RAPS Light Art Projection "Must Haves" Report

This report is provided as part of the RAPS Public Art Project Brief. It is intended to show the particular needs for the RAPS in facilitating light art projections shows from an operational projectionists' perspective.

In addition to these considerations, practitioners also need to consider the artistic/sculptural form of the structure and its safety/engineering compliance. Information on that can be seen here:

For wider arts/sculptural form information consult the separate "*The RAPS Project Public Art Brief*" document.

For information on the engineering and compliance considerations for the structure consult the separate "*Engineering Specifications*" document.

Light Art Projection "Must Have" Needs

For projectionists to create light shows, the placement of the projector and the ability to shine projected light onto an object at the right height/angle and from the right distance is critical.

In the past, projectionists have created bespoke scaffold tower designs to allow for the specific size, orientation and number of projectors to fit the project as required. Here are a few examples:



Above: Examples of Projection Structures

While the above systems were effective as they provided bespoke set ups for each show, they are expensive to build, hard to position projection equipment into safely and are not secure. These factors both increase the set up/technical/security costs for projection shows.

The intention of the RAPS is to reduce these set up costs and technical/security challenges while still providing the projection artist and technicians with maximum flexibility for light shows.

The following points (1-10) and the appendices, provide some discussion and definition of 'must haves' for the structure of the RAPS from a projectionist point of view.

1. Size, Type, Number of Projectors/VIZBOX Enclosure Boxes

The RAPS must accommodate at least two (2) Panasonic RZ120 projectors, each housed inside a VIZBOX enclosure box. The size of these projectors when housed in their VIZBOX is 720mm wide x 800mm long x 420mm high. See the VIZBOX schematic in the Projection Rig Design document in the appendices.

The VIZBOX units provide for weather proofing and atmospheric protection of the projectors meaning the RAPS need not function as weatherproofing (including water ingress) for the projectors or other electrical playback equipment.



Above: Panasonic RZ120 Projector VIZBOX Projector Enclosure box in show and install modes

2. Height Weight and Footprint of the RAPS

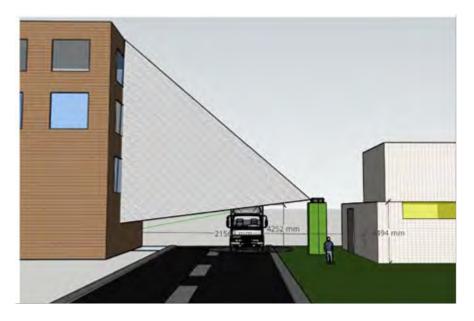
A reasonable lens height for each projector is required for viable images to be shot onto target structures. This height is important to avoid nuisance light spill, shining at people or vehicles, passing through the projected light beam. The edges of the projected light beam can be defined and managed exactly by the projectionists at set up. The edge of the beam is a definite line not a graduating "transition" of light to dark.

In practical terms, the upper height of the RAPS will need to be sufficiently high enough to house the VISBOX units (or at least the upper unit) to achieve this reasonable lens height. This height is termed the "required projector height"

To facilitate shows, projectionists must also be able to adjust the projectors up/ down tilt angles to at least 45 degrees from horizontal and point the projectors in all four directions from the RAPS. This must also include potentially pointing one projector in a different direction/angle from the other.

In normal operating situations (so not over roads) this required projector height is thought to be about 3 to 4 metres. However, it is also likely that some shows will necessitate at least one of the projectors shooting over the top of live traffic/open roads. When this is done, the edge of the light beam must not enter the interior of the vehicles onto their users. This must be so, even for high seated vehicles, such as trucks/ single decker busses. For this type of operation, to allow the projection to be low enough on the target structure, some additional height is likely to be required. This "required projector height" is thought to be somewhere between 4 and 5 metres.

It may be viable to have the RAPS design offer an option that provides a height extender/ add in section to the RAPS structure. This could be an optional add on structure to gain height, for situations where the projector shoots over roads. This may also allow engineering and transportation constraints to be reduced when the unit is set up at the lower "standard" projection height.



Above: Example of how projector height allows projectionists to control the light beam avoiding conflicts with the public.

The RAPS will need to have a footprint big enough and heavy enough to provide stability/counterbalancing when the projection rig (with both VIZBOXES and projectors on board) is set at the required projection height. The maximum weight of the projection rig in its projection height setting, including two projectors, two VIZBOXES and rigging hardware will be **500KG.** This weight, which will need to be located high in the structure, could otherwise cause the structure to tip over in extreme events such as under high wind loads or earthquakes.

Conversely the footprint and weight of the RAPS needs to be small/light enough to allow for its positioning, often in restricted spaces such as streets/pathways. Ideas to facilitate this could include:

- Adding ballast (potentially water) after the RAPS is positioned.
- Breaking down the RAPS into constituent parts, thereby making each section lighter and easier to move.
- Variable "required projector height" settings.

3. Transportation Placement and Set Up

It will be critical that the unit can be moved/set up for a relatively low cost. The preferred target cost for each new removal and RAPS light show set up within the Nelson City

Council boundary is under \$1500. This price would be 50% projectionist/tech set up cost and 50% transportation cost. Transportation costs would be based on a competitive job price based on at least ten moves in a financial year.

The proposed moving technology of a viable price must be commonly available within the Nelson region.

Design solutions that show how relocation of the RAPS is facilitated are expected. Ideas to do this could include:

- Positioning the RAPS on a purpose-built trailer unit.
- Lifting the RAPS off and onto a Hiab truck.
- Pricing/considering any on-site construction costs and methodologies.

Considerations need to be presented on how the total weight and size of the RAPS can be accommodated using its proposed transportation system. This system needs to comply with any standard road transport rules. For details of NZ road transport rules consult <u>www.nzta.govt.nz</u>. E.G. The total dimensions of a truck and load are limited to; height 4.3m, width 2.55m, length 12.6m. However, to be available in Hiab form, the deck area will likely be shorter (ideally as short as possible).

If considering Hiab use, several factors make for more flexible/less costly relocations. These include:

- The lower the weight of the RAPS the further a Hiab arm will be able to reach to place the sculpture.
- The smaller a Hiab truck size, the less expensive and more manoeuvrable it will be in achieving access to different projection spaces. This will be especially important when placing the RAPS in hard-to-reach places, such as under trees or across grass areas which would be damaged by heavy truck wheels.
- Having the RAPS be easily broken down into constituent parts would make transportation on smaller trucks viable but may increase set up costs.

Any on site assembly/deconstruction should not require additional engineering compliance checking at each site. On site assembly should be inexpensive, potentially being done by Hiab/delivery truck operators.

On placement at the projection location, a levelling system will need to be incorporated into the design of the RAPS to allow for sloping or differing ground levels such as over kerb edges to be accommodated.

This levelling system needs to accommodate a change in ground level of up to 220mm or to a one in ten (1:10) slope in either direction. When levelled, security into the inside of the RAPS must be maintained. I.E., after setting up, no gaps under the structure that could allow access to its interior should be present.

4. The Projection Rig Design

A projection rig has been partly designed to allow projectionists to hoist and manoeuvre the projectors into position for each light show. More information on this can be seen in "The Projection Rig Design Report" in the appendices.



Above: Examples of how the projection rig may look showing VIZBOX units including in tilted/angled mode.

Depending on the projection "screen" and viewing angles for a particular show, the two projectors may be set at different angles, heights, or directions. The projection rig design allows for this, and the RAPS must also cater for this in its design.

4.1 Rig Hanging Beams

Inside the RAPS, beams or structural elements are required for the full projection rig to be hung from. The main beams shall be located as high as possible to enable the projectors to be winched up/hoisted up high enough for light shows to be conducted.

In designing this structural component of the RAPS, the following factors need to be considered:

- The beams/structure shall be engineered to take a safe working load of 500KG.
- The beams/structure shall be positioned as high as possible (around five metres from the ground level.
- The beams/structure shall enable the two suspended VIZBOX units to gain maximum height to its underside.

More information on the rig hanging requirements can be seen in the appendices under "The Projection Rig Specifics" section of The Projection Rig Design Report.

4.2 Show Facilitation Lock Off Points

The ability to tie down or lock off the projector rig in various ways means several internal anchor points must be provided to the projectionist when setting up for different light art shows. This will allow them to set the rig at different angles, directions and configurations. This will be done once the rig is winched to show height. Tie down lock off points will also stop sway of the projector in the rig during high winds.

More information on the show lock off point requirements can be seen in the appendices under "The Projection Rig Specifics" section of The Projection Rig Design Report.

4.3 Transportation Lock Off Points

It is intended that the VISBOX units, potentially with the projectors inside, will stay within the RAPS for transportation. The RAPS design will need to cater for this, so the units are not damaged in transit.

More information on the transportation lock off point requirements can be seen in the appendices under "The Projection Rig Specifics" section of The Projection Rig Design Report.

