

RESOURCE CONSENT APPLICATION (CONCERTS)

EDEN PARK PRECINCT 42 REIMERS AVENUE KINGSLAND

TRANSPORT ASSESSMENT

Prepared By: Todd Langwell and Elemit Fu

June 2024 Reference: 240082 Issue D – Final

> Auckland Office: P O Box 60-255, Titirangi, Auckland 0642 Level 1, 400 Titirangi Road, Titirangi Village Tel: (09) 817 2500 Fax: (09) 817 2504 www.trafficplanning.co.nz

Project Information:

Client	Eden Park Trust
Job Number	240082
Title	Resource Consent Application – Concerts Eden Park Precinct, 42 Reimers Avenue, Kingsland Transport Assessment
Prepared By	Todd Langwell and Elemit Fu
Date	June 2024

Document History and Status

Revision	Date Issued	Reviewed By	Approved By	Date Approved	Status
А	21/03/2024	T Langwell	T Langwell	23/03/2024	Draft
В	17/04/2024	T Langwell	T Langwell	17/04/2024	Updated Draft
С	05/06/2024	T Langwell	T Langwell	06/06/2024	Final
D	27/06/2024	T Langwell	T Langwell	27/06/2024	Updated Final

This document and information contained herein is the intellectual property of Traffic Planning Consultants Ltd and is solely for the use of Traffic Planning Consultants Ltd contracted client. This document may not be used, copied or reproduced in whole or part for any purpose other than that for which it is supplied, without the written consent of Traffic Planning Consultants Ltd. Traffic Planning Consultants Ltd accepts no responsibility to any third party who may use or rely upon this document.



TABLE OF CONTENTS

1.0	INTRODUCTION	
2.0	EXISTING TRANSPORT ENVIRONMENT	
	2.1 Surrounding Activities / Context	2
	2.2 Eden Park Precinct (I310)	2
	2.3 Existing Consent for Concerts	3
	2.4 Existing Site Traffic Environment	6
	2.5 Surrounding Road Network	6
	2.5.1 Sandringham Road	
	2.5.2 Dominion Road	8
	2.5.3 New North Road	8
	2.5.4 Surrounding Local Streets	8
	2.6 Daily Traffic Flow in Auckland	9
	2.7 Public Transport Accessibility	10
	2.7.1 Public Transport Usage in Auckland	11
	2.8 Pedestrian Accessibility	11
	2.9 Cycling & E-Scooter Accessibility	12
	2.10 Event Traffic Management	13
3.0	TRANSPORT CHARACTERISTICS OF CONCERTS AT EDEN PARK	15
	3.1 Typical Timeframes	15
	3.2 Stage Position / Crowd Size	15
	3.3 Event Set Up / Pack Down	16
	3.4 Event Day	17
	3.5 Trip Characteristics of Crowd	18
	3.5.1 Arrival Profile for Concerts at Eden Park	18
	3.5.2 Arrival Profile – Proposed	20
	3.5.3 Travel Mode Split	22
4.0	THE PROPOSAL	24
5.0	TRANSPORT ASSESSMENT	24
	5.1 Allowing 12 Concerts for 6 Artists in a Calendar Year	24
	5.2 Concerts to finish at 11:00pm	
	5.3 Sunday Events	26
	5.4 Increase the Weekday Concert Capacity to 60,000 Persons	27
	5.4.1 Comparison to a Weekday Permitted Concert	27
	5.5 Removal of Conditions on the Heavy Vehicle Access	31
6.0	CONCLUSIONS	32



1.0 INTRODUCTION

Eden Park was granted resource consent (ref: LUC60351212) to hold up to six concerts in any calendar year. The concerts can take place on weekdays, Saturdays, Sundays preceding a public holiday and public holidays, subject to controls on frequency, duration and timing.

Eden Park Trust proposes to seek a new application to increase the number of concerts and modify the conditions in which concerts can be held. The key proposals that affect transport are as follows:

- To allow for up to 6 artists up to 12 concerts in a calendar year.
- To allow concerts finishing at 11:00pm.
- To allow concert activity to occur on a Sunday evening.
- Increase the maximum capacity for weekday concerts from 50,000 to 60,000 people; and
- Removal of Conditions 41-43 (heavy vehicle access) and inclusion of management of truck movements for pack-in and pack-out within the Traffic Management Plan.

This report describes the location of the site in relation to the adjacent transport environment; describes the current mitigations that are in place to manage transport effects for events at the park, considers the likely impacts of the proposal and assesses the proposal in terms of the relevant AUP criteria.



2.0 EXISTING TRANSPORT ENVIRONMENT

2.1 Surrounding Activities / Context

The site is zoned Special Purpose – Major Recreational Facility under the Auckland Unitary Plan Operative in Part (AUP) and located within the Eden Park Precinct at 42 Reimers Avenue in Kingsland (the subject site). The location of the overall precinct in relation to the surrounding road network is illustrated in *Figure 1*.

Figure 1 illustrates the surrounding activities to the Eden Park precinct. The typical land use immediately surrounding Eden Park is predominantly residential in nature. Within a close walking distance are the Kingsland Town Centre, New North Road, Dominion Road, Kowhai Intermediate School and the Kingsland and Morningside Railway Stations.



Figure 1: Site Location

Source: GeoMaps, Auckland Council

2.2 Eden Park Precinct (I310)

The purpose of the Eden Park Precinct is to provide specific planning controls for the use, development and redevelopment of Eden Park. Eden Park was established as the home of Auckland Cricket in 1910, with Auckland Rugby joining in 1925. Eden Park is a multi-purpose stadium and is one of New Zealand's premier sports facilities.

The Precinct Plan includes several standards for delivery of events. The relevant standards that relate to transport effects and concerts are as follows:

Under **Standard I310.6.4 - Traffic Management**, activities must meet at least one of the following traffic management standards:



- (1) The activity and management of associated transport and traffic effects is undertaken in accordance with a Transport and Traffic Management Plan authorised by Auckland Transport.
- (2) Organised sports and recreation activities which generates a crowd of less than 5,000 people and does not require the closure of a public road; or
- (3) Any other activity undertaken at night-time which generates a crowd of less than 2,000 people and does not require the closure of a public road.

Standard I310.6.5 currently does not specifies any minimum or maximum parking requirement within the precinct.

2.3 Existing Consent for Concerts

Auckland Council has granted consent for Eden Park to hold up to six concerts in any calendar year and under the following transport related conditions:

Condition 6 to 9 specify the number and frequence of concerts and on days that are allowed to be held in Eden Park:

- 6. No more than six concert events may be held in any calendar year..
- 7. No more than four concerts may be held in any four-week period.
- 8. There shall be at least one weekend (inclusive of Friday night) in every 35-day period that is free of any concert or organised sports and recreation undertaken during the night-time on number 1 field.
- 9. Concerts may take place on Monday to Saturday (inclusive) and any Sunday that precedes a Public Holiday.

Condition 10 specifies that any concert held on a weekday (other than a public holiday) is restricted as follows:

- (a) The gates to the number 1 field shall not open before 5:00pm;
- (b) The concert shall not start before 6:30pm for supporting acts and 7:30pm for the main act;
- (c) The concert shall finish no later than 10:30pm;
- (d) The total duration of the concert, being time between the commencement of the first (or single) performance/act and the conclusion of the last (or single) performance/act, shall not exceed four (4) hours; and
- (e) The crowd size shall not exceed 50,000 persons.

