footpath or within a shoulder or berm) there is sufficient lighting to provide safe movement. Lighting that is limited to certain areas (such as intersections, cul-de-sac heads and low radius curves) will result in areas being completely dark, beyond the lit areas, which will compromise the safe movement of pedestrians at night.

I believe that pedestrian safety (at night) will be compromised if the Applicant only provides limited lighting at the intersections, cul-de-sac heads and low radius curves.

Section 9.6 - *On the basis of the specific advice from Mr. Eivers, the condition should be amended through the removal of the words "and the wider street network" from the condition.*

It is my professional opinion that Condition 33 should be retained and not amended to allow a lower standard of lighting to be provided. My recommendation is that full Category P lighting (to the appropriate subcategory - to be agreed between the Applicant and CHBDC) should be provided along all roads within the extents of the new subdivision.

Selection criteria (Table 2.1) extracted from AS/NZS 1158.3.1:2020:

TABLE 2.1
LIGHTING SUBCATEGORIES FOR ROAD RESERVES IN LOCAL AREAS

1	2	3	4	5	6
Type of road or pathway		Selection criteria ^{a,b}			Applicable lighting subcategory ^{c,d}
General description	Basic operating characteristics	Pedestrian/cycle activity	Fear of crime	Need to enhance amenity	

Local roads or streets used primarily for access to abutting properties, including residential, commercial and industrial precincts	Mixed vehicle and pedestrian traffic	N/A	High	N/A	PR1
		High	Medium	High	PR2
		Medium	Low	Medium	PR3 ^f or PR4 ^f
		Low	Low	Low	PR5
		N/A	N/A	N/A	PR6 ^g

Light technical parameter (LTP) values (Table 3.3) extracted from AS/NZS 1158.3.1:2020:

TABLE 3.3
VALUES OF LIGHT TECHNICAL PARAMETERS
FOR ROADS IN LOCAL AREAS

1	2	3	4
Lighting subcategory	Light technical parameters (LTP)		
	Average horizontal illuminance ^{a,b} (\bar{E}_h) lx	Point horizontal illuminance ^{a,b} (E_{ph}) lx	Illuminance (horizontal) uniformity ^c Cat. P (U_{E2})
	PR1	7	2
PR2	3.5	0.7	8
PR3 ^e	1.75	0.3	8
PR4 ^{d,e}	1.3	0.22	8
PR5 ^{d,e}	0.85	0.14	10
PR6 ^d	0.7	0.07	10

Regards

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From: Philip McKay <Philip.McKay@mitchelldaysh.co.nz>
Sent: Friday, 13 May 2022 11:40 am
To: Campbell, Ian <ian.Campbell@stantec.com>
Cc: 'Robyn Burns' <robyn.burns@chbdc.govt.nz>
Subject: Springhill Subdivision hearing - RM210103

Hi Ian, good to talk to you in the Teams meeting today. As promised, please find attached the applicant's evidence for the hearing, including the expert traffic evidence from George Eivers, which is focused totally on the street lighting issue.

Kind regards,
Phil

 **Philip McKay**
Associate

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