5. Light Openings (for projected light to pass through the structure)

The design of the RAPS structure adjacent to the projectors (when projectors are positioned at projection height), in all directions, should provide for as much flexibility as possible in how projection light can pass through openings in the structure. This area of the structure is termed the "critical projection zone." This critical projection zone is between the 3.5 to 5 metre height range in each compass direction and at various angles shooting out from the structure. The critical projection zone extends to be at least one metre above the top projector and one metre below the bottom projector, to allow for tilted upwards, or tilted downwards shooting angles.

Openings (holes/slits/windows/ports) in this critical projection zone area need to be numerous and adjustable but also work to limit any theft or damage access into the RAPS especially to the projection lenses.

These openings need to allow for shooting at various angles from each projector: up, down, and sideways. These openings need to work for the different types of lenses required, both standard and short throw. Maximum flexibility will be needed more regularly on just one forward facing aspect of the RAPS where most light shows will be shot from. However, it is preferred that design solutions are proposed, that provide for all faces of the structure to have opening flexibility within the critical projection zone. This will give projectionists the opportunity to set up a variety of projector angles that will have viable openings of differing shape, location, and size to suit the specific projection project. This would facilitate the projection of shows in two different directions, onto two completely different screens, at the same time. Ideas to facilitate this could include:

Having multiple openings at all angles from the projectors, potentially with multiple replaceable covers. E.G like removable shingles on a house.

A design that allows for external elements to be adjusted/changed to facilitate fully bespoke openings, each time a projection site is chosen, and projectors set up.

A structure that has multiple holes or openings all over it as a design feature.

 A structure/surface "skin" that allows light to pass through it (e.g., glass/plastic), but still be unbreakable.

6. Power Supply

For typical use, projectionists will run 16-amp power cable to the RAPS. 16 Amp 3 pole CEE-FORM plugs will be used. The two 12kw laser PT-RZ120 projectors each draw 1000 watts. Associated computer and control equipment will draw approximately 300 watts. A sound system will draw approximately 500 watts. The VIZBOXES will draw up to 500 watts. This total draw equates to approx. 14 amps at 240V requiring a 16amp feed or two 10amp feeds to be considered.

Most cabled power supplies will come from the Councils outdoor power supply assets (outdoor wall plugs, standalone power supply boxes etc). These assets are located in parks, on facilities and in streets. There are approximately fifty of these power points in Nelson. They differ considerably in function and format. Details of these power locations and the likely projection sites are provided in the RAPS Projection Sites Survey Report in the appendix to this report.



Above: Standalone and part of a structure power supply boxes

Design of the RAPS should include a system for power cables to pass into the structure of the RAPS from nearby power sources. In places, it may be possible to position the RAPS over the top of a standalone city power supply box. To allow for this the base could be left open enough for the RAPS to be dropped over the power box.

An off-grid option for the RAPS is desirable This could involve use of a petrol or diesel generator to be incorporated into the base of the RAPS. The generator space must be sufficient for fire safety and soundproofing. A fan driven fresh air inlet and exhaust port should also be considered to provide for this possibility.

There is also an aspiration that it may be possible for fossil fuel free/carbon neutral off-grid options to power the RAPS. This could include:

- Built-in, on-site power charging through solar panels or wind turbines feeding a battery bank.
- Mains charged battery banks, potentially that could be swapped out for fresh batteries using easy handing systems" roller doors, winches etc.

• Systems where an electric vehicle (so a mobile battery bank) could be brought in to charge the RAPS battery bank or directly power a light show.

When considering any off-grid option, for the RAPS, practitioners need only cater sufficient power to run just one projector and VISBOX at any time so approximately 7 amps or 1400 watts draw. It is envisaged that even off grid shows need to run for multiple nights. Practitioners should provide options for this, showing the number of nights shows can run for and documenting what interventions, (fuelling, charging, swapping out) etc. will be required to achieve that capacity.

7. Security and Access

The RAPS should provide unmonitored security for the projection equipment. This shall include any locks/door systems requiring at least fifteen minutes grinding time if using a portable grinder cutting system.

Projection equipment being moved in and out of the RAPS is bulky and heavy. 800mmx700mmx400mm and 70kg for the VIZBOX and 20kg for the RZ120 projector to be placed inside the VISBOX. At ground level, there needs to be an access panel that will allow technicians inside the structure and for both the projectors and the VIZBOXES to be passed through. This should be approximately 1.2 metres wide x 1.6 metres high. This could be a removable panel or hinged access. This panel must be lockable from the inside.

Access to the internal lock should be gained via other smaller hatch that cannot allow any more than hand/arm access inside the structure. This small hatch must be locked from the outside. This system will mean that for a projector to be removed from the RAPS, access to and opening of both locks including the inside one, needs to be achieved.

While all the rigging and initial projector set up can be done at ground level, projectionists will need to access the projectors once they are in set up position. Depending on the design the space required for projectionists to work inside the RAPS is at least 800MM from the projector rig on at least two sides at ground level to two metres height and 500mm from the projector rig on at least two sides at two metres to four metres height.

8. Sound Output

It is planned that two (or more) waterproof outdoor speakers will be part of the RAPS setup. The placement of these speakers will need to be flexible as the intended sound direction will vary depending on RAPS placement, viewer position and to best point speakers away from residential boundaries.

Sound can pass through a metal grill of suitable design so these speaker openings could be part of the 'skin' of the structure. In most settings it is imagined that speaker placement will be high on the RAPS, pointing down at approximately 45 degrees. At least two speaker openings should be available in each of the four compass directions on the RAPS and each opening should be at least 300mm by 225mm. At least 50% of that area should be

fully open for sound transmission. Many small holes perform better than fewer larger holes.

9. Scalability

Proposals for the RAPS should have an element of scalability. This will present Council with delivery options to choose from. It will also potentially allow proposals that are outside the current financial year's budget to be selected. This will mean some expanded capabilities can be staged for delivery and payment after 30/06/2023. Proposals that provide future upgrade options and how these are incorporated into the original design are encouraged.

It may be prudent to consider technologies for the build of the RAPS that provide easily and cheaply replicated reproduction of more RAPS units. For example, use of standardised off the peg materials or technologies such as casting, CNC cutting/milling, 3D printing may be appropriate.

	Must have targets	Nice to have targets
Safety and Engineering Testing	Engineer input so producer statements can be provided, that evidence compliance with The Building Act or allow Council's approval of a formal exemption from the act.	Systems that reduce costs in this area of work.
1. Number of Projec- tors Housed	Two.	More than two.
2. Height Weight, Footprint		
Required Projector Height- Standard shows mode.	3-4 metres.	5 metres or higher.
Required Projector Height- Over roads show mode	4-5 metres	6 metres or higher.
Weight	Stable in all conditions but light enough or sectional, to be relo- cated easily.	Stable in all conditions but light enough to relocate easily, possibly relocatable using a Ute.
Footprint	Stable in all conditions but as small as possible and fits on a standard Hiab truck or trailer.	Stable in all conditions. Under 2.2x5.2 metres. Able to sit inside a single standard car parking space or smaller.
3. Transportation and Placement		
Transportation	To be able to be transported within standard vehicle sizes using a single, as small and easily manoeuvred Hiab vehi- cle, as possible.	Smaller transportation vehicles poten- tially towed using just a Ute.
Placement	Accommodates up to 220 mm surface level changes and/or a one in ten slope levelling but	Greater surface level changes and more degrees of levelling but maintain- ing security at base.

10. Summary Table

	maintaining security at base.	
Set up Costs	Set up RAPS for shows for	Set up RAPS for shows for under
	around \$1,500 per site (price	\$1,000 per site (price based on at least
	based on at least 10 moves a	10 moves a year) including any on-site
	year) including any on site as-	assembly.
	sembly.	
4. Projection Rig De-		
sign		
Certified hanging beam	500KG.	More than 500KG.
load weight		
Internal Lock off points	Eight.	More than Eight
Main beam Height	4.5 metres.	Higher than 5 metres
5. Light Openings	Multiple and adjustable	Multiple and adjustable projection
	projection openings within the	openings within the critical projection
	critical projection zone in all	zone in all directions.
	four compass directions.	
6. Power Supply		
Total on mains power draw	14 amps 3300W.	Above 14 amps 3300W.
capable		
Total off grid power draw	7 amps 14,000W	Above 7 amps 14,000W
capable		
Off grid capacity-	Safety features to add a gener-	More safe, more efficient, quieter.
Generator option	ator- fire, emissions, noise con-	
	trols as part of design.	
Off grid capacity-	Space/weight capacity inside	Adding or capacity to in future add re-
Renewable power options	the base of the RAPS for bat-	newable energy charging systems (so-
	teries to be added in future	lar or wind) to the RAPS to charge bat-
	years. Easily lift/battery move-	teries.
	ment systems to allow swap	
	out of batteries. Vehicle charg-	
	ing system options.	
7. Security/ Access		
Security	At least a 15-minute grinder	Longer grinder cutting time required.
	cutting time required on	Extra security features.
	locks/structure.	
	Two locks entry	More locks to open
Internal Access/Working	Ground level- at least 800mm	Extra working space inside RAPS for
Space	from the outside of the projec-	projectionists.
-1	tor rig to the inside of the struc-	
	ture wall on at least two sides.	Safe ladder/work platform construction.
	Projector show level- at least	Other innovative and safe systems of
	500mm from the outside of the	access to projectors systems. Remote
	projector rig to the inside of the	control systems, etc.
	structure wall on at least two	
	sides.	
	Space for safe ladder access	
	to projectors.	
8. Sound Output	Adjustable speakers locatable	Personalised audio options e.g., head-
	to at least two speaker areas	phones/Bluetooth links to web-based
	on each compass direction of	audio on phones etc.
	the RAPS that are 300mm by	

	225mm wide. At least 50% of the speaker areas are free of any material.	
9. Scalability	Has aspects of the design that can be delayed/built upon to transfer spending into future fi- nancial years.	Can be scaled potentially building fur- ther RAPS units with significant cost savings.