Condition 11 specifies that any concert held on a Saturday or a Sunday preceding a public holiday is restricted as follows:

- (a) The gates to the number 1 field shall not open before 8:30am;
- (b) The concert shall not start before 10:00am;



- (c) The concert shall finish no later than 10:30pm;
- (d) The total duration of the concert, being time between the commencement of the first (or single) performance/act and the conclusion of the last (or single) performance/act, shall not exceed six (6) hours; and
- (e) The crowd size shall not exceed 60,000 persons.

Condition 12 specifies that any concert held on a public holiday is restricted as follows:

- (a) The gates to the number 1 field shall not open before 8:30am;
- (b) The concert shall not start before 10:00am;
- (c) The concert shall finish no later than 10:30pm;
- (d) The total duration of the concert, being time between the commencement of the first (or single) performance/act and the conclusion of the last (or single) performance/act, shall not exceed six (6) hours; and
- (e) The crowd size shall not exceed 60,000 persons.

Condition 35 to 38 specify the requirements on traffic management plans (TMPs):

- 35. A base Traffic Management Plan (TMP) tailored to concerts shall be developed by the consent holder and be authorised by Auckland Transport. The authorised base TMP shall be provided to the Council. The base TMP shall form the basis of an event-specific TMP as required by Condition 37. The base TMP shall include measures in order to:
 - a) ensure that residents and their invitees are able to access their properties and residents-only parking at all times before, during and after concert events;
 - b) ensure that roads continue to function as far as practicable and do not experience undue congestion;
 - c) strongly encourage patrons and staff to make use of public transport to access Eden Park by providing public transport information and making use of integrated ticketing where possible;
 - d) maximise pedestrian safety particularly immediately before and after the concert event;
 - e) ensure that emergency vehicle access both to the ground and the surrounding neighbourhood is maintained at all times;
 - f) provide for the parking and movement of buses and coaches, including within Eden Park;
 - g) manage traffic flows around Eden Park so as to facilitate rapid clearing of people and vehicles from the streets in the vicinity of Eden Park after concert events; and
 - h) ensure that procedures are in place for communicating any unplanned network disruptions with patrons and relevant event staff.



- 36. The TMPs shall include the details of a traffic management specialist to be engaged by either the Consent Holder or Auckland Transport, who will be responsible for managing any traffic-related issues as they arise before, during and after the concert event in conjunction with Auckland Transport and the NZ Police.
- 37. An event-specific TMP, that incorporates the requirements of the base TMP authorised by Auckland Transport, shall be prepared by the consent holder and authorised by Auckland Transport prior to each concert. The consent holder shall co-operate with and provide all practical and reasonable assistance to Auckland Transport with the implementation of the TMP.
- 38. The consent holder shall meet the costs of implementing the TMPs, unless otherwise agreed with Auckland Transport.

Condition 40 to 43 specify the requirements on heavy vehicle access:

- 40. Heavy vehicles associated with concerts shall access and egress from Sandringham Road only, using Gate Q, the bus hub or temporary gates. No heavy vehicles associated with concerts may access, park or idle on Walters Road or Reimers Avenue.
- 41. Heavy vehicles may only enter the site between 8:00am and 10:30pm on any day, and on the day of the concert must be parked inside the tunnel under the south stand, or down the ramp forming the entrance to the south tunnel by 10:30pm.
- 42. No heavy vehicles may exit the site between 10:30pm and 8:00am, except as provided for by Condition 43.
- 43. Where pack-out activities commence immediately following the conclusion of a concert, no more than 17 heavy vehicles may exit the site between the hours of 10:30pm and 8:00am the next day. Any such heavy vehicle movements shall be controlled to exit the site, via the western end of the South Stand and onto Sandringham Road through the gate at the northwest corner of the Eden Park site, at no less than 15-minute intervals by a marshal at the departure point under the West Stand unless approval is obtained from all residents adjoining the Gate Q driveway to alternative egress arrangements.



2.4 Existing Site Traffic Environment

At present, apart from the main sporting event activities and six concerts per 12-month period, there are various other activities occurring at Eden Park on a day-to-day basis, including the following:

- administration (Eden Park Trust and other organisations occupying office space);
- conferences, product launches, receptions, dinners, parties etc utilising various stadium areas including hospitality spaces areas and including supporting catering activities;
- tourism activities and experiences including Stadium tours and Haka on the Park;
- non-sporting activities including community, charitable and cultural events;
- rugby and cricket training and education;
- event day staff training and education;
- stadium maintenance; and
- event preparation.

Several vehicle crossings and access points are available on the road frontages to provide access for parking (approximately 310 spaces) and servicing on a day-to-day basis.

2.5 Surrounding Road Network

Eden Park is centrally located in the Auckland region approximately 4 kilometres south of the Auckland CBD and is readily accessible via all transport modes. It is well served by the arterial road network with both Sandringham Road and Dominion Road running in the north-south direction and New North Road and Balmoral Road running in an east-west direction. The wider road network surrounding the site is shown in *Figure 1*, while the roads in the immediate surround are shown in *Figure 2*.

Eden Park can be easily approached from many different directions with the north-western motorway being the closest strategic route. The range of route choices to and from Eden Park means that there is not a reliance on one main route and any distribution of traffic flows is likely to be spread over several roads.

Primary access to Eden Park on the immediate road network will be via Sandringham Road and to a lesser extent Walters Road and Reimers Avenue.





Figure 2: Road Network in the Vicinity of the Site

Source: Geomaps, Auckland Council

2.5.1 Sandringham Road

Sandringham Road is classified as an Arterial Road in the AUP functioning primarily to transport the traffic between areas of the city. Within the vicinity of the site, Sandringham Road has a typical carriageway width of 15.0 metres. Sandringham Road has two traffic lanes in each direction separated by a painted flush median. During the peak commuter periods, bus lanes operate northbound (AM peak) and southbound (PM peak).

Parking on Sandringham Road is available on the western side and to the north and south of the site on the eastern side of Sandringham Road (except when bus lanes are operating). Parking is prohibited at all times immediately along the site frontage between Walters Road and Reimers Avenue.

The most recent traffic counts on Sandringham Road (between Ethel Street and Ward Terrace) were carried out by Auckland Transport in August 2022. Details of the traffic count are summarised in *Table 1*.

Table 1: Traffic Counts on Sandringham Road

Direction	Weekdav	Saturday	Sunday	Weekday		
Direction	on weekday Satu		Sunday	AM Peak	Midday Peak	PM Peak
Both	14,662	13,239	10,668	1,278	1,119	1,396



2.5.2 Dominion Road

Dominion Road is located approximately 500 metres east of Eden Park. It is classified as an Arterial Road in the AUP. It typically has a carriageway width of 15.0 metres to support two traffic lanes in each direction separated by a painted flush median. During the peak commuter periods bus lanes also operate northbound (AM peak) and southbound (PM peak).

The most recent traffic counts on Dominion Road (between Valley Road and Bellwood Avenue) were carried out by Auckland Transport in August 2022. Details of the traffic count are summarised in *Table 2*.

