

**BEFORE A COMMISSIONER APPOINTED BY THE CHRISTCHURCH
CITY COUNCIL**

IN THE MATTER OF

the Resource Management Act 1991

AND

IN THE MATTER OF

RMA/2022/517 – Proposed Digital
Screen Campus, 129 Waimairi Road,
Ilam

**STATEMENT OF EVIDENCE OF DAVE BRADY
(SCREEN PRODUCTION ACTIVITY)**

Dated: 8 August 2022

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1 INTRODUCTION

- 1.1 My name is David (Dave) Charles Brady. I hold a Bachelor of Commerce degree from Otago University. I am an independent consultant with expertise in the development of screen production facilities. I work with film studio operators to develop film studios and associated screen infrastructure. This work includes site selection, consenting, performance specification development, design, construction, and operations. I also help match screen productions with appropriate screen infrastructure.
- 1.2 I have been asked to provide evidence in relation to the Dovedale Digital Screen Campus proposal, to describe the nature of the facilities required for screen production, the type of industry production activity anticipated on the Digital Screen Campus site given the facilities proposed, the nature of a production cycle and the variation in activity levels during that cycle.
- 1.3 In preparing my evidence, I have reviewed:
- (a) the Assessment of Environmental Effects lodged with the application for resource consent;
 - (b) the Council's s92 request and the Applicant's response;
 - (c) the s42a report; and
 - (d) the relevant evidence of the other witnesses for the Applicant (Robyn Nuthall, Dr Andrew Phelps, Max Herriot, Jon Farren, Andrew Metherell and Felicity Letcher).
- 1.4 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014. I have complied with it in preparing this evidence and I agree to comply with it in presenting evidence at this hearing. The evidence that I give is within my area of expertise except where I state that my evidence is given in reliance on another person's evidence. I have considered all material facts that are known to me that might alter or detract from the opinions that I express in this evidence.

2 SCOPE OF EVIDENCE

2.1 As described in paragraph 1.2, my evidence addresses:

- (a) The nature of the facilities required for screen production;
- (b) The type of industry production activity anticipated on the Digital Screen Campus site given the facilities proposed; and
- (c) The nature of a production cycle, and in particular the variation in activity levels during that cycle.

3 THE NATURE OF FACILITIES REQUIRED FOR SCREEN PRODUCTION

3.1 Screen production involves multiple phases which, at a high level, are described below:

- (a) **Development:** the creation of the core intellectual property. This is the idea generation, the script writing, the concept art design, and the financing.
- (b) **Pre-production:** the core planning phase (for example organising the designs, hiring the crew¹, and identifying the locations required).
- (c) **Production:** this includes the physical elements required for the production (such as building the sets, making the costumes, sourcing or making any props or prosthetics, arranging the lighting and cameras) and shooting (filming).
- (d) **Postproduction:** the assembly of the film. This includes a number of digital crafts such as editing, adding digital special effects, and sound laying. As technology advances, this phase has become more integrated with the production phase and often happens at the same time as the production phase.
- (e) **Distribution and Merchandising:** sees film makers maximising all the commercial aspects of the intellectual property. This includes distribution through cinema, broadcast television and streaming platforms.

¹ Crew being all persons involved in a production from the creator, producer, director, set dressers, set builders etc.

- 3.2 The need for postproduction is greater now that digital technologies allow for more and more visual effects to be delivered post the shooting period. With the advent of virtual production, there is a trend towards elements of postproduction activities now occurring prior to the cameras rolling such as the digital design and programming required for the LED walls which are sometimes used during the shooting phase of the production². Postproduction uses a number of digital screen trades which I understand will be taught within the Digital Screen Campus academic program.
- 3.3 There has also been a convergence of gaming and traditional film production over recent years, as described in the evidence of Dr Phelps. The technologies of gaming are now used in postproduction, virtual production, and XR crafts, hence the importance of the Digital Screen Campus academic programs in producing crew skilled in that area.
- 3.4 Together, the five phases of screen production described above are known as “end to end”. The facilities needed for end to end production involve the following built elements:
- (a) Sound stages: large buildings designed to exclude light and sound from the external environment;
 - (b) Production support offices: these read as traditional offices as a typology but house the office-based trades and professions needed for production. A non-exhaustive list of office-based trades might include: production management, locations department, art department, accounting, direction, producers, traffic and logistics, costume design, postproduction, writers, visual effects, virtual production, editing, and show runners;
 - (c) Workshop, “mill” or flexible space: “mill” or flexible space is typically workshop and sometimes office space. The crafts included are as many and varied as the types of sets and props that are required. A non-exhaustive list might include: set construction, mould making, prosthetics manufacture, manufacture of miniature sets, set decoration, storage, textiles and costume manufacture, props, visual effects, lighting, and

² Virtual productions walls display backgrounds in the context of the scene being shot. *The Mandalorian* is a good example of the use of virtual production using LED walls.

rigging. Some of these elements can be undertaken offsite in specialised facilities; and

- (d) Outdoor (backlot) space: any activity that can be carried out outdoors to support the production. A non-exhaustive list might include: hard stands for outdoor sets, parking for technical vehicles, and trailers.