11. Excluded Assets

It should be noted that the following assets are outside the scope of delivery of the initial RAPS commission. Their separate purchase has either already made or is planned by NCC. However, their incorporation into the structure must be accommodated in the design:

- The two projectors, lenses, and VIZBOX units.
- The full projection rig Winches and control systems.
- Power cables and trunking and off grid power: generators/batteries/inverters etc.
- The sound/playback units including any projection delivery hardware such as computers and software.

12. Appendices

Apendix 1. The Projection Rig Design Report

The build design of the RAPS must accommodate structural elements that provide for the RAPS rigging design to be installed and operated safely inside the RAPS. This is the point where the sculptural design elements meet with the structural and functional elements of a projection tower.

Physics is real. Safe rigging relies on some very specific knowledge. We have designed the projector rigging system to be considered in the RAPS design however the actual solution for the mounting points for this rigging design are not specified. This is to allow for the artist to factor this need into the design according to their vision.

This document <u>https://www.worksafe.govt.nz/assets/dmsassets/zero/401WKS-1-building-and-construction-ACOP-load-lifting-rigging.pdf</u> gives an overview of the expectations from worksafe of any activity that has a lifting component. The terms SWL Safe Working Load and MBL Minimum Breaking Load need to be understood to provide for a safe working solution inside the RAPS.

The key elements of this design are:

- A high level of flexibility for future unknowns
- Choice of equipment to allow for the maximum headroom to be utilised
- Off the shelf components to remove bespoke engineering and certification costs

- Ability for the rig to be handled by one technician (two when the VIZBOXs position is being reset)

The artist must consider into their design a mounting system for the four electric winches of this rigging design. They must also consider how electrical cable and control systems are brought to this top point of the RAPS.



If the RAPS is built in two parts to allow for easier transportation these systems would need to remain fixed in the top part of the RAPS and be reconnected to any distribution systems in the bottom half of the RAPS once reinstated.

Down-force anchor points must be designed into the build. These are to provide for the anchoring down of the VIZBOX units to remove any swing during use.

The VIZBOXs and possibly the projectors will stay inside the RAPS for transport. This will require a bolt down solution on the base of the RAPS for the VIZBOXs to ensure their safety in transit. The Unistrut fittings on the VIZBOXs provide for an ideal mounting point for lock down angle brackets to be fitted.

The winches will be similar to the winch detailed below. Though possibly smaller and possibly operated by remote control rather than a wired control. Supply issues and specific design considerations are causing variability in the final selection of this winch. However, the mounting demands that must be considered in the design will not change.



The Projection Rig Specifics

Rig Hanging Beams/Structural Components

In designing this structural component of the RAPS, the following factors need to be considered:

- There will be four mounting points for four independently operated electric winches
- The structure shall be engineered to take a total safe working load of 500KG across the four mounting points. 125KG per point including winch weight
- The total weight of two VIZBOXs, projectors and control equipment are 200KG
- The structure shall allow for the two suspended VIZBOX units to gain maximum height inside the RAPS
- The mounting structure must be non-flammable

The winches will either side or bottom mount onto the structure provided by the RAPS design. 125KG SWL per point is not a huge weight but do note we are asking for SWL not MBL to allow for the safety factor to be built into the design. If bottom mounting the structure could be an I-Beam or it may be possible at the minimal weight loading for the winches to side mount onto a vertical steel flange as in the drawing.

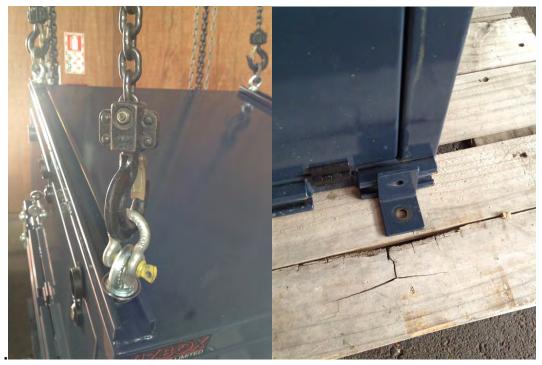
Depending on the shape of the top of the RAPS the winch positions could be set wider than the dimensions of the VIZBOX. This would provide for a reduction in sway and twist forces in the suspended items.

Show Facilitation Lock Off Points

The RAPS Design must allow for:

- 8 eyelets or rings rated to a SWL of at least 100kg each to be installed in the internal wall of the RAPS at approximately 2m from ground level
- Ratchet tie downs will be used to effect the locking off. Rings and shackles on the VIZBOX Unistrut rails will provide for the VIZBOX lock off points
- The ideal 'fleet' angle of these straps is 45deg in both elevation and plan views

The tension generated in the structure by the use of these lock off points must be considered in the RAPS design.



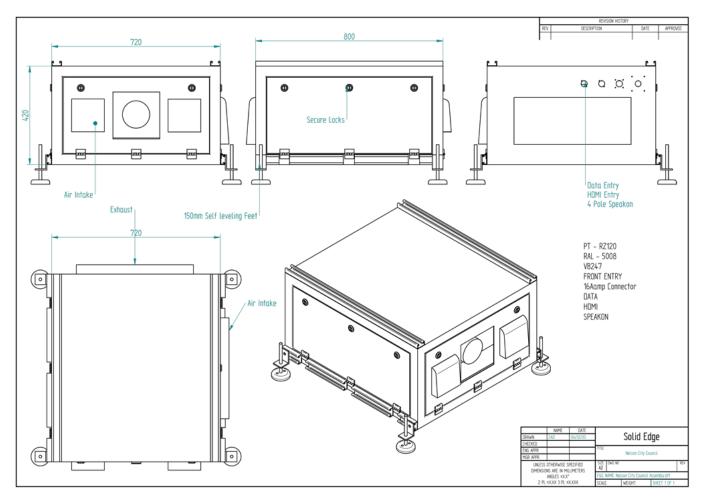
Above: Unistrut ring and shackles system and VIZBOX Bracket examples

Transportation Lock Off Points

Bolt down lock off points are to be designed into the base of the RAPS.

These points will allow for the VIZBOXs to be lowered to ground level and bolted to the base for stability and security during transport. Depending on the distance and terrain the projectors may remain inside the VIZBOX units.

Unistrut angle brackets and mounts will provide for mounting systems at the VIZBOX end. Any transportation lock off points/systems on the RAPS must be considered in the RAPS design.



Above: VISBOX schematic.

Appendix 2. Scoping Ground Truthing Potential Light Art Sites

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 9M (shown on map)

Will cables have to cross roads/paths/walking areas? Yes (shown on map)

Overall score out of 10: 7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Trees, Mama Cod (accross the road), Church steps

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) middle platform of church steps

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 500+ What is the estimated car parking nearby for viewers? 50+ spaces Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Yes, street lanterns along the steps

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - either would work

How many projectors would be needed on the light art subjects? : 1 or 2 (depends on project)

Overall score out of 10: 7

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes but difficult

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? Yes, see comments

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) Yes, see comments

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 6.

Note: the access points are difficult for a Hiab truck to manouvre. The path is quite narrow at places. Low hanging branches need to be trimmed.

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes, in the middle of the steps
200m+ (no residential buildings nearby)	What is the type of surface if not hard standing?
What is the risk of light spill onto private	n/a
residences/roads from the projector? Low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	50 metres
light show subject? 20 metres	Would traffic management be needed to create space for the RAPT to be in position for shows?
Is the light show clearly visible to passing drivers of traffic? Yes	
Overall score out of 10: 8	Overall score out of 10: 8

EXTRA NOTES

The site has difficult access with a Hiab truck (narrow path and low hanging tree branches). Great central location with possibilities to project on trees, Church steps and parts of the cathedral.





Possible site for RAPT





Mama Cod across the road

Low hanging tree branches

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 40+M

Will cables have to cross roads/paths/walking areas? Yes, across a footpath

Overall score out of 10:8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, Cathedral side and main entrance

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Cathedral carpark

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? What is the estimated car parking nearby for viewers? 50+ spaces Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns in the carpark

Who are the impacting lights owned by? NCC / Cathedral

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal, both

How many projectors would be needed on the light art subjects? : 1 or 2 -(depends on project)

Overall score out of 10: 9/10

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes, easy

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 9/10

Easy access for Hiab truck. Power cable needs to be installed safely for foot traffic.