Table 2: Traffic Counts on Dominion Road

Direction	Weekdav	Saturday	Sunday	Weekday		
Direction	vveekuay	Saturday	Sulluay	AM Peak	Midday Peak	PM Peak
Both	17,945	18,165	15,460	1,301	1,258	1,345

2.5.3 New North Road

New North Road connects Symonds Street in the east, and Blockhouse Bay Road in the west. It is the main route serving Kingsland, St Lukes, Mount Albert, and Avondale areas, and is classified as an Arterial Road in the AUP.

In this general location, New North Road has a kerb to kerb carriageway width of some 15.4 metres, which provides two traffic lanes in each direction separated by a painted flush median. Kerbside parking is permitted on both sides of the road, where some places have time or pay-and-display restrictions. During peak commute hours, clear way restriction applies on the road and kerbside lanes are available for the public.

The most recent traffic counts on New North Road (between Mostyn Street and George Street) were carried out by Auckland Transport in August 2022. Details of the traffic count are summarised in *Table 3*.

Table 3: Traffic Counts on New North Road

Direction	Weekdav	Saturday	Sunday	Weekday		
Direction	weekday	Saturday	Suriday	AM Peak	Midday Peak	PM Peak
Both	17,206	15,543	11,436	1,592	1,302	1,466

2.5.4 Surrounding Local Streets

Walters Road connects between Sandringham Road and Dominion Road along the northern edge of Eden Park. Uninterrupted two-way flow is possible in the street with parking available on both sides. Walters Road is one of the primary roads used by pedestrians to access Eden Park to attend events as it provides a connection between Kingsland Railway Station, Sandringham Road and the stadium. It is regularly used by vehicles to travel between Sandringham Road and the commercial areas on Dominion Road. Speed tables and traffic management measures are in place along its length recognising the important for low speeds for pedestrian protection during events.



Reimers Avenue and Cricket Avenue are designated as local roads and together with other local roads also connect Sandringham Road and Dominion Road. The primary function of both roads is access for residential properties as well as to the Eden Park precinct.

Walters Road and Reimers Avenue intersect with Sandringham Road and each side road is controlled by a stop sign.

2.6 Daily Traffic Flow in Auckland

As typical for any cities, traffic flow fluctuates on a day-to-day basis. TomTom has prepared a "Auckland Traffic Report" (TomTom report) and published the report on its website ("https://www.tomtom.com/en_gb/traffic-index/auckland-traffic/"). The TomTom report includes discussion on the traffic pattern in Auckland and provides information on the congestion level on each hour of the day and each day of the week reflected as Travel Time Required per 6-Mile Travel. *Figure 3* shows the hourly congestion level during the weekdays.

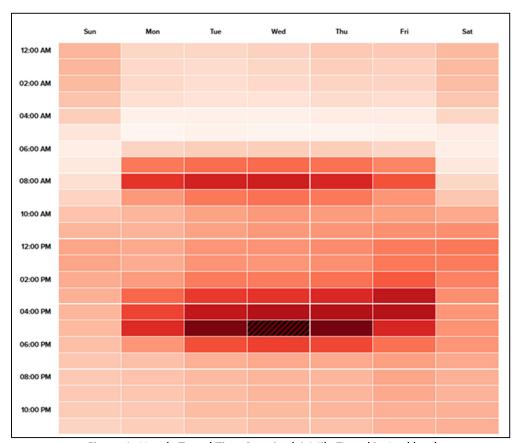


Figure 3: Hourly Travel Time Required 6-Mile Travel in Auckland

As can be seen, the longest travel time required for the 6-mile travel happens on the Wednesday afternoon peak hour followed by Tuesday and Thursday. The typical afternoon commuter periods on Monday to Thursday start from 4pm, peak at 5pm and finish before 7pm. The Friday afternoon commuter period starts earlier from 3pm, peak at 4pm and finish before 6pm. This is likely due to people leaving their work early to prepare for the weekends and less people working on a Friday reduced demand on the network which is evident from the lower congestion recorded is



the morning peak period. Compared to other weekdays excluding Monday, the peak Friday afternoon commuter periods also requires less travel time. Among weekdays, Monday was recoded to have the quietest weekday afternoon commuter period. Notwithstanding, the conclusion from this data is that the roading network appears to have spare capacity during the peak Friday afternoon commuter period which is the typical day when a weeknight concert is held.

For the Saturday and Sunday, there is no evident congestion period reported by TomTom.

2.7 Public Transport Accessibility

The surrounding area is well served by public transport, including Kingsland Station directly opposite the Stadium and Morningside Railway Station 800 metres away.

Several bus routes run along Sandringham Road, New North Road and Dominion Road, linking Auckland City Centre and wider area of Auckland Central as shown in *Figure 4*. The bus service on these roads operate every five to ten minutes during peak commute hours, and every fifteen to thirty minutes at other times. The nearest bus stops are located on Sandringham Road north of Altham Avenue, which is along the site frontage.

Kingsland Railway Station is located within 200 metres walking distance from Eden Park, and Morningside Station is approximately 800 metres walking distance from Eden Park. Both stations are serviced by the Western Line train service, which connects Britomart (Auckland City Centre) and Swanson via Mount Albert, New Lynn and Henderson. It operates every 10 to 20 minutes. With the completion of the Central Rail Link (CRL) project in 2026, the efficiency, reliability, and frequency of Auckland's passenger rail network will improve almost double the number of trains coming into the city, allowing the network to carry up to 27,000 passengers per hour at peak times.

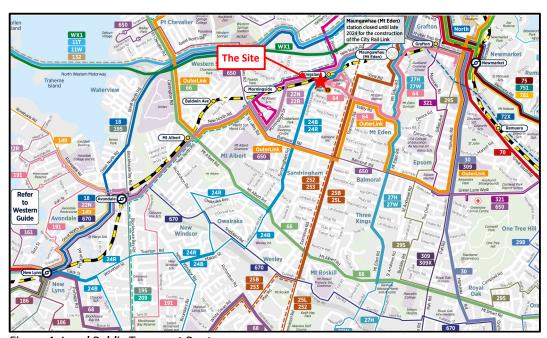


Figure 4: Local Public Transport Routes
Source: Central Guide, Auckland Transport

2.7.1 Public Transport Usage in Auckland

Daily patronage data for bus and train and for the year of 2023 was obtained from Auckland Transport website ("https://at.govt.nz/about-us/reports-publications/at-metro-patronage-report").

Table 4 shows the average train and bus patronage across the Auckland region during the weekdays and weekends. As can be seen, the average Monday and Friday public transport patronage is 10% to 15% lower than other average weekdays. Notwithstanding, the conclusion from this data is that the public transport network appears to have spare capacity on a Friday which is the typical day when a concert is held.

No specific public transport data is available for the afternoon peak periods, which is the most critical for this application. However, it is a reasonable assumption that the same percentage difference could apply to the afternoon peak periods given the evidence that is available on congestion throughout the network and lower demands on a Friday.

Table 4: Daily Public Transport Patronage

Dov		Patronage				
Day	Bus	Train	Total			
Monday	180,731	36,515	217,246			
Tuesday	206,604	43,501	250,105			
Wednesday	215,417	44,909	260,326			
Thursday	214,210	45,224	259,434			
Friday	191,977	38,799	230,776			
Saturday	105,236	13,267	118,502			
Sunday	82,017	9,780	91,796			

2.8 Pedestrian Accessibility

Footpath connections currently exist on most roads surrounding the site and across the railway line to New North Road and the Kingsland commercial centre. Several walkways also exist around the Eden Park site connecting the main stadium entrance to the footpath network.

