

Operation & Maintenance Plan  
For Aspire Digital Sign  
Pacific Highway  
Hornsby Sydney

Prepared by JCDecaux Australia

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## 1.0 Background

### Introduction

JCDecaux is committed to ensuring the operation of digital advertising signs is completed safely without any disruption to TfNSW operations or the travelling public.

This plan has been prepared to detail the operation and maintenance of the digital advertising structure to be constructed at Pacific Highway Hornsby Sydney

### Objective

This plan provides details of how the digital signs will operate and the maintenance regimes that will be put in place to ensure we meet our target to safely operate each advertising structure. This Operation & Maintenance Plan defines both the ongoing operating conditions of the digital signs as well as proactive and reactive maintenance systems supporting the sign's ongoing safe operation and high standard of appearance.

This Operation and Maintenance Plan is effective from the date on the front cover of this document and will be updated to accommodate any changes required to the maintenance or operational parameters of the sign.

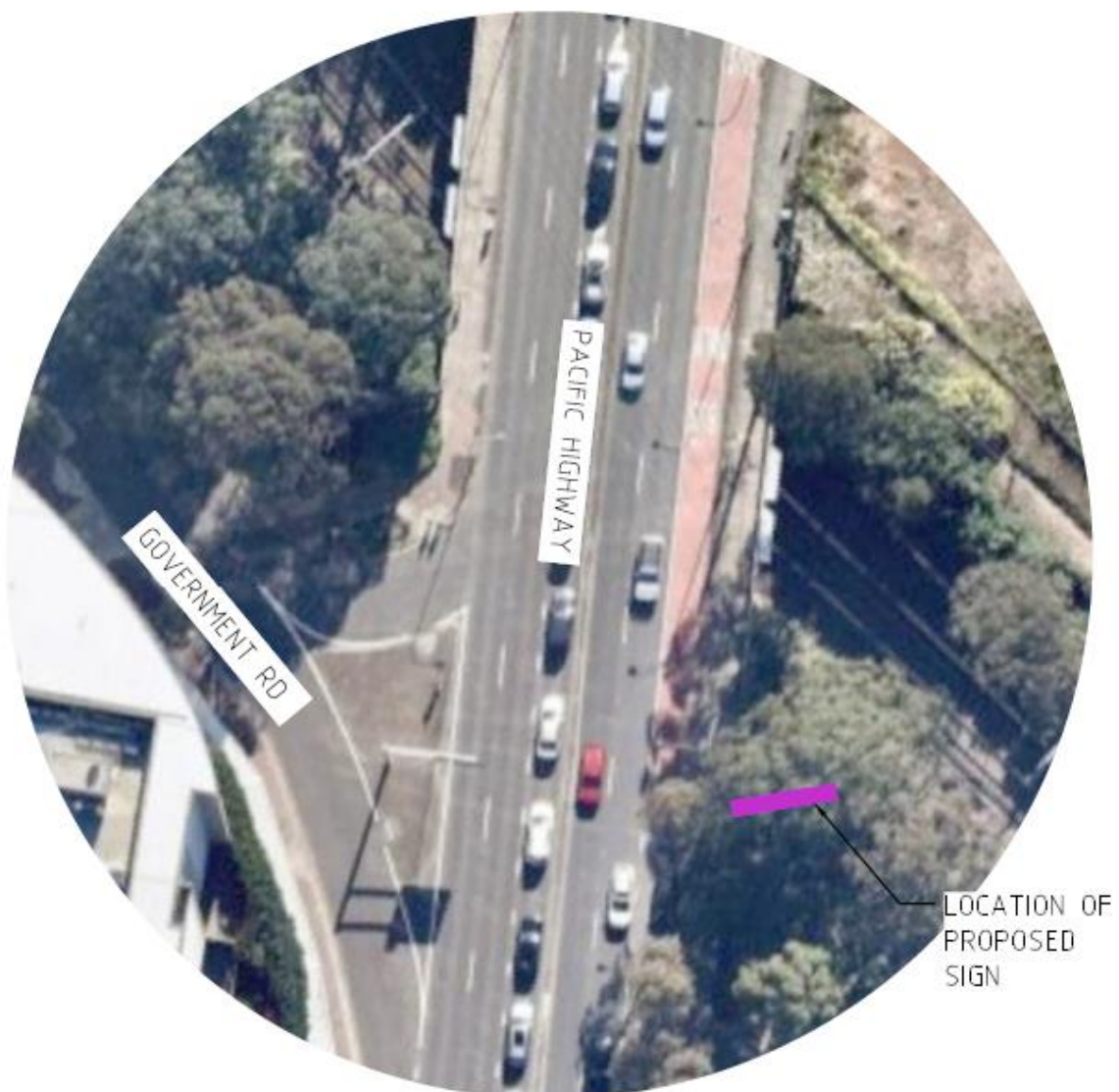
# Operation and Maintenance Plan

## 1.1 Sign Locations

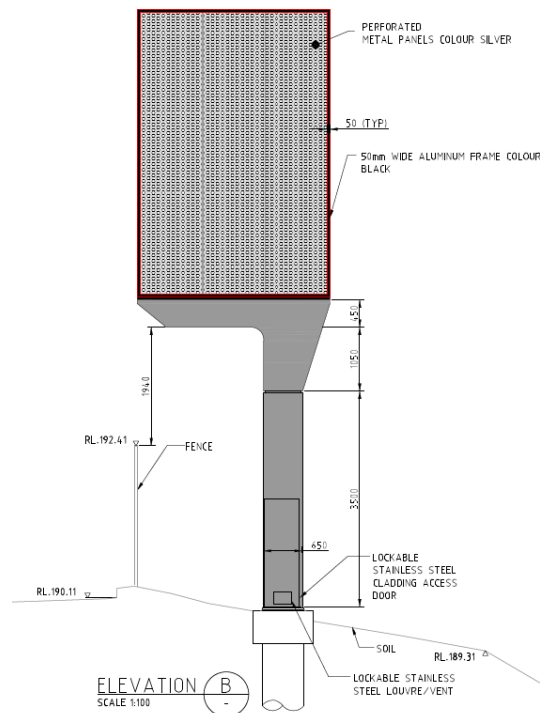
Panel No.	Location	Sign Type	Format Type and Size	Faces	Comment
	Pacific Highway, Hornsby Sydney	Portrait Digital	3.072m x 4.736m	1	Digital Portrait

### 1.1 Sign Location (cont.)

### 1.2 Inbound Sign



AERIAL PHOTO  
NTS



## Sign Specifications

### Digital LED Specification

The product specifications of the LED component of the digital screens are included below. The product selected for installation are typical of high-end installations across the industry and are chosen to ensure a high screen resolution and optimum viewing distance. Other attributes used to select the product are length of lifecycle, durability and energy consumption.