400+

Name of the site: Church Hill 2 / Toilet block power point

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
100+ m (shown on map)	What is the type of surface if not hard standing?
What is the risk of light spill onto private	N/A
residences/roads from the projector? small	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	10 metres
light show subject? 25 metres	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? No	space for the RAPT to be in position for shows?
Overall score out of 10: 9/10	Overall score out of 10: 9/10

EXTRA NOTES

Great site for projection on trees, video mapping on Cathedral entrance and side building. Multiple installation options for RAPT. Easy access for Hiab truck, good ground surface. Easy public access and good video mapping possiblities.



Name of the site: Church Hill 2 / Toilet block power point



Main entrance Cathedral for video mapping

Carpark lights

Name of the site: Church Hill 3 / Top of church steps

p.1/3

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC / Cathedral

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 10+ m

Will cables have to cross roads/paths/walking areas? Yes - footpath

Overall score out of 10:8

What is the estimated car parking nearby for viewers? 50+ spaces Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns in the carpark

Who are the impacting lights owned by? NCC / Cathedral

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal / both

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10:8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, Cathedral tower

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) In front of the Cathedral tower

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)?

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes / difficult road

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? Yes, tree branches

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) Yes, tree branches

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 6

Difficult road for Hiab truck. Low hanging branches would need to be noted/trimmed. A key needed to get access to the site.

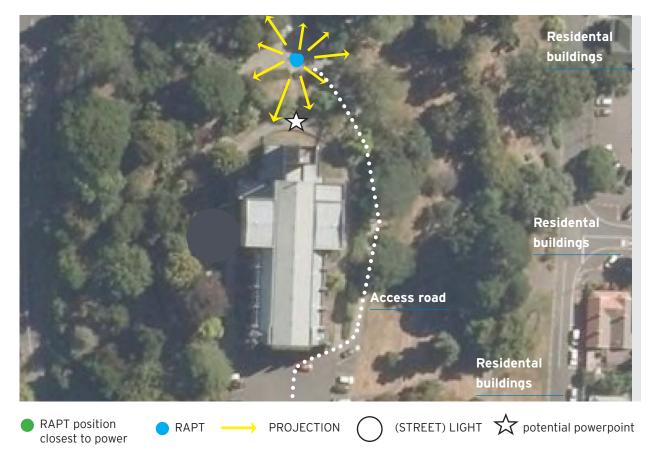
200+

Name of the site: Church Hill 3 / Top of church steps

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes – gravel
100+ m (show on map) What is the risk of light spill onto private	What is the type of surface if not hard standing? N/A
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from light show subject? 100 metres	20 metres
Is the light show clearly visible to passing drivers of traffic? No	 Would traffic management be needed to create space for the RAPT to be in position for shows? No
Overall score out of 10: 8	Overall score out of 10: 8

EXTRA NOTES

Great site for projection on trees, video mapping on Cathedral and foot path. Tricky access for Hiab truck, narrow road and low hanging tree branches.



Name of the site: Church Hill 3 / Top of church steps



Access point needs key, low hanging tree branches (left) and gravel (right)



Power box (above) and projection surfaces

Lights and RAPT site (above), low hanging tree branches.

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 10+ M

Will cables have to cross roads/paths/walking areas? Yes / footpath

Overall score out of 10:8

Score per powerpoint: PP1: 8 / PP2: 8 / PP3:8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, Nelson Womens club, Mama Cod, Church steps, 1903 stage and mural.

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Multiple loactions, in front of 1903 stage

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? What is the estimated car parking nearby for viewers? 50+ spaces Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, cross over lights and lights from restaurants and bars, shop windows

Who are the impacting lights owned by? NCC / Cathedral

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10:8

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes, easy

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) Yes - tree branches

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10:8

Good access for Hiab truck. Need to be mindful of low hanging tree branches.

p.1/3

Name of the site: 1903 Square power points (3)p. 2/3

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? 100+ m (show on map)	Can the RAPT be located on a hard standing? Yes
What is the risk of light spill onto private	What is the type of surface if not hard standing?
residences/roads from the projector? Low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from light show subject? 10+ metres	20 metres
Is the light show clearly visible to passing drivers of traffic? No	 Would traffic management be needed to create space for the RAPT to be in position for shows? NO
Overall score out of 10: 8	Overall score out of 10: 8

EXTRA NOTES

Great site for projection on trees, video mapping on Nelson womens club, Mama Cod, Church steps, 1903 stage and mural painting.



Name of the site: 1903 Square power points (3)





Power point 1



Power points 2 (left) and 3 (right)



Potential installation site RAPT



Street lights and projection surfaces

Name of the site: Top Trafalgar Street fountain

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 7+ M

Will cables have to cross roads/paths/walking areas? Yes / footpath

Overall score out of 10:9

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Video mapping on buildings, footpath

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Multiple locations, in front of fountain

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? What is the estimated car parking nearby for viewers? 50+ spaces Nelson CBD

Are there any light sources that would impact the show? Street lanterns, lights from restaurants/bars, smart pole lights

Who are the impacting lights owned by? NCC and restaurant owners

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 depends on project

Overall score out of 10: 9

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes, easy

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10:10

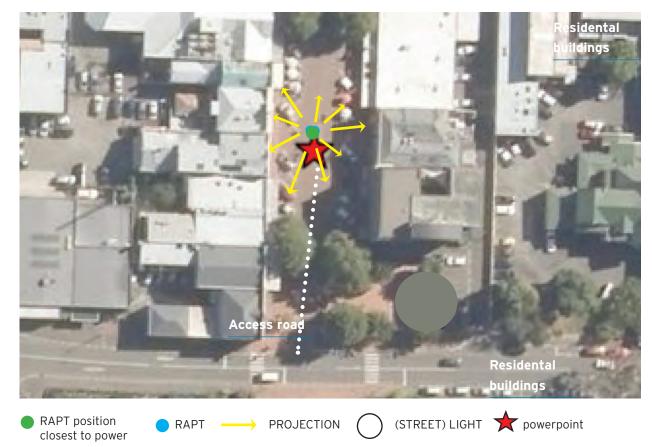
Good access for Hiab truck. Be mindful of foot traffic during install.

Name of the site: Top Trafalgar Street fountain

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
no residential buildings nearby (CBD)	What is the type of surface if not hard standing?
What is the risk of light spill onto private	N/A
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from light show subject? 25 metres	7+ metres
	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? No	space for the RAPT to be in position for shows? No
Overall score out of 10: 9/10	Overall score out of 10: 9/10

EXTRA NOTES

Great site for projection/video mapping on buildings and footpath



Name of the site: Top Trafalgar Street fountain

p. 3/3



Street lights and projection surfaces

POWER / CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC / Food cart

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M

Will cables have to cross roads/paths/walking areas? Yes / footpath

Overall score out of 10: 7, as need to run long cables to RAPT.

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Footpath, trees, 623 Cafe - but no obvious/good projection surfaces present.

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Buxton carpark / Hardy Street foothpath

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)?

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? What is the estimated car parking nearby for viewers? Buxton Carpark, 80+ places

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, lights from 623 Cafe

Who are the impacting lights owned by? NCC / and restaurant owners

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - project dependent

Overall score out of 10: 6 (no great surfaces)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) Yes, tree branches on Hardy footpath side

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 7 (only from Buxton carpark side)

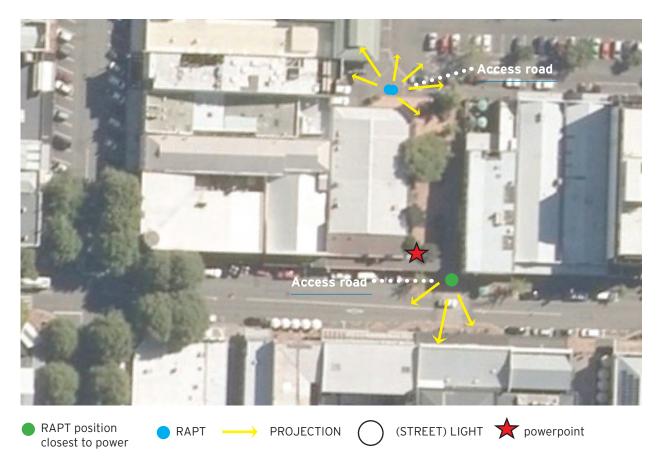
200+

Name of the site: Bank Lane / Hardy Street / Thai food cart

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
no residential buildings nearby	What is the type of surface if not hard standing? N/A
What is the risk of light spill onto private	
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread) 7+ metres
What is the distance to the nearest road from	
light show subject? 5 metres - Buxton carpark	Would traffic management be needed to create space for the RAPT to be in position for shows? No
Is the light show clearly visible to passing drivers of traffic? Yes, if installed on Hardy St side	
Overall score out of 10: 7	Overall score out of 10: 9/10

EXTRA NOTES

Easy access for Hiab truck from Buxton side, but no real good projection surfaces present. Long power cable is needed if RAPT is installed on Buxton carpark side.