Figure 5 below illustrates the key pedestrian routes to and from Eden Park for pedestrians from the surrounding areas and transport hubs. There is a clear concentration of pedestrian movement to and from the Kingsland and Morningside rail stations, key bus transport routes and the Kingsland and Dominion Road commercial centres that provides opportunities for pre-event hospitality.



In 2010, pedestrian facilities along Sandringham Road and Walters Road were upgraded to provide better pedestrian access to public transport to and from Eden Park. Some of these improvements included a new signalised crossing across Sandringham Road directly to the Kingsland Train Station, a new pedestrian walkway between Sandringham Road and Walters Road and the installations of speed tables along Walters Road for traffic calming effects. Any temporary traffic management surrounding the stadium supports these key routes to ensure safe and efficient movement of pedestrians before and after an event. Together, these all provide a high level of accessibility for pedestrians during an event.

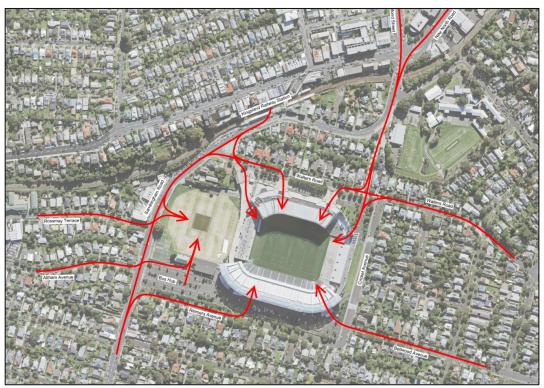


Figure 5: Primary Pedestrian Routes to and from Eden Park

2.9 Cycling & E-Scooter Accessibility

The Auckland Transport Central Cycle Map shown in *Figure 6* for the area indicates that no specific off-road or on-road cycle lanes currently exist in the area immediately around Eden Park. Nevertheless, some local roads surrounding the stadium are identified as quiet routes suitable for cyclists. Those routes also connect to the on-road cycling lanes on Dominion Road linking to the shared path along North-Western Motorway.

Patrons regularly use cycling and e-scooters to attend events at Eden Park. Drop off zones are provided around the venue for the storages of bikes and scooters in safe convenient places.



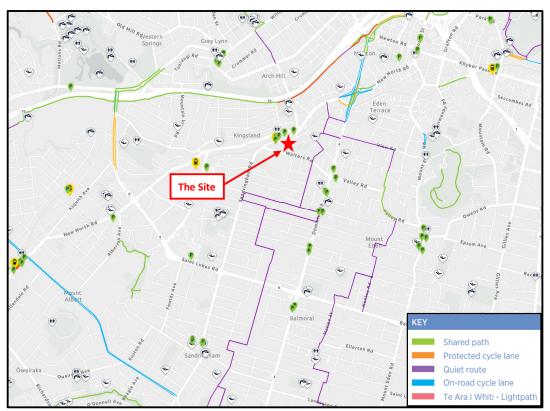


Figure 6: Site Vicinity Cycling Provisions

Source: Auckland Cycleway Map, Auckland Transport

2.10 Event Traffic Management

As an established major event venue, Eden Park regularly prepares and implements Event Traffic Management Plans (TMPs) to manage traffic and pedestrian movement associated with events. There are a range of TMP responses depending on the crowd size and the type of event.

For a full capacity concert at Eden Park (crowds over 35,000 people) "TMP-5" is typically implemented. Two examples of the typical TMP for concerts is included in *Attachment 1*. These relate to the Ed Sherran concerts on 10 and 11 February 2023, and the Guns and Roses concert on 10 December 2022. However it is noted that all concert TMP's to date have been very similar to those attached with the typical variation only relating to the time of road closures depending on the concert schedule.

The concert TMPs are consistent with Conditions 35 to 38 within the current consent for a concert with the following points noted:

- It provides measure to ensure that local residents and their invitees are able to access their properties and resident-only parking during the full course of the traffic management period;
- It minimises the road closure to ensure that roads continue to function as far as
 practicable and do not experience undue congestion and roads are only closed where it
 is close to the Eden Park environs where pedestrian demands are at the highest and their
 safety is paramount;



- A number of streets are reserved as bus parking only and a good level of pedestrian connections is established between the venue, Kingsland Train Station and Morningside Train Station to encourage patrons and staff to make use of public transport to access Eden Park;
- Emergency vehicles are able to access both to the ground and the surrounding neighbourhood at all times; and
- Traffic flows around Eden Park are managed to facilitate rapid and safe clearing of people and vehicles from the streets in the vicinity of Eden Park after concert events.

The traffic management response around the Eden Park environs is designed to mitigate the effects of the event and ensure traffic flow and pedestrian safety is maintained while minimising the impact traffic management has on the surrounding neighbourhood.

Eden Park works closely with neighbours and with Auckland Transport to implement suitable TMPs. This includes a communication strategy and periodic roads closure and parking controls to manage effects immediately around the stadium. During events Auckland Transport are in continued communication with Eden Park operational staff, public transport suppliers and emergency services.

Venue hirers and event organisers also work with Auckland Transport to provide additional bus and train services to accommodate the increased demand relating to an event and the potential for integrated ticketing making the use of public transport much easier for event goers. These are not part of the TMP that is approved by Auckland Transport, however elements of the TMP assist with public transport movement including accessing event buses and trains for travel to and from the events. Planning for concerts and engagement with Auckland Transport occurs months in advance of the actual event to enable sufficient time for Auckland Transport to work with suppliers and optimise and public transport provision.

When public transport services are limited, alternative measures are put in place to accommodate crowd travel demands. For example, during the recent Billy Joel concert, the rail network was closed for upgrade works and additional bus services and park and ride operations were established to replace the rail demand. Similarly, with added demand for larger crowd sizes, or more visitors from outside of Auckland such as the 2011 Rugby World Cup additional mitigation such as the walking trail from the CBD have been established as an alternative mode.

Continuing assessment and improvement of these TMPs is undertaken regularly with all key stakeholders to ensure any issues that are raised are addressed for the next event. This includes a debrief with key stakeholders, including Auckland Transport, to address any issues that may have arisen during the event. Any changes to TMP's are then made for next events and approved by Auckland Transport. An example of this would be the recent congestion issues that occurred at the Kingsland Train Station following one of the Pink concerts when crowds were waiting for trains. It was identified that improved wayfinding and messaging around reducing crowd congestion and directing people to the most appropriate route.



3.0 TRANSPORT CHARACTERISTICS OF CONCERTS AT EDEN PARK

3.1 Typical Timeframes

The typical timeframes necessary to hold a concert involve up to 7 days of preparations on-site to construct the necessary infrastructure including turf protection, security fencing, stage and production infrastructure. On the day of the concert, completion of the production continues, catering, venue security and customer services, transport management and ticket staff will arrive on site to prepare for the event.

Following the completion of the event, the pack down of the production equipment begins immediately and is completed over the next three days the stage, temporary structures and turf protection are deconstructed and removed from the site.

3.2 Stage Position / Crowd Size

There are three key options for a stage position within the stadium, each of which will have an impact on the crowd size and therefore related transport effects. Depending on the shape of the stage and whether the field is used for seating or standing general admission, the following estimated crowd sizes can be expected in *Table 5*.