#### Aspire LED Screen

6mm SMD Traditional Steel Front Service Panel with Redundant PSU Technology

Pixel Pitch: 6mm

Dimensions: 3.072mW x 4.736mH

Sqm: 14.5sqm

Screen Weight: 841kg

Brightness: 6000 nits

Product Specifications	
Pixel Pitch	6mm
Active Screen Size (WxH)	3.072mW x 4.736mH
Active Screen Size (Sqm)	14.5sqm
Matrix Size (WxH)	512 x 789
Aspect Ratio	0.6:1
Display Weight	841kg
Display Weight per Sqm	58kg
Total Avg. Power Consumed	2.6kW
Total Max. Power Consumed	8.7kW
Max. Power Consumption per Sqm	0.6kW/m <sup>2</sup>
Current Draw	38 amps max load*
Mains Recommendation	Three phase at 16 amps per phase

Product Specifications	
Physical Pitch	6mm
Pixel Density	27777 pixel/m <sup>2</sup>
Pixel Configuration	SMD LED
Module Dimensions (WxH )	192mm x 192mm
Module Resolution (WxH )	32 x 32 pixels
Cabinet Material	Steel
Viewing Angle	H 140 Deg. / V 120 Deg.
Best Viewing Distance	6+m
Maintenance	Rear access
Protection Degree	IP65 front; IP54 rear

Product Specifications	
Panel Net Weight	58kg/sqm
Gray Scale	16-bit Color Processing Depth
Refresh Rate	1920+ Hz
Display Control	Synchronous control
Power Supply	220V, 50Hz
Operation Temp.	-20° ~60°
Display Dimming	Auto/Manual, 8~256 Levels
Signal Transfer	Text, image, graphics animations, video
Power Consumption (Max./Avg.)	0.6kw/sqm; 0.18kw/sqm
Lifetime	100,000hrs
Luminance	6000 nits

### 1.3 Digital Sign Lifespan

The lifespan of each screen is expected to exceed 100,000 hours under normal operating conditions and subject to regular servicing and maintenance. JCDecaux engages specialized O&M authorized digital signage technicians to conduct regular post-installation maintenance and servicing throughout the lifecycle of the digital screens supported by a stringent Service Level Agreement entered into between JCDecaux and the screen supplier, Big Screen Video.