Name of the site: Bank Lane / Hardy Street / Thai food cart





Power point and potential sites for RAPT





POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Not sure, but this toilet block must have a power point somewhere.

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+m, variable

Will cables have to cross roads/paths/walking areas? depends on exact location

Overall score out of 10:8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Various buildings around the carpark / footpath

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Buxton toilet block

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 400+ (if carpark is free of cars)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 400+ (as above)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 400+ (as above) What is the estimated car parking nearby for viewers? 100+ places Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, shop windows/signage

Who are the impacting lights owned by? NCC / shops / restaurant owners

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 (depends on project)

Overall score out of 10:8

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No,

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 8 RAPT will take up 1 or 2 carpark spaces

Name of the site: Buxton Carpark (toilet block)

DADT CONSTRUCTION / SAFETY ASSESSMENTS

PLANNING EFFECTS ASSESSMENTS	RAPI CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
No residential buildings nearby, but hotels present	What is the type of surface if not hard standing? N/A
What is the risk of light spill onto private	
residences/roads from the projector? Low	What is the distance to the nearest building structure from the RAPT? (firespread) 20+ metres
What is the distance to the nearest road from	
light show subject? approx 150 metres / Hardy Street / Bridge St / Collingwood	Would traffic management be needed to create space for the RAPT to be in position for shows? No
Is the light show clearly visible to passing drivers of traffic? Yes, if driving into Buxton carpark	
Overall score out of 10: 8	Overall score out of 10: 8

EXTRA NOTES

Easy access for Hiab truck, some video mapping / projection surfaces present. RAPT will take up 1-2 carpark spaces. No residential places nearby, but hotels are present around the carpark in term of light pollution so that needs to be considered.



Name of the site: Buxton Carpark (toilet block)



Power point (above) and potential installation site RAPT (right). Street lights/light pollution as well.



Potential surface for projection, and street light



Potential power point? Needs further investigation



Potential surface for projection

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Not sure, but this toilet block must have a power point somewhere

Who owns the power asset? NCC / Toilet block

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / variable

Will cables have to cross roads/paths/walking areas? Yes but depends on exact location

Overall score out of 10:8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Various buildings around the carpark / footpath

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Middle of Montgomery carpark (toilet block)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 400+ (if carpark free of cars)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 400+(see above)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 400+ (see above) What is the estimated car parking nearby for viewers? 100+ places Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, shop lights

Who are the impacting lights owned by? NCC / shop / restaurant owners

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal (both possible)

How many projectors would be needed on the light art subjects? : 1 or 2 (depends on project)

Overall score out of 10:8

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No,

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 8 RAPT will take up 1-2 carpark spaces after install

Name of the site: Montgomery Carpark (toilet block)

What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
No residential buildings nearby	What is the type of surface if not hard standing?
What is the risk of light spill onto private	N/A
residences/roads from the projector? Low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	20+ metres
light show subject? 100 m to either Bridge St, Hardy St, RutherfordSt, Hardy Street, Trafalgar St	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? Yes, if driving onto Buxton carpark	space for the RAPT to be in position for shows? No
Overall score out of 10: 8	Overall score out of 10: 8

EXTRA NOTES

Easy access for Hiab truck. Potential video mapping / projection surfaces present. RAPT will take up 1-2 carpark spaces. No residential building but hotels/motels are nearby so that needs to be considered in terms of light pollution.



Name of the site: Montgomery Carpark (toilet block)



Potential installation site RAPT, power point expected in toilet block, potential projection surfaces



Potential access points for power



Potential projection surface

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC / Food carts

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? No but depends on exact location/set-up

Overall score out of 10:9

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Various walls around the food cart site

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Placed anywhere on food cart site

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 300+ What is the estimated car parking nearby for viewers? 100+ places Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Nearby street lights, Westpac floodlights

Who are the impacting lights owned by? NCC / Westpac bank

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -(depends on project)

Overall score out of 10:9

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? Yes, need key to get access

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

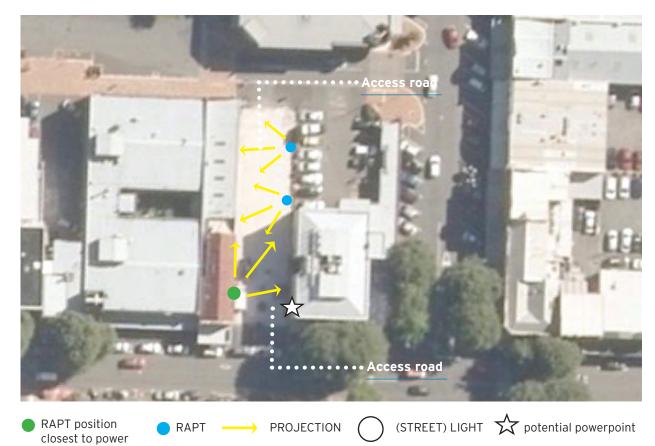
Would traffic management be needed to drop off the RAPT? No

Name of the site: Food cart site behind Westpac bank

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
no residential buildings nearby.	What is the type of surface if not hard standing?
What is the risk of light spill onto private	N/A
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	5+ metres
light show subject? 20+ metres to Trafalgar St and/or Bridge St	Would traffic management be needed to create space for the RAPT to be in position for shows?
Is the light show clearly visible to passing drivers of traffic? Yes, if driving along Bridge/Trafalgar St	No
Overall score out of 10: 9	Overall score out of 10: 9

EXTRA NOTES

Easy access for Hiab truck, good walls for video mapping / projection. Easy install for RAPT.



Name of the site: Food cart site behind Westpac bank

Power points (above) and potential installation sites for RAPT



Street lights and potential projection surfaces







POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Not visible

Who owns the power asset? NCC / Library

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes, but depends on location

Overall score out of 10:9

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Various walls around playground site

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) On playground site, might need to move unfixed playground obstacles

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 100+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 100+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? What is the estimated car parking nearby for viewers? 100+ places around Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, library, Burger King lights

Who are the impacting lights owned by? NCC / Library / Burger King

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal (both possible)

How many projectors would be needed on the light art subjects? : 1 or 2 (depends on project)

Overall score out of 10:9

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? Yes, need key to get access

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Name of the site: Playground next to library

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
no residential buildings nearby	What is the type of surface if not hard standing?
What is the risk of light spill onto private	N/A
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	7+ metres
light show subject? 10+m to Halifax Street	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? Yes, if driving along Halifax Street	space for the RAPT to be in position for shows? No
Overall score out of 10: 9	Overall score out of 10: 9

EXTRA NOTES

Easy access for Hiab truck. Walls offer good video mapping / projection surfaces. Easy install for RAPT.



Name of the site: Playground next to library



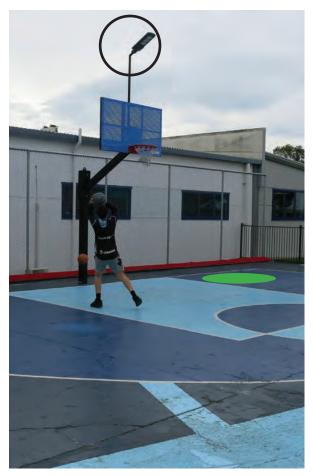
Power points (inside library, above) and potential installation sites for RAPT

5





Some street lights and potential projection surfaces



Name of the site: Empty site next to library

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Not found

Who owns the power asset? NCC / Library

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes, but depends on location

Overall score out of 10:7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) No suitable surfaces, site would need screen

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Various spots

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 80+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 80+

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 100+ What is the estimated car parking nearby for viewers? 100+ places Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, library lights

Who are the impacting lights owned by? NCC / Library

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -(depends on project)

Overall score out of 10: 7

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? Yes, need key to get access

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Name of the site: Playground next to library

RAPT CONSTRUCTION / SAFETY ASSESSMENTS
Can the RAPT be located on a hard standing? Yes
What is the type of surface if not hard standing?
N/A
What is the distance to the nearest building structure from the RAPT? (firespread)
7+ metres
Would traffic management be needed to create
space for the RAPT to be in position for shows? No
Overall score out of 10: 7

EXTRA NOTES

Easy access for Hiab truck, walls not suitable for video mapping / projection unless screens is used. Easy install for RAPT.



Name of the site: Playground next to library



No outside power points found (yet), power would need to come from library at this stage.



Street lights indicated and a projection surface that would require a screen.

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location

Overall score out of 10:9

PP1: 9/PP2:9/PP3: 9/PP4:9/PP5:9/PP6:9

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, footpath, taurapa sculpture, or screen

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Directly next to or on footpath

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 50+

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)?