Table 5: Expected Crowd Size

Stage Position	Estimates Crowd Size
Eastern End	42,000 – 46,500
Western End	40,000 – 45,500
Central 360°	58,000 – 60,000

As with most stadiums, any stage position at one end will reduce the seating capacity as some seats will not have views of the stage or are required for backstage or production arrangements. These seats are typically replaced with general admission or seating on the field and as indicated above, will result in a crowd size of up to 50,000 people which is consistent with what is currently permitted. However, a central 360° stage has a potentially greater crowd capacity as it the full seating capacity plus on-field areas can be utilised (either standing general admission or seated).

The most likely stage position is at either end of the field as it optimises the accessibility of the stadium and takes advantage of the outer oval to accommodate on-field patrons that arrive early within the stadium environs and provide them with food and beverage and facilities that are typically available within the grandstands. An end stage at the western end would also allow backstage and bone yards to be focused on part of the outer oval. An example of an eastern stage position is illustrated in *Figure 7*.



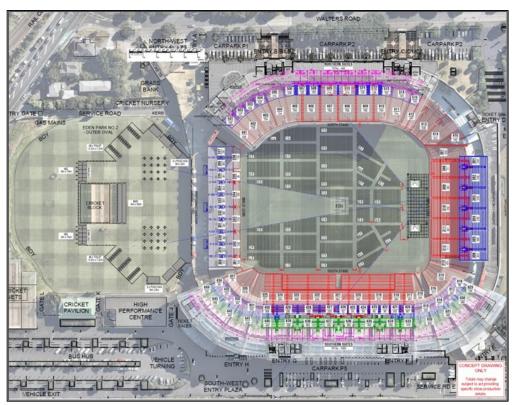


Figure 7: Stadium Layout (Eastern Stage)

Source: BECA

3.3 Event Set Up / Pack Down

As set out above, up to 7 days is required to erect and up to 3 days to deconstruct the concert production before and after the event respectively. The number of staff on site during the pack in and pack out periods will vary for each day from 40 to around 200 people per day depending on the stage of preparation or disestablishment.

All this activity will occur well within the stadium precinct itself except for the movement of trucks to and from Eden Park with the necessary equipment and materials. Information provided by an event promoter indicates that up to 50 container loads of equipment are usually delivered to the site over the 7 days prior to the event and then removed again following the event. This represents a total of up to 200 truck movements, 100 occurring before the event and 100 occurring after the event.

Immediately following the completion of the event, containers will start to be loaded and removed from site. Trucks and containers will be stored on site prior to the concert beginning so that loading will begin at the completion of the event. Conditions 40-43 of the current consent set out the requirements around heavy vehicle movements to and from site both before and after a concert.



Trucks are proposed to approach the site from the North-Western Motorway via St Lukes Road and Sandringham Road before turning into the site either via the bus interchange or via Gate Q direct from Sandringham Road. The painted flush median on Sandringham Road provides suitable refuge for trucks to wait while turning right into the site and avoid any disruption of through movement on Sandringham Road.

Both access points link to the tunnel under the southern stand and a loading area under the western stand. This provides some flexibility when accessing the site and depending on stage positions. Also, all trucks will therefore be able to enter and leave in a forward direction. The route shown on *Figure 8* can operate in either direction.

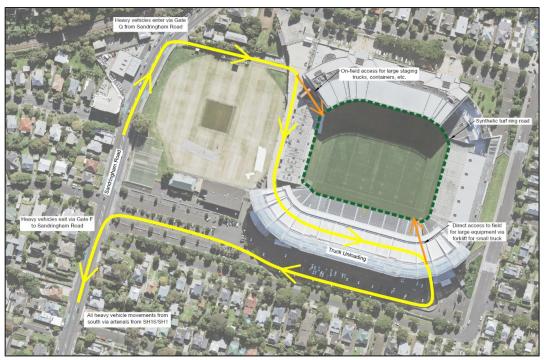


Figure 8: Truck Access to the Site

3.4 Event Day

On the day of the event, activities typically continue like any other event with traffic management infrastructure put in place, catering and supplies delivered to the stadium, catering and venue staff arriving and the final production set up for the stage.

The event itself is expected to follow a general schedule as summarised in *Table 6* and will inform the transport effects relating to crowd arrivals and departures. The only modification to the current condition is that the proposal seeks to allow up to 2 artists and up to six concerts to finish at 11:00pm in a calendar year and allow a concert to be held on any Sunday. There are varying gate opening start times depending on whether it is a weekday or weekend.



Table 6: General Schedule of the Concert

Activity	Monday to Friday	Saturday	Sunday
Stadium Gates Open	5:00pm	No earlier than 8:30am	No earlier than 8:30am
Supporting Act Starts (if booked)	No earlier than 6:30pm	Varies	Varies
Main Act Starts	No earlier than 7:30pm	No earlier than 10:00am	No earlier than 10:00am
Scheduled Finish	No later than 11:00pm	No later than 11:00pm	No later than 11:00pm

3.5 Trip Characteristics of Crowd

To assess the impact on the wider transportation network, including public transport, a predicted arrival profile for the event has been prepared for an event as this is expected to have the greatest impact on the transport network given the other day to day demands.

3.5.1 Arrival Profile for Concerts at Eden Park

The arrival profile for the proposed concert has been developed based on information collected from several concerts at Eden Park, namely the:

- SIX60 Wednesday, 21st April 2021;
- SIX60 Saturday, 19th November 2021;
- Billy Joel Saturday, 3rd December 2022;
- Ed Sheeran Friday, 10th February 2023;
- Ed Sheeran Saturday, 11th February 2023;
- P!NK Friday, 8th March 2024; and
- P!NK Saturday, 9th March 2024.

The ticket scan information for each concert is provided by Eden Park Trust and in a 15-min interval. The actual ticket scan totals for these concerts range from 25,018 to 46,506.

Figure 9 provides the arrival profiles by the percentage of total arrivals in a 15-minute interval for the above concerts and provides an average arrival profile for these events. *Figure 10* provides the cumulative arrival profile of these events, which also provides an average accumulative arrival profile for these events. The details of these data are provided in *Attachment 2*. The profile sets out the arrival of attendees relative to the start time of the main act.



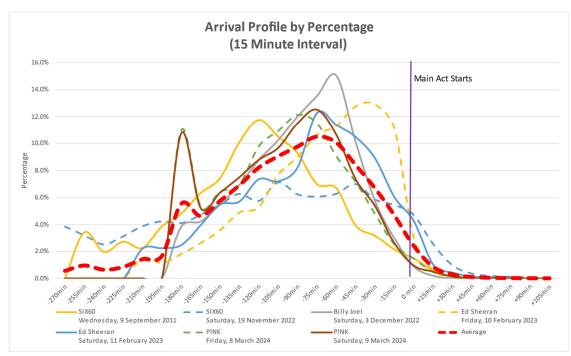


Figure 9: Arrival Profile (15-Minute Interval) – Eden Park

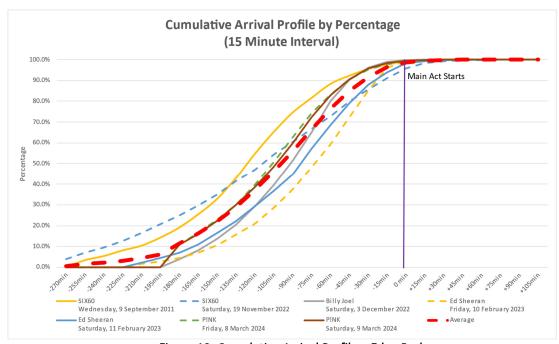


Figure 10: Cumulative Arrival Profile – Eden Park

As can be seen, a concert has a spreading profile with a generally low intensity during its peak arrival period (reflected by a smoother cumulative arrival profile). The graph shows that the 45-minute period from 105 minutes before the main act begins to 60 minutes before the main act begins (approximately 10% of total scans during each 15-minute period) to be the busiest. This is also reflected in *Figure 10*, as the busiest period would have the steepest gradient on the cumulative arrival profile.