## 2.0 Sign Operation

### 2.1 Hours of Operation

Digital images will be displayed of digital signs between 5am and 2am, 365 days per year.

### 2.2 Images Rotation and 'Dwell Time'

Images will change in accordance with Condition \_\_\_ and \_\_\_ of the Development Consent document reference \_\_\_ dated \_\_\_. The duration of each advertisement is often referred to as "dwell time" being 15 seconds in accordance with Condition \_\_\_ with the transition between each advertisement being 0.1 seconds in accordance with Condition \_\_\_ of the development approval. Advertisements proposed to be displayed are also stringently checked by JCDecaux Australia's operations team prior to posting to ensure they do not emulate or contain messages which could be construed as traffic directions, signal and the like as proscribed by condition \_\_\_.

### 2.3 Light Output

Each screen will be carefully calibrated so not to exceed the pre-determined brightness. The brightness of the screens also automatically adjust to ambient light conditions to ensure a high resolution is maintained in differing light conditions throughout the day using in-built automatic light sensors. Luminance levels shall be in accordance with Condition \_\_\_ of the Development Consent document reference \_\_\_ dated \_\_\_\_\_.

### 2.4 Advertising Content Controls

Whether static or digital sign formats, all content on JCDecaux signs is controlled with various measures prior to posting. Where particular sites have specific censorship, these categories are blocked from sales opportunities automatically. Beyond this, there are several manual checks on content to ensure there is compliant with the various codes that JCDecaux subscribe to by being a member of the Outdoor Media Association. In addition to these guides, there are specific codes that relate to motor vehicle, food and beverage and alcohol advertising that must be strictly adhered with. Should a complaint be made, this complaint is raised with the Advertising Standards Bureau (ASB) that regularly assess all advertising across all mediums in Australia. JCDecaux strictly follows any direction from the ASB should a complaint be upheld and the advertisement requires removal. Working in roadway environments, we also ensure advertisements do not give a traffic direction to motorists to stop, turn around and the like, nor do we permit advertisements that can reasonably replicate a traffic signal.

### 2.5 Digital Content Management

JCDecaux will operate the screens remotely from Sydney via JCDecaux Campaign Delivery. Campaign Delivery are responsible for the receipt, processing and scheduling of all client artwork via a digital operating software known as KIS. Each screen will be supported by back to base CCTV showing live images and fault reporting of the screen ensuring each sign is operating as intended.

## 3.0 Maintenance

Repair & Maintenance types cover the following categories of work:

### 3.1 Graffiti

Graffiti on both digital and static signs refers to tags or markings that have been painted or sketched on the physical asset structure. The removal process of graffiti will vary according to the type of damage ranging from in-situ cleaning to the whole or in the case of digital, the partial removal of the affected LED module(s). It is the responsibility of the Assets Function within JCDecaux to action all graffiti on structure. If the graffiti is deemed to be offensive, vulgar or in any way unsightly, JCDecaux will use its best endeavours to remove this within 4 hours although not later than 1 working day of being notified. If this is not the case, the graffiti will in most situations be removed within 7 working days.

### 3.2 Electrical

All electrical work is carried out by an accredited electrician. All electrical issues on digital screens are reported as urgent and JCDecaux will typically rectify the issue within 4 hours of being notified

### 3.3 Structural

The key objective of the structural repair service is to make safe, repair or replace damaged assets.

Structural **Condition Monitoring** shall be carried out by an accredited Structural Engineer and classified as follows and a set out below.

STRUCTURAL CONDITION – Structural rating			
No conditions apply other than a re-inspection required in 2 to 5 years from the date of this inspection.	1	The DEFECTS list attached is to be rectified and re-inspected within 4 weeks	4
Re-inspection required in 6 months to 2 years from the date of this inspection.	2	<b>ASSET TO BE DEMOLISHED IMMEDIATELY</b>	<b>5</b>
Re-inspection required in 2 to 6 months from the date of this inspection.	3	ASSET not inspected	6

JCDecaux shall provide TFNSW with a copy of Level 1-4 reports within 7 days following each inspection.

### 3.4 General Maintenance

Digital assets undergo regular maintenance checks which include cleaning as required. In addition, cleaning is part of the annual maintenance program. The objective of general maintenance is to address wear and tear of asset components to ensure correct operation and visual appearance is maintained as detailed below:

- Cleaning.
- Painting.
- Other works as required.