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 100+ (more when during festival on site) What is the estimated car parking nearby for viewers? 100+ places at the library / Trafalgar Centre

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns around the site

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -(depends on project)

Overall score out of 10: 9

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Potentially

Are there locked access problems for Hiab driver to get to the drop off? Yes, key required

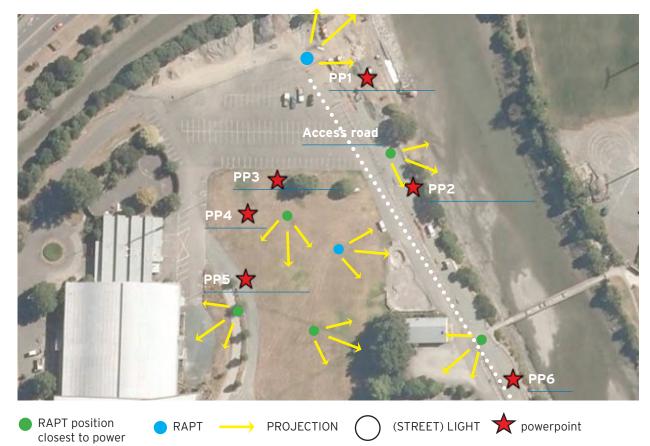
Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

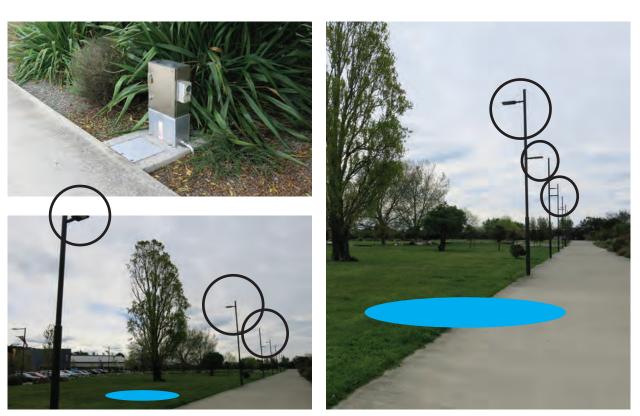
Would traffic management be needed to drop off the RAPT? No

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
no residential buildings nearby	What is the type of surface if not hard standing?
What is the risk of light spill onto private	Grass
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	100+ metres
light show subject? 50+ m Trafalgar centre	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic?	space for the RAPT to be in position for shows? No
Yes, potentially from State Highway 6	Overall score out of 10: 9
Overall score out of 10: 9	

EXTRA NOTES

Easy access for Hiab truck, good set up possibilties for RAPT. Projection options include footpath, trees, skate park, Taurapa sculpture, Trafalgar Centre, outdoor screen or festival prop / set-up. Multiple on-site power points create various set-up options for the RAPT.





Power points, light pollution risks, and potential installation sites for RAPT



Street lights and potential RAPT sites



Power points (above) and potential installation site RAPT (right)



Taurapa sculpture, potential projection surface



Power points and potential installation sites for RAPT



Potential RAPT site and projection surface

p. 6/6



Power point (above, right) and potential installation site RAPT





Light pollution, potential RAPT site and projection surfaces.

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes, multiple

Who owns the power asset? NCC / Trafalgar park

Is it possible to drop the RAPT over the power source so that no cables are seen? Currently not

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes, but depends on location

Overall score out of 10: 9, this site has multiple power points and projection set up options but we need access to this site to further inspect the options. Multiple power points

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, footpath, screen, potentially more (site needs further inspection)

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Not clear yet, closer inspection needed

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 200+ (depends on location set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 200+ (depends on location set-up)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 300+ depends on set-up

What is the estimated car parking nearby for viewers? 100+ places Library / Trafalgar Centre

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns around the site

Who are the impacting lights owned by? NCC / Library

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -depends on project

Overall score out of 10: 9

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Yes, this can be possible

Are there locked access problems for Hiab driver to get to the drop off? Yes

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Name of the site: Trafalgar Park / this site need further inspection

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
Residential buildings around the stadion	What is the type of surface if not hard standing?
What is the risk of light spill onto private	Grass
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	100+ metres
light show subject? 50+ m Trafalgar Centre depends on location in stadion	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic?	 space for the RAPT to be in position for shows? No
Yes, if driving past Trafalar park stadium	Overall score out of 10: 9
Overall score out of 10: 9 Site needs further in- spection.	-

EXTRA NOTES

Multiple sites on ths location. This site need further inspection.



Name of the site: Trafalgar Park / this site needs further inspection



Power points

more information/images to follow after further inspection (need access to terrain)

Name of the site: Neale Park / Skatepark

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? Depends on location of RAPT

Overall score out of 10: 7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Skatepark or screen set-up

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Close to entrance points, see map

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 50+ (depends on location and set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 50+ (see above)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)?

50+ (see above)

What is the estimated car parking nearby for viewers? 100+ at Founders park

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns around the site / skate park

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -depends on project

Overall score out of 10:7 (no suitable surfaces)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? This may be needed

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
No residential buildings on this location	What is the type of surface if not hard standing?
What is the risk of light spill onto private	Grass / Gravel
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	50+ metres
light show subject? 30+ m, State Highway 6	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? Yes, if driving on State Highway 6	space for the RAPT to be in position for shows? No
Overall score out of 10: 6	Overall score out of 10: 6

EXTRA NOTES

Not the best site in term of objects/surfaces to project on. Projections are possible on the skatepark or a custom build structure.



Name of the site: Neale Park / Skatepark



Power access point in foreground, street light in back.

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 20+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location RAPT

Overall score out of 10: 6

What is the estimated car parking nearby for viewers? 100+ Miyazu Gardens

Are there any light sources that would impact the show? (Name, shown on map) Garden / street lights

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -depends on project

Overall score out of 10:7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, construction or screen set-up

What are the best RAPT positions in the area if dropped directly from Hiab? (shown on map) Close to power point, see map

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 50+ (depends on location set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 50+ (depends on location set-up)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 50+ (depends on location set-up)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Yes, this can be possible

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Name of the site: Miyazu Japanese Gardens

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence?	Can the RAPT be located on a hard standing? Yes
Residential buildings opposite Miyazu Gardens	What is the type of surface if not hard standing?
What is the risk of light spill onto private	Grass / Gravel
residences/roads from the projector? low	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from	70+ metres
light show subject? 40+ m Atawhai Drive	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? Yes, if driving on Atawhai Drive	space for the RAPT to be in position for shows? No
Overall score out of 10: 7	Overall score out of 10: 7

EXTRA NOTES

Not the best site in term of objects to project on. Projections are possible on trees or screen/custom build structure on site.



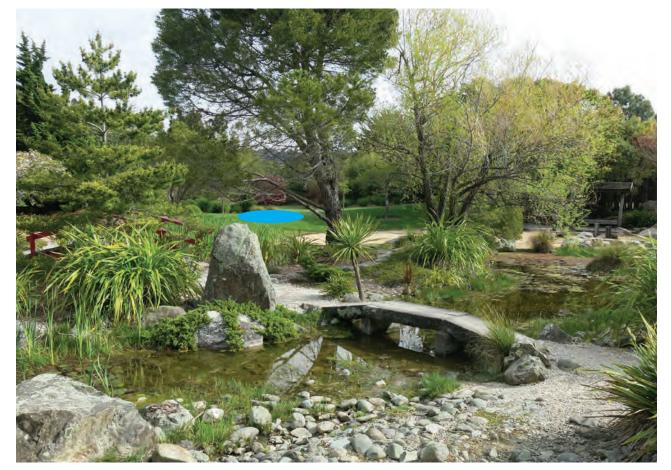
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Name of the site: Miyazu Japanese Gardens





Power access point



Potential RAPT point

Potential RAPT point

Name of the site: Botanic Sportsfield

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 20+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location of RAPT

Overall score out of 10: 7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? (name structure, shown on map) Trees, construction or screen set-up

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, or on field (see map)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 100+ (depends on location set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 100+ (depends on location set-up)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)?

100+ (depends on location set-up)

What is the estimated car parking nearby for viewers? 50+ around Botanic Sportsfield

Are there any light sources that would impact the show? (Name, shown on map) Street lights

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 -depends on project

Overall score out of 10: 7 (no objects to project onto, limited parking spots)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Yes

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

RAPT CONSTRUCTION / SAFETY ASSESSMENTS
Can the RAPT be located on a hard standing? No
What is the type of surface if not hard standing? Grass
What is the distance to the nearest building structure from the RAPT? (firespread) 70+ metres
Would traffic management be needed to create space for the RAPT to be in position for shows?
No Overall score out of 10: 7

EXTRA NOTES

Not the best site in terms of objects to project on. Projections are possible on trees or custom build structures/screens placed on site.



Name of the site: Botanic Sportsfield



Projections on trees possible

Power access point



POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes / multiple

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen?No

What is the length of cable required to reach the best projection locations? 20+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location of RAPT

Overall score out of 10: 8 for

PP1:8 /PP5:8/PP6:8 /PP7: 8/PP8:8/PP9: 8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Trees. Construction or screen set-up required.