3.5.2 Arrival Profile - Proposed

For this assessment, the average profile derived from the listed concerts has been adopted. For a typical concert, the gate opens three to four hours before the main act starts. The weekday concert is only allowed to open the gate after 5:00pm. A good example for a weekday concert is that the gate opens at 5:00pm, the main act starts at 8:00pm. For a weekend concert, the gate opening time and act time have more flexibility but generally follows the similar profile.

Some modification has been done on the average profile. For early arrivals (more than three hours before the gate opens), they have been proportionally added to the ticket scan in each 15-minute interval before the main act starts. For late arrivals (more than one hour after the main act starts), they have been proportionally added to the ticket scan in each 15-minute interval after the main act starts.

Figure 11 provides the adopted arrival profile by percentage of total arrivals in a 15-minute interval. The graph shows that the 45-minute period from 105 minutes before the main act begins to 60 minutes before the main act begins (approximately 11% to 12% of total scans during each 15-minute period) to be the busiest. This is also reflected in *Figure 12*, as the busiest period would have the steepest gradient on the cumulative arrival profile.

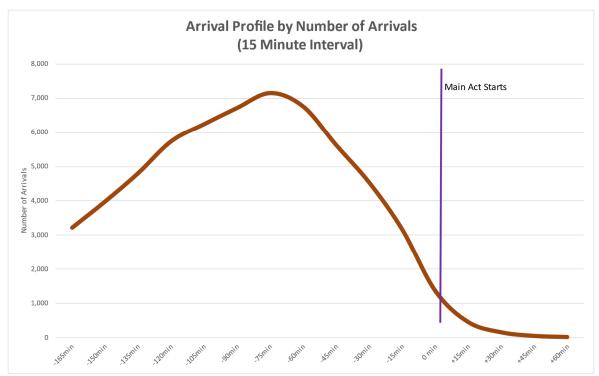


Figure 11: Arrival Profile (15-Minute Interval) - Concerts

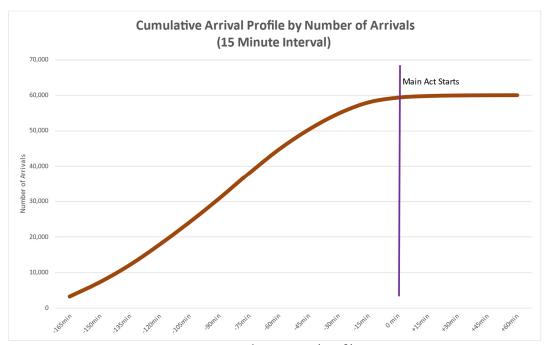


Figure 12: Cumulative Arrival Profile - Concerts

From *Figure 12*, it is anticipated that 75% of a crowd will arrive before the start of any supporting act (typically starts an hour before the main act) and then growing to almost full attendance by the end of supporting act. This is considered the most likely profile for a concert and a reasonable basis for assessment.

For a typical weekday concert with an attendance of 60,000 people, starting the main act at 8:00pm and gates opening at 5:00pm, the estimated arrival profile is set out in *Table 7*. It should be noted that even though the gate would open at 5:00pm, there would be some earlier arrival expected to wait outside of the stadium. Attendees can congregate within the outer oval and clear of any public footpaths or roads.

For a typical weekend concert, the profile is expected to be similar, but the time can vary as it has more flexibility for a weekend event.



Table 7: Arrival Profile for the Proposed Concert

Time (PM)	% of Total Crowd	% of Total Crowd (cumulative)	No. of People	No. of People (Cumulative)
17:00-17:15	5.4%	5.4%	3,217	3,217
17:15-17:30	6.6%	12.0%	3,982	7,200
17:30-17:45	8.0%	20.0%	4,807	12,006
17:45-18:00	9.6%	29.6%	5,739	17,745
18:00-18:15	10.4%	40.0%	6,244	23,989
18:15-18:30	11.2%	51.2%	6,720	30,709
18:30-18:45	11.9%	63.1%	7,154	37,863
18:45-19:00	11.3%	74.4%	6,761	44,623
19:00-19:15	9.4%	83.8%	5,627	50,250
19:15-19:30	7.6%	91.3%	4,534	54,784
19:30-19:45	5.3%	96.6%	3,165	57,949
19:45-20:00	2.3%	98.9%	1,367	59,316
20:00-20:15	0.8%	99.6%	455	59,772
20:15-20:30	0.3%	99.9%	157	59,929
20:30-20:45	0.1%	100.0%	52	59,981
20:45-21:00	0.0%	100.0%	19	60,000

3.5.3 Travel Mode Split

Information on the type of travel for the listed events to Eden Park was provided by Eden Park Trust on the public transport usage. The statistics on the public transport usage for arrivals to the concerts shows average 10.6% of arrivals by bus and average 27% of arrivals by train. The balance of the crowd either arrived in a car or taxi, walked or cycled to the event. For the ease of reference, arrivals by different travel mode have been rounded to the nearest five percent.

Bus Services: 10%
Trains: 30%
Others: 60%

Transposing this split in travel choice to the arrival profile identified above, *Table 8* sets out the number of patrons expected to use each of the modes to travel to a weekday event. An attendance of 60,000 people has been used to illustrate the maximum crowd that could attend a concert.



Table 8: Travel Choice Split

Tubic 8. Travel choice Spire						
	No. of People	No. Pe	ople Arriving by	Mode		
Time	Arriving	Buses (10%)	Train (30%)	Others (60%)		
17:00-17:15	3,217	322	965	1,930		
17:15-17:30	3,982	398	1,195	2,389		
17:30-17:45	4,807	481	1,442	2,884		
17:45-18:00	5,739	574	1,722	3,443		
18:00-18:15	6,244	624	1,873	3,747		
18:15-18:30	6,720	672	2,016	4,032		
18:30-18:45	7,154	715	2,146	4,292		
18:45-19:00	6,761	676	2,028	4,056		
19:00-19:15	5,627	563	1,688	3,376		
19:15-19:30	4,534	453	1,360	2,720		
19:30-19:45	3,165	316	949	1,899		
19:45-20:00	1,367	137	410	820		
20:00-20:15	455	46	137	273		
20:15-20:30	157	16	47	94		
20:30-20:45	52	5	16	31		
20:45-21:00	19	2	6	12		
TOTAL	60,000	6,000	18,000	36,000		

Consideration has been given to obtaining information of other venues and their arrival profile and mode share for concerts. However, every venue will be different due to its location and accessibility to the various modes. For example, Mt Smart Stadium has a limited access to rail and no hospitality precinct nearby and Western Springs has no access to rail or any nearby hospitality.