3.5 While it is possible to produce content with siloed facilities based in different places, this is highly inefficient. It adds significant cost to a production and in some cases may mean that a production is either not produced at all, or is produced offshore. The education of students also requires an end to end facility so that when students have completed their studies, they are set-ready.

3.6 There are currently no end to end production facilities in the South Island. Productions will be attracted to the Digital Screen Campus because it provides co-located end to end facilities in close proximity to various South Island shooting locations. There is ready access to an international airport close by and not the same constraints on the use of locations in Canterbury as there are in Auckland (for example in relation to the consultation needed to use of Sites of Significance in Auckland).

Production Tiers

3.7 In New Zealand, screen productions are classified by tiers. The tier system helps the industry understand the scale of the production and what facilities and equipment they might need. The tier breakdowns are shown in the table below:

TIERS OF SCREEN PRODUCTION AND LINE PRODUCTION		
TIER ONE (T1)	INTERNATIONAL FEATURE FILM/MARQUEE TV SERIES STREAMING	NZ\$100 million+
TIER TWO (T2)	INTERNATIONAL FEATURE FILM/ TV SERIES STREAMING	NZ\$15m - \$90 million
TIER THREE (T3)	INTERNATIONAL FEATURE FILM INCLUDING TELE-FEATURES /INTERNATIONAL TV SERIES (STREAMING/CABLE) LONG RUNNING NZ TV SERIES	NZ\$4m - \$14 million
TIER FOUR (T4)	NZ DOMESTIC TV AND FEATURE FILM MARKET/COMMERCIAL MARKET/ONLINE CONTENT	NZ\$1 – 3 million, less than \$1 million

Table 1: Tiers of Screen Production and Line Production

3.8 Generally, the tier of production correlates with the scale of the facilities required (in particular Tier 1 productions typically require sound stages of at least 5,000m²).

Existing Screen Facilities Across New Zealand

3.9 Film studios³ can be classified by their size and the types and sizes of sound stages⁴ they have. Large film studios typically have multiple large stages (either purpose built or repurposed industrial warehouses with significant sound and light attenuations). The larger film studios in New Zealand are concentrated in Auckland and Wellington. Table 2 below gives an overview of the size and facility profile of those film studios and other facilities they offer. All of the large scale film studios cater to Tier 1 productions, while the medium scale film studios cater to Tiers 2 and 3. All large and medium scale film studios offer end-to-end facilities.

Scale	Location	Film Studio	Stages	Total Stage SQM approx.	Other facilities
Large	Auckland	Kumeu Film Studios	3	8,500	Large mill, backlot, surface and dive tanks, office
Large	Auckland	Auckland Film Studios	5	7,500	Large mill, offices
Large	Auckland	X3 Wiri	4	10,000	Virtual production screens, flex space
Large	Wellington	Stone Street	4	8,000	Mill and office
Large	Wellington	Lane Street	2	4,500	New facility, mill, backlot, development space
Medium	Auckland	Studio West	4	5,000	New 3,400m ² sound stage and offices, mill and office (comparable size to Dovedale Digital Screen Campus)
Small	Auckland	South Pacific Pictures	2	1,200	Smaller warehouse stages with slate of small-scale drama shows
Small	Wellington	Avalon	4	1,400	Historic film studio with smaller but high performing stages

Table 2: Existing Film Facilities Across NZ

³ Defined as the entire facility.

⁴ Sound stage buildings are also sometimes referred to in the industry as studios.

- 3.10 Privately owned film studios do not integrate well with formal education requirements and only take a limited number of interns onto productions, preventing graduates from gaining the hands on knowledge they need. All of the film studios in Table 2 are privately owned, except Auckland Film Studios which is owned by Auckland Council, but is currently for sale so soon will be privately owned.
- 3.11 Facilities outside of Auckland (New Zealand's screen hub) and Wellington are less common. There are very few facilities in the South Island. Those that do exist such as Whitebait TV in Christchurch are very small and as discussed in Ms Letcher's evidence, are used mostly for their own productions.
- 3.12 While new film studio developments are consented at Templeton and Wanaka, those developments are large and won't compete with the Digital Screen Campus – they are aimed at Tier 1 productions and do not offer the same benefits in terms of co-locating with a tertiary education and research provider such as the university.
- 3.13 Massey University in Wellington is developing a screen production facility at its Mt Cook, Wellington, campus. However this facility will not be end-to-end as it will not have on-site mill facilities.