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, or on field (see map)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 500+ (depends on location set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 500+ (depends on location set-up)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 500+ (depends on location set-up) What is the estimated car parking nearby for viewers? 100+ around Tahunanui Recreation Reserve

Are there any light sources that would impact the show? (Name, shown on map) Gardens lanterns around the site

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 7 (no obvious projection surfaces present)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Possibly

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

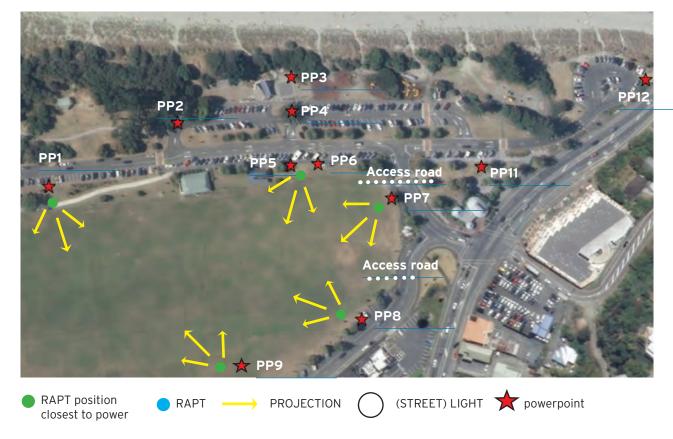
Would traffic management be needed to drop off the RAPT? No

Name of the site: Tahunanui Recreation Reserve (field)

RAPT be located on a hard standing?
he type of surface if not hard standing?
ravel
he distance to the nearest building from the RAPT? (firespread)
es
affic management be needed to create the RAPT to be in position for shows?
core out of 10: 8
S

EXTRA NOTES

Not the best site in term of objects to project on. Projections are possible on trees or custom build structures on site. Easy access for Hiab truck.



Name of the site: Tahunanui Recreation Reserve (field)



Access point

Projection options (trees)



Power options and potential position for RAPT





Power options

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? Yes / multiple

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 20+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location of RAPT

Overall score out of 10:8

PP2:8/PP3: 8/PP4:8/PP11:8/PP12:8

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Trees, skate ramps, basketball court, footpath (construction or screen set-up required).

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, either on the field or in thecarpark (see map)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 500+ (depends on location set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 500+ (depends on location set-up)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 500+ (depends on location set-up) What is the estimated car parking nearby for viewers? 100+ around Tahunanui Recreation Reserve

Are there any light sources that would impact the show? (Name, shown on map) Street lights

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 7 (no obvious projection surfaces present so would need to install one)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Possibly

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Name of the site: Tahunanui Recreation Reserve (opposite side)

Can the RAPT be located on a hard standing? No What is the type of surface if not hard standing? Grass / gravel
Grass / gravel
What is the distance to the nearest building structure from the RAPT? (firespread)
70+ metres
Would traffic management be needed to create space for the RAPT to be in position for shows?
No
Overall score out of 10: 8

EXTRA NOTES

Not the best site in term of available objects to project on. Projection is possible on trees, skate ramp, basketbal court or ideally a custom build structure on site. Easy access for Hiab truck.



Name of the site: Tahunanui Recreation Reserve (opposite side)







Access point & Power points

RAPT placement



Power options and potential position for RAPT



Potential position for RAPT



Is an outdoor/weather stable mains power source present? Yes, multiple

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 20+ M / Variable

Will cables have to cross roads/paths/walking areas? Depends on location of RAPT

Overall score out of 10: 8 (see notes)

PP1: 8 /PP2:4/PP3: 4

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Not many ideal subjects (trees, fountain, bridge, footpath) but darkness of area works well.

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, or grass or footpath. (see map)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 150+ (depends on location set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 150+ (depends on location set-up)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 150+ (depends on location set-up) What is the estimated car parking nearby for viewers? 70+ around Queens Gardens

Are there any light sources that would impact the show? (Name, shown on map) Garden lanterns

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 8 (no obvious projection surfaces present but darkness of area is a plus)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Possibly

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

Overall score out of 10: 6 (two of the three power point locations can't be reached with Hiab truck)

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? Residential buildings around Queens Gardens	Can the RAPT be located on a hard standing? Yes
	What is the type of surface if not hard standing? Grass
What is the risk of light spill onto private residences/roads from the projector? low	
	What is the distance to the nearest building structure from the RAPT? (firespread) 70+ metres
What is the distance to the nearest road from light show subject? 100+ m Hardy, Bridge and Tasman Street	
	Would traffic management be needed to create space for the RAPT to be in position for shows? No Overall score out of 10: 8
Is the light show clearly visible to passing drivers of traffic? Not likely	
Overall score out of 10: 8	

EXTRA NOTES

Suitably dark location for projection (think of the Bloom installation during the Te Ramaroa event). Howeve,r two of the three power points can't be reached with Hiab truck.



Name of the site: Queens Gardens



RAPT placement options & power point (top right)



Access road and possible position for RAPT





Is an outdoor/weather stable mains power source present? Yes / multiple

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 20+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location of RAPT

Overall score out of 10: 8 (PP1: 8/PP2:8)

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? No much (trees, path, toilet block)

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, or on field or foothpad (see map)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 20+ (depends on set-up, and if part of event)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)?

20+ (depends on set-up, and if part of event)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)?

20+ (depends on set-up, and if part of event)

What is the estimated car parking nearby for viewers? 40+

Are there any light sources that would impact the show? (Name, shown on map) Flood lights

Who are the impacting lights owned by? NCC

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 6 (no obvious or suitable projection surfaces present and isolated location)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Possibly

Are there locked access problems for Hiab driver to get to the drop off? No

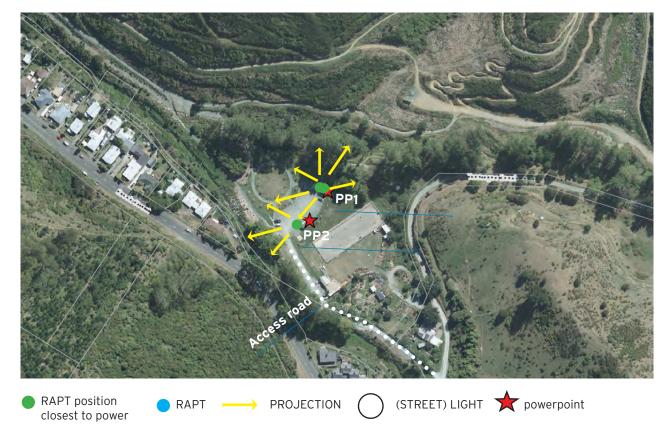
Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? No

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? Residential buildings around MTB hub, see map	Can the RAPT be located on a hard standing? Yes
	What is the type of surface if not hard standing? Grass / Gravel
What is the risk of light spill onto private residences/roads from the projector?	
	What is the distance to the nearest building
What is the distance to the nearest road from light show subject? 100+ m Brook Steet	structure from the RAPT? (firespread) 30+ metres
	Would traffic management be needed to create space for the RAPT to be in position for shows? No
Is the light show clearly visible to passing drivers of traffic? No	
Overall score out of 10: 8	Overall score out of 10: 8

EXTRA NOTES

Suitably dark but very isolated locaiton with few objects to project on. Would need installation or screen to project on as well as connection to an event that will draw people to this more remote spot.





Power points



Access road and possible position for RAPT



Potential position for RAPT

Is an outdoor/weather stable mains power source present? Yes / multiple (2)

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 20+ M / variable

Will cables have to cross roads/paths/walking areas? Yes but depends on location of RAPT

Overall score out of 10: 7

PP1: 7/PP2:7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Various buildings (not ideal) and footh path

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, or on foothpad (see map)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 60+ (depends on location/set-up)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)?

60+ (depends on location and if part of event)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)?

60+ (depends on location and if part of an event)

What is the estimated car parking nearby for viewers? 50+ waterfront parking

Are there any light sources that would impact the show? (Name, shown on map) Street lights, restaurant lights

Who are the impacting lights owned by? NCC / restaurants

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal - both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 6 (no obvious/suitable projection surfaces present)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Possibly

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

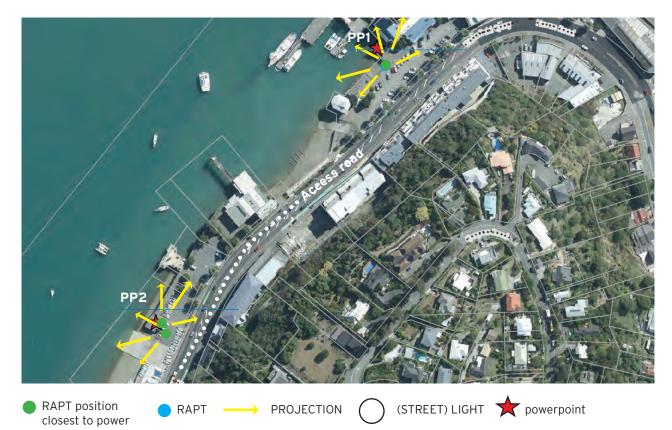
Would traffic management be needed to drop off the RAPT? No

Name of the site: Wakefield Quay power boxes

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? 50m	Can the RAPT be located on a hard standing? Yes
	What is the type of surface if not hard standing? N/A
What is the risk of light spill onto private residences/roads from the projector? medium	
	What is the distance to the nearest building structure from the RAPT? (firespread) 5-20 metres (see photos)
What is the distance to the nearest road from light show subject? 30+ m Rocks Road	
	Would traffic management be needed to create space for the RAPT to be in position for shows? No Overall score out of 10: 7
Is the light show clearly visible to passing drivers of traffic? Yes, along Rocks Road	
Overall score out of 10: 8	

EXTRA NOTES

No suitable surfaces to project on. Needs installation or screen to project on.