This means any results on mode share and arrival profile would be significantly different to an event at Eden Park where all modes have a high level of accessibility and audiences have a choice to travel early and be entertained either in Kingsland, Dominion Road or on site.

What this does highlight, is that in terms of transport effects, Eden Park and its surrounding environment has the greatest potential to manage effects and to adapt to different audience types and any transport issues that might arise.



4.0 THE PROPOSAL

The details of the proposal are set out in the Assessment of Environment Effects (AEE), but basically, it involves the following key transport related outcomes:

- To allow for up to six artists up to 12 concerts in a calendar year.
- To allow concerts finishing at 11:00pm.
- To allow concerts to occur on a Sunday evening.
- Increase the maximum capacity for weekday concerts from 50,000 to 60,000 people; and
- Removal of Conditions 41-46 (heavy vehicle access) and inclusion of management of truck movements for pack-in and pack-out within the Traffic Management Plan.

Each of these matters is assessed in Section 5.0 below in terms of traffic and transport effects.

5.0 TRANSPORT ASSESSMENT

5.1 Allowing 12 Concerts for 6 Artists in a Calendar Year

Condition 6 of the current consent only allow up to six concerts to take place in any calendar year.

The proposal seeks to allow up to 12 concerts (increased by 6) at Eden Park while only allowing six artists.

Setting aside the proposal to increase the maximum capacity for concerts on weekdays to 60,000 people, this is assessed below, the related transport effects of allowing 12 concerts are the cumulative effect of increasing the number of large events that may occur.

With regards to cumulative effects, the following is noted:

- The schedule of concerts will still comply with the frequency requirements of no more than four concerts that can be held in any four-week period as set out in Condition 7 of the same consent.
- Furthermore, the event schedule will remain consistent with at least one weekend in every 35-day period that is free of any concert or organised sports and recreational night-time event as set out in Condition 8.
- Retaining Conditions 7 and 8 will ensure that sufficient relief is available to surrounding residents and businesses in the same manner as what is currently permitted.
- There is no change to the permitted start times, therefore no change in effect on the evening commuter peak than is currently permitted because of increasing the number of concerts that could occur.



On days that the concert occurs, impacts on neighbours and the surrounding road network, this is no difference to the existing consent. The following is noted in this regard:

- To mitigate the traffic effects on concert days, TMPs are used. As discussed above, TMP-5 is used to manage pedestrian and vehicle movements for the largest crowd sizes that can occur at Eden Park (>35,000). It has been used regularly over the past few years and it has been an effective tool to manage effects of large events at Eden Park.
- The TMP's are continually monitored and refined with every event to ensure they are as effective as possible. If stakeholders have specific concerns with the use of TMP for an event, they can contact EPT to raise their concerns either on the day via the Eden Park hotline or by email following the event. This is an important part of the communication plan around an event and is the current practice with all Eden Park events. Residents can also raise these matters through the Community Liaison Group (CLG) that has been specifically set up to provide resident groups and stakeholders with the opportunity to raise concerns with events and the TMP's and to request modifications.
- In terms of the event set up / pack down activities, the impact in terms of transport is no different to having six single concerts which are permitted. The proposal retains the same number of artists in a calendar and therefore the number of set up days and post-concert pack down activities remains the same.

5.2 Concerts to finish at 11:00pm

Conditions 10 to 12 set out the various timings for concerts on weeknights, weekends and Sundays proceeding public holidays including specifying that concerts must finish before 10:30pm.

The proposal seeks to allow concerts to finish at 11:00pm. There are no changes proposed to the start times, this proposal is to allow for some artist that have a larger playlist the opportunity to complete encore sets.

From a transport perspective, the effects of a concert finishing at 11:00pm is no different than if it finished 30 minutes earlier at the time permitted under the current consent. The following points are noted in this regard:

- The available capacity of the surrounding road network would be no different if an event ended at 10:30pm when compared to a 11:00pm.
- As there is no change to the start time, there is no change in effect on the evening commuter peak than is currently permitted.
- Special train and bus services are put in place for large events to coincide with the finish time and provided these are available, mode choice for attendees will not be disrupted.



- The event would be held under the current operational traffic management plans approved by Auckland Transport to manage the traffic and pedestrian effects. Engagement occurs with Auckland Transport months in advance of concerts to establish a transport response suited to a particular event and allow enough time for resources to be confirmed.
- The traffic management response around the Eden Park environs is designed to mitigate the effects of traffic and ensure pedestrian safety while minimising the impact traffic management has on the residential amenity.
- The third move to manage effects with the events is implementing a communication strategy. This is a common practice where Eden Park works with Auckland Transport to inform and assist local residents, the wider public and patrons of the event and the transport options available to them.

5.3 Sunday Events

Conditions 9 set out the days of the week that concerts are permitted, and it currently only excludes Sundays unless it proceeds a public holiday. The proposal seeks to allow concerts to remove this condition so that concerts can occur on Sundays.

The general transport effects from allowing concerts to occur on a Sunday night would not be any different than it took place on a Saturday night. The following points are noted in this regard:

- The event would be held under the current operational traffic management plans (TMP's) approved by Auckland Transport to manage the traffic and pedestrian effects. The traffic management response around the Eden Park environs is designed to mitigate the effects of traffic and ensure pedestrian safety while minimising the impact traffic management has on the residential amenity. How TMP's are developed and used is set out in Section 2.10.
- As set out in Section 2.10, venue hirers and event organisers also work with Auckland Transport to provide additional bus and train services. These services are provided to coincide with the finish time and provided these are available there is no material difference in effect.
- Planning for concerts and engagement with Auckland Transport occurs months in advance of the actual event to enable sufficient time for Auckland Transport to work with suppliers and optimise and public transport provision. When public transport services are limited, alternative measures are put in place to accommodate crowd travel demands.
- The third move to manage effects with the events is implementing a communication strategy. This is a common practice where Eden Park works with Auckland Transport to inform and assist residents, the wider public and patrons of the event and the transport options available to them.



Traffic flows on the surrounding road network on a Sunday are typically lower than on a Saturday suggesting that the overall effects will be less as there is additional capacity in the network to accommodate vehicle activity associated with an event when public transport services may be limited. For example, vehicle flows measured by Auckland Transport on Dominion Road show that daily flows on a Sunday are 15% less than those recorded on a Saturday.

Overall, it is considered that the transport effects of the proposal to allow concerts to occur on any Sunday can be accommodated on the road network without compromising its function, capacity or safety.

5.4 Increase the Weekday Concert Capacity to 60,000 Persons

Conditions 10(e) only allows up to 50,000 persons to attend a weekday concert. The proposal seeks to allow up to 60,000 persons at Eden Park for a weekday concert.

The key transport effect of having a concert with a crowd size over 50,000 people is the potential extra demand of patrons arriving at Eden Park within the afternoon commuter peak. The ability for the network to accommodate the additional demand is an important element of ensuring effects can be suitably managed, particularly with the added demands on the public transport network and the local neighbourhood.

5.4.1 Comparison to a Weekday Permitted Concert

A comparison of arrivals profiles between a permitted event with 50,000 attendees that would begin at 7:30pm and the proposed increase in weekday concert capacity to 60,000 is illustrated in *Figure 13* and *Figure 14*.