Demand

- 3.14 Ms Letcher's evidence describes the growth of the screen industry in New Zealand and the strong demand for screen production facilities here, as well as crew. I can confirm that this is my experience. In New Zealand, there is demand from both New Zealand based content creators (typically Tier 2 – 4) as well as international content creators (typically Tiers 1 and 2).
- 3.15 In Auckland, for example, large sound stages have grown by four and a half times in the last 10 years (from 8,530m² to 39,036m² in total stage area). There is capacity in Auckland for at least another 50,000m² of sound stage in my opinion, which is one large full size film studio of eight to twelve sound stages and associated large scale production support of mill, office space, and backlot, and other developments.

- 3.16 There is a considerable lack of production facilities in New Zealand that support Tier 3 facilities. Facilities in Auckland (where over 75% of all screen activity is located) and Wellington are designed to support Tier 1 and Tier 2 productions. These facilities have been operating at near 100% utilisation for over five years. There are facilities in Auckland and Wellington that are owned or operated by content creators that support Tier 3 productions, but like the big film studios, these are difficult to get into due to high demand or are locked up by their owner's own slate of productions.
- 3.17 Alongside the gap in Tier 3 production facilities, I am aware that there is also a significant shortage of qualified and set-ready film crew both in New Zealand and internationally. There are some film school programs in New Zealand within universities and polytechnics however none of these have end-to-end facilities supported by a full academic program.

Facilities Proposed at the Digital Screen Campus

- 3.18 As described in Dr Phelps' evidence, the facilities proposed at the Digital Screen Campus consist of:
- (a) Two 2,300m² sound stages with a grid height of 17m, supported by a 1500m² mill and 600m² mezzanine (includes costume, wardrobe and makeup);
 - (b) 1,275m² production office;
 - (c) 680m² Green Screen and Virtual Production facilities;
 - (d) A Premix (film mix, Foley, colour grading) facility; and
 - (e) Backlot.
- 3.19 These facilities will meet industry requirements to allow Tier 2 or Tier 3 productions to produce in Christchurch. The Digital Screen Campus will not attract Tier 1 productions as the facilities are simply not big enough.
- 3.20 The sound stages proposed are of particular importance. Sound stages must be an appropriate size and height to make them fit for purpose and there must be two stages (so one can be filmed in while

sets are built in the other). If only one stage were proposed, it would essentially be used by industry as “rain cover” (i.e. as wet weather contingency), which would not deliver the work integrated learning that is the key feature of the Digital Screen Campus.

- 3.21 In terms of stage size, my own experience is that productions typically need sound stages of between 2,000m² and 3,500m². 2,300m² is the size typically required by the North American market. Stages of 2300m² are sought after because they can be used for multiple sets (or one large set). For example, a film shooting a house scene might build a façade set and one or two other sets in a 2,300m² sound stage.
- 3.22 Stages less than 2,000m² are now seen by production companies as too small. The average stage size in Los Angeles for example is smaller than 1,500m². A majority of the stages in Los Angeles are legacy stages dating from as early as the silent picture days. 1,500m² stages do not meet the needs of a modern production.
- 3.23 Sufficient height is the other key element that productions look for when selecting a stage. Stages need to be of sufficient height to allow for construction of large-scale sets, and to have a lighting and rigging grid which allows for workers to operate safely from the grid. Sometimes, sets are also hung from the grid. A grid in a sound stage is usually 15-17m to their underside, with a safe working height above the grid (ideally 2m).
- 3.24 Selection of grid height is a balance between the cost of building the sound stage and the need to have a sufficiently tall space for large set builds. Tall sets might include for example large throne rooms, building façades, or a rocket ship.
- 3.25 Stages must also include highly efficient ventilation, given their lighting and acoustic needs. Therefore, the height of a stage building must allow for sufficient space to install ventilation ducting systems above the grid.