Name of the site: Wakefield Quay Power boxes



Power points and street lights



Lights and possible positions for RAPT





Name of the site: Crossing in front of Civic House

POWER/CABLE ASSESSMENTS

Is an outdoor/weather stable mains power source present? No

Who owns the power asset? Bike shop

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 15+ M / Variable

Will cables have to cross roads/paths/walking areas? Yes on footpath

Overall score out of 10:7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Civic House (clock tower)

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, on footpath (see images)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 50+ (depends on time /day/event on)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 50+ depends on time /day/event on)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 100+ depends on time /day/event on) What is the estimated car parking nearby for viewers? 100+ Nelson CBD

Are there any light sources that would impact the show? (Name, shown on map) Street lanterns, shop lights, Burger King, and traffic lights

Who are the impacting lights owned by? NCC / Burger King

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 7 (only one good projection surface present which is the tower)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? No

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) No

Would traffic management be needed to drop off the RAPT? Yes, Hiab will block the road during install

Name of the site: Crossing in front of Civic House

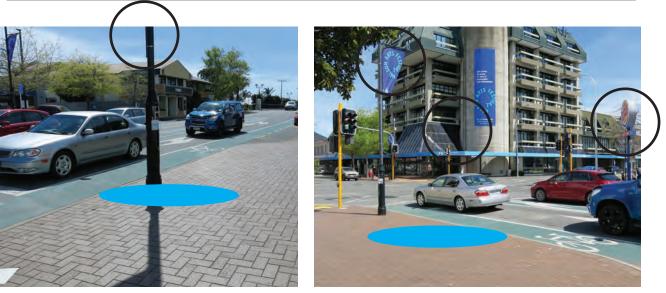
PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? Shops nearby, no residential buidlings, see map	Can the RAPT be located on a hard standing? Yes
	What is the type of surface if not hard standing? N/A
What is the risk of light spill onto private residences/roads from the projector? medium	
	What is the distance to the nearest building structure from the RAPT? (firespread)
What is the distance to the nearest road from light show subject? 5+ m road crossing, see map	3 m (see photos)
	Would traffic management be needed to create space for the RAPT to be in position for shows? Yes
Is the light show clearly visible to passing drivers of traffic? Yes, see map	
Overall score out of 10: 7	Overall score out of 10: 6/7

EXTRA NOTES

This location can be used to project onto the Civic House clock tower. Power point is in the Miller's Acre bike-shop on the corner. Street lights need to be turned off when possible during projection.



Name of the site: Crossing in front of Civic House



Projection set up points



Position for RAPT and power point



Potential position for RAPT, street lights that need turning off

Is an outdoor/weather stable mains power source present? Yes

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 10+ M / 20+ m / variable

Will cables have to cross roads/paths/walking areas? Yes on footpath

Overall score out of 10: 8 (PP1: 8/PP2:8)

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Isel House and trees

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, on footpath / grass (see images)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 30+ (depends on time and context/event)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 30+ (depends on time and context/event)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 60+ (depends on time and context/event) What is the estimated car parking nearby for viewers? 20+ Isel park

Are there any light sources that would impact the show? (Name, shown on map) Park lanterns & flood lights

Who are the impacting lights owned by? NCC / park

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 7

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? Yes

Will a Hiab truck need to access the drop off by driving over grass? Yes, maybe

Are there locked access problems for Hiab driver to get to the drop off? Yes, locked posts

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) Yes, tree branches

Would traffic management be needed to drop off the RAPT? No

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? 30+ metres (see map)	Can the RAPT be located on a hard standing? Yes
	What is the type of surface if not hard standing? Grass / Gravel
What is the risk of light spill onto private residences/roads from the projector? low	
	What is the distance to the nearest building structure from the RAPT? (firespread) 10+ metres from Isel House (see photos)
What is the distance to the nearest road from light show subject? 50m	
	Would traffic management be needed to create
Is the light show clearly visible to passing drivers of traffic? No	space for the RAPT to be in position for shows? No
Overall score out of 10: 7	Overall score out of 10: 6/7 (need to cut low hanging tree branches)

EXTRA NOTES

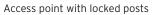
This loctaion is nice and dark for projections, but is a bit isolated. More suitable for event / night market etc. Video mapping on Isel House possible. Potential for low hanging tree branches getting in the way.



Name of the site: Isel Park

p. 3/3





Power point



Potential position for RAPT and power point



Field in front of toilet block



Positions for RAPT and power point



Access road and possible location for RAPT

Is an outdoor/weather stable mains power source present? Yes / see map

Who owns the power asset? NCC

Is it possible to drop the RAPT over the power source so that no cables are seen? No

What is the length of cable required to reach the best projection locations? 10+ M / 20+ m Vvariable

Will cables have to cross roads/paths/walking areas? No, on grass

Overall score out of 10: 7 (PP1: 7/PP2:7)

What is the estimated car parking nearby for viewers? 50+ along Nayland Road

Are there any light sources that would impact the show? (Name, shown on map) Street lights, flood lights

Who are the impacting lights owned by? NCC / Broadgreen House

Does the site have potential for two direction shows? Yes

What position would projectors be set up in for each projection subject? vertical / horizontal -both possible

How many projectors would be needed on the light art subjects? : 1 or 2 - depends on project

Overall score out of 10: 7

LIGHT SHOW ASSESSMENTS

What light art subjects are in the area? Broadgreen House and trees

What are the best RAPT positions in the area if dropped directly from Hiab? Close to power point, on grass (see images)

What is the passing traffic audience viewing capacity? (estimated numbers of viewers in 1 hour) 30+ (depends on time / event)

What is the pedestrian audience viewing capacity without need for traffic management? (estimated numbers of viewers)? 30+ (depends on time/ event)

What is the pedestrian audience viewing capacity with a need for traffic management (estimated numbers of viewers)? 60+ (depends on time / event)

SITE ACCESS ASSESSMENTS

Can a Hiab truck access the drop off area by staying on roads/hard surface? No

Will a Hiab truck need to access the drop off by driving over grass? Yes

Are there locked access problems for Hiab driver to get to the drop off? No

Are there any height restrictions to access the drop off site with Hiab? (shown on map with estimated heights) Yes low tree branches

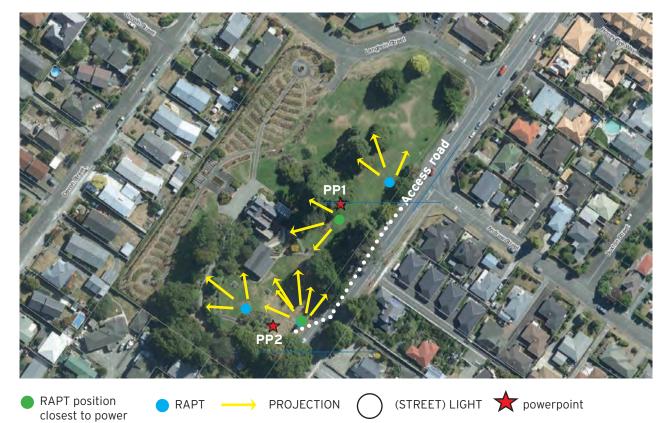
Would traffic management be needed to drop off the RAPT? No

Name of the site: Broadgreen House, Stoke

PLANNING EFFECTS ASSESSMENTS	RAPT CONSTRUCTION / SAFETY ASSESSMENTS
What is the distance from the RAPT position to nearest residence? 20m+	Can the RAPT be located on a hard standing? No
	What is the type of surface if not hard standing? Grass / field
What is the risk of light spill onto private residences/roads from the projector? low	
	What is the distance to the nearest building structure from the RAPT? (firespread) 20+ metres (see photos)
What is the distance to the nearest road from light show subject? 15 m + Nayland Rd Is the light show clearly visible to passing drivers of traffic? Yes, when driving along Nayland Road	
	Would traffic management be needed to create space for the RAPT to be in position for shows?
Overall score out of 10: 7	Overall score out of 10: 6/7 (possible need to cut low hanging tree branches)

EXTRA NOTES

This location offers easy access but RAPT needs to be placed on grass. Lots of residential houses accross the road and possibly too far from CBD to draw Nelson crowd.



Name of the site: Broadgreen House, Stoke



Power point in foreground

Power point



Access road with locked posts / low hanging branches



RAPT possible position



Residential houses just across the road



Possible location for RAPT