The arrival profile for a permitted concert event is same as the adopted profile but factored to having a crowd size of 50,000 people. The peak weekday afternoon commuter period is also shown in the graphs below. The weekday peak afternoon commuter period starts easing from 6:00pm and the Monday and Friday peak afternoon commuter periods even finishes earlier. Although the gate can still only open at 5:00pm, there would be some early arrivals anticipated to wait near the venue for the gate to be open.

Although the charts below focus on arrival time of crowds during the even peak period, it must be noted that their journey starts earlier and for some it will begin before the evening peak.



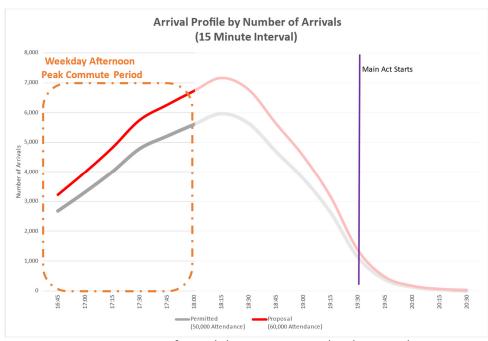


Figure 13: Comparison of Arrivals between Permitted and Proposed Concert

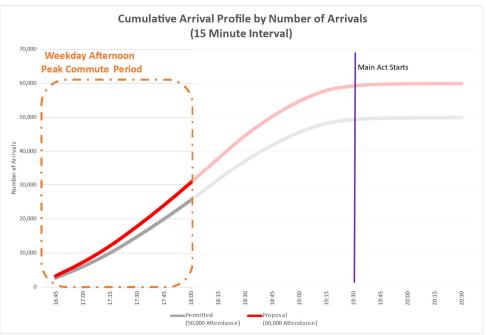


Figure 14: Comparison of Cumulative Arrivals between Permitted and Proposed Concert

The impact of the additional 10,000 people on each travel mode is summarised in

Table 9. This also indicates that the expected demand on public transport during the weekday afternoon commuter peak is not considered to be excessive and can be accommodated within the current capacity especially on Mondays and Fridays where more capacity is available for public transport.



Table 9: Impact on each Travel Mode by the Additional 10,000 People

	No. of People	No. Pe	ople Arriving by	/ Mode
Time	Arriving	Buses (10%)	Train (30%)	Others (60%)
16:30-16:45	536	54	161	322
16:45-17:00	664	66	199	398
17:00-17:15	801	80	240	481
17:15-17:30	956	96	287	574
17:30-17:45	1,041	104	312	624
17:45-18:00	1,120	112	336	672
18:00-18:15	1,192	119	358	715
18:15-18:30	1,127	113	338	676
18:30-18:45	938	94	281	563
18:45-19:00	756	76	227	453
19:00-19:15	527	53	158	316
19:15-19:30	228	23	68	137
19:30-19:45	76	8	23	46
19:45-20:00	26	3	8	16
20:00-20:15	9	1	3	5
20:15-20:30	3	0	1	2
TOTAL	10,000	1,000	3,000	6,000

The following conclusions can be reached regarding increasing the crowd capacity for weekday concerts to 60,000:

- Eden Park has successfully held weeknight events of this size during the 2011 Rugby World Cup where crowds of 60,000 people attended. At the time, the traffic management response around Eden Park environs was similar in nature the current TMP-5 which is expected to be implemented with future concert events.
- The event is held under an operational traffic management plan approved by Auckland Transport to manage traffic and pedestrian movement associated with the event. This can include the provision of additional bus and train services to accommodate the increased demand, or alternative travel options such as the walking trail or park and ride facilities.
- A communications strategy covering the event and travel planning of patrons, local residents and the wider community is also included all aimed at minimising transport effects.
- The traffic management response around the Eden Park environs can be designed to mitigate the effects of the event and ensure traffic flow and pedestrian safety is maintained while minimising the impact traffic management has on the surrounding neighbourhood.
- Over 50% of the crowd is anticipated to arrive after 6:00pm which is outside of the weekday afternoon commuter peaks especially for Mondays and Fridays. These being the likely days



that weekday concerts would occur to align with what is expected to be concerts held on the adjacent weekend days.

- If for a typical weekday concert starting later, even less arrivals would be coming during the peak hours and the impacts would be less.
- Some large concert events having allocated seating for all ticket holder also ensures that there will not be an early crowd arrival which is typical with most events. This further reduces the risk of adding demand on the network and the normal bus and train services during the peak commute times.
- Although the proposal will permit increases in crowd sizes for weekdays. It is worth noting that the actual attendance with the concerts to date at Eden Park is has been lower than the actual capacity with a maximum crowd of 46,506 people. This included two Ed Sheeran concerts that were permitted up to 60,000 attendees. It has been common across all concerts to date that the actual attendance has been lower than the number of tickets sold.
- For those who do arrives early, catering for these people on the outer oval field will ensure that these people are kept clear of road reserve and within the site in a managed area.
- With a concert, crowd arrival is also spread across a longer period with the ability for patrons to arrive earlier than the afternoon peak and take advantage of hospitality nearby and on site. This is different to a conventional build up to rugby matches (as a permitted activity in Eden Park with up to 50,000 attendances) where general admission gates open 2.5 hours prior to kick off at the earliest. Some rugby matches also have pre-match hospitality, but these are typically limited to large occasions such as test matches.
- The peak Friday afternoon commuter period starts and finishes earlier compared to other weekdays, which is a typical day for holding weekday concert. It also has a lower congestion level than a typical weekday (excluding Mondays). Therefore, spare capacity is available on the roading network to accommodate a greater demand for attendees driving to the proposed concert and those commuters with other destinations, reducing the overall cumulative effect on the network.
- With any event occurring on a Friday before weekend, a reduced demand for public transport and its drivers will be required the following day. This will assist in ensuring a higher level of additional public transport can be provided for the event without impacting on public transport requirements on a Saturday. This is a conventional method of managing travel demands of patrons associated with major events and is a regular occurrence with events at Eden Park.



- The demand for public transport (for both train and bus services) on Friday is about 8.5% lower than the average demand on other weekdays (excluding Monday), and therefore this demonstrates that there is spare capacity on the public transport network on a Friday to accommodate a greater demand for passengers to attend the proposed concert.
- With future completion of Central Rail Link (CRL), the capacity of public transport by train is expected to increase and better serve the events held in Eden Park given its proximate location to the train station.

5.5 Removal of Conditions on the Heavy Vehicle Access

Conditions 41 to 46 specifies that the requirement on the heavy vehicle access that can only access via Gate Q, the bus hub or temporary gates and specifies the maximum number of heavy vehicles that can access the site during the specified periods.

As mentioned in Section 3.3, all setup and pack-down activities will occur within the stadium itself except for the movement of trucks to and from Eden Park with the necessary equipment and materials. Information provided by an event promoter indicates that up to 50 container loads of equipment are usually delivered to the site over the 7 days prior to the event and then removed again following the event. This represents a total of up to 200 truck movements, 100 occurring before the event and 100 occurring after the event through multiple days.

Immediately following the completion of the final concert date, up to 25 trucks will be loaded and leave the site. Most of these activities are expected to happen between 10:30pm and 8:00am the next day, when the traffic on the road network is very low and can easily accommodate the anticipated heavy vehicle movements.

Trucks are