## 4.1 Warranties

Each digital panel is covered by a supplier warranty. JCDecaux will maintain that warranty agreement for both digital panels and engage with the supplier for any claims under the warranty period. Generally maintenance under the warranty will capture the following:

- A Service Level Agreement ("SLA") for operational defects covering e.g. digital diode function and the response time for the supplier to rectify reported operational defects.
- Cleaning of the digital panel. This will detail the activities that will be carried out by the supplier once a year to assist with the continuity of digital output on the screen. Examples of activity can be; cleaning the front & back of the screen, inspecting all filters and fans to repair or replace as required, etc.

## 4.2 Scheduled Maintenance

Operation & Maintenance (O&M) is a vital part of the JCDecaux business. O&M can be defined as work required to ensure the presentation of the asset is held to the highest possible standard.

A program is established to create a plan for cyclical tasks to prioritise certain O&M tasks. This information is inputted into an internal IT system called '**Fusion**' which notifies JCDecaux Assets Staff members that a scheduled inspection is due. These planned maintenance activities include:

- **Sign Brightness / Illumination Runs**

Illumination runs are designed to inspect visually all LED modules at night and completed the week following each campaign start date (typically every 4 weeks). If any outages are found during these runs, those issues are rectified by an JCDecaux electrician.

- **Structural and Electrical Inspections**

JCDecaux typically carry out routine structural and electrical inspections every 12 months and carry out any works arising from recommendations to ensure advertising structure and electrical devices are being adequately maintained. Inspection schedules may be varied according to recommendations from structural engineers inspecting these structures.

## 4.3 Reactive Maintenance

Safety for the public, TFNSW employees and JCDecaux personnel remains our first priority. As soon as a report of damage or of an asset in a dangerous condition is received through the 24-hour (OWL) hotline 1800 276 695, repairs will be performed as soon as possible and within the times listed in the Fault Response Schedule. JCDecaux maintains a stock of complete standard sign components to enable the speedy replacement of damaged assets or LED components in the case of digital signs.

JCDecaux has a streamlined reporting process that includes:

- 24/7 toll free hotline known as the "OWL" (phone number or 1800 276 695)
- Email addresses: [au.owl@jcdecaux.com](mailto:au.owl@jcdecaux.com) an automated reply email is generated to confirm the receipt of the issue.
- Reports from JCDecaux maintenance representatives. (If O&M issues are found and the rectification of that issue generally takes no more than 10 minutes to complete (and they are able to complete ), then the Reports from JCDecaux maintenance representatives fixes that O&M issue and reports it back to JCDecaux. If the repair takes, or expected to take, more than 10 minutes or they are unable to complete (e.g. electrical issue found but the installer isn't an electrician) the defect is reported via OWL.

Reactive Maintenance issues can be generated by:

- an JCDecaux employee;
- a client;
- an agency;
- a TFNSW representative ;
- an external contractor; or
- the general public

The JCDecaux Assets Coordinator must review the OWL database twice daily (after 9:30am & 2pm) to assess the issues reported and begin rectification works. Action must be taken to either clean or replace all other damages under the following guidelines:

- **Assessment of Damage** – Decision required as follows;
  - Extent and Type of Damage or Hazard. Structural (WHS) damages that may endanger the public must be attended to immediately regardless of cost. These WHS issues must also be reported to the National Assets Director and National WHS Director for them to complete the required actions.
- **Issue Work Order** in relation to repair.
  - All Work Orders must be issued through Fusion via a 'Maintenance Of Plant' (MOP) works order
  - Work Orders can only be issued to the Super Suppliers or the Preferred Suppliers on the National Supplier Panel or in the case of digital screens, the digital supplier.
  - The 'MOP' works order must include the same information as recorded in the OWL database. I.e. Panel ID; Panel address; Damage description and 'Rectification by' date.
- **Before and after photos required for Assets O&M.** The Assets Co-Ordinator is responsible to follow up with the suppliers to ensure the requested rectification works are completed within the required timeframe and 'Before' and 'After' photos are received. If however the task has been assigned to the National Static Executive, then that person will follow through that work to completion.

### 4.4 Reporting

JCDecaux maintains an asset register via its operating system, Fusion and all advertising assets have a unique identifier. This is normally attached to the asset by an ID barcode. JCDecaux assets reports are comprised of the following:

- Formal monthly reports and meetings detailing operational and commercial activities. This includes progress of the maintenance program and any particular tasks for the month plus results from regular inspections
- Updates of status of maintenance program/work in regular operational and management meetings
- Periodic audits by JCDecaux staff and independent inspection consultants.

### 4.5 Exemplar Maintenance SWMS