4 ANTICIPATED PRODUCTION ACTIVITY - PROPOSED DIGITAL SCREEN CAMPUS

- 4.1 The scale of a screen production can vary from a one person shoot to a multi-million-dollar international production that could employ several hundred cast and crew.
- 4.2 The facilities proposed at the Digital Screen Campus could support small and mid-tier productions, or a large production while it undertakes significant location shooting elsewhere. Productions with a budget of up to \$40m are likely to be attracted to the Digital Screen Campus or productions with a higher budget which are heavily location based. Recent productions that have been filmed in New Zealand that in my opinion may have chosen the Digital Screen Campus if it existed as an option are listed in Appendix A to my evidence.
- 4.3 In terms of scale:
- (a) A smaller production would typically have a production budget of less than \$5 million and would have a cast and crew of less than 100;
 - (b) A mid-tier production would typically have a production budget of up to \$80 million and have a cast and crew of less than 400; and
 - (c) A large production needing location support which might use Digital Screen Campus would typically have a cast and crew of up to 500 based on the size of the proposed facility.

5 THE NATURE OF SCREEN PRODUCTION ACTIVITY AND THE PRODUCTION CYCLE

- 5.1 The level of activity within screen production facilities varies depending on the size of the production and where the production is at in the production cycle. Activity will gradually scale-up during a production, peaking during filming, and then will quickly scale back down. Shooting is normally done over a small number of days up to a few weeks depending on the production size and scale. The number of people on site during filming will vary depending on the type of production. There may also be gaps between one production exiting and another arriving. It is not uncommon for there to be voids in

production activity in a film studio, meaning 100% utilisation of a film studio is difficult to achieve.

- 5.2 In my experience, typically, for approximately 40% of time sound stages of this size are used, there would be less than 40 crew working within them doing preparation type work for production. I have reviewed the numbers used for transport modelling purposes by Mr Metherell and confirm that these reflect the levels of traffic that will be generated.
- 5.3 The potential increase in vehicle movements (and associated parking) during periods of peak activity such as shoot periods can be managed through the use of a Traffic Demand Management Plan or a Travel Management Plan. This has been done very successfully at several sites in the North Island with which I have been involved.

6 **SUMMARY AND CONCLUSION**

- 6.1 The nature and scale of facilities proposed within the Digital Screen Campus are the minimum needed for end-to-end industry use, and to produce work ready graduates in the screen sector. Only providing one sound stage, for example, would be of little benefit and smaller stages would limit the amount and style of productions that could use the facility.
- 6.2 The level of activity within the facilities will vary during the production cycle, and periods of peak production will be relatively short. Activity will gradually scale-up during a production, peaking during filming, and then will rapidly scale back down. The potential increase in vehicle movements (and associated parking) during periods of peak activity can be managed through traffic demand management measures and this has been done very successfully at several sites in the North Island with which I have been involved.
- 6.3 The need for skills in the digital aspects of screen production is growing quickly. In my opinion, there is an immediate need for the development of the academic and physical elements of the proposed Digital Screen Campus. Crew numbers need to grow alongside the development of new facilities for the industry to flourish.

6.4 The growth of the screen industry in Canterbury is limited by the fact that there are no suitable facilities for use by commercial productions and, as described in Ms Letcher's evidence, the industry is also limited nationally and internationally by a lack of the tertiary educated graduates required for all phases of the production manufacturing cycle. The fact that students at the Digital Screen Campus will use industry standard facilities will give them the technical skills and knowledge needed to be set-ready.

Dave Brady

August 2022

Appendix A:

- (a) *The Power of the Dog* (2021) – a film produced for cinematic and streaming release. This film was based at an industrial property in Auckland, (Walls Road, Penrose) with the majority of their location work in rural Central Otago. Those with a keen eye will also see Oamaru, Dunedin and Auckland buildings used in location work. The film (Tier 2) had an estimated budget of \$35 million.
- (b) *Black Christmas* (2019) – estimates of production size: \$5m budget (Tier 3), peak of 100 crew. Filmed in Dunedin and Oamaru.
- (c) *The Royal Treatment* (2021) - estimates of production size: \$5m budget (Tier 3), peak of 120 crew. Filmed in Dunedin.
- (d) *Don't Make Me Go* (2022) - estimates of production size: unknown budget (estimated <\$20m, Tier 3), peak of 120 crew. Filmed in Auckland with location work in Christchurch.
- (e) Weather cover for *Mulan* (2018) – This film was is a large budget Tier 1 production, shot in Auckland at a Kumeu Film Studios (4,672m² of sound stages and 4,036m² of warehouse stage on a 27-hectare lot with office, expansive mill, and large backlot). However the location work was predominantly based in the Mackenzie Country (with other South Island locations). No weather cover facilities were available to the production and temporary facilities were established at the locations base. Budget estimated at \$80 million (2018) and a peak crew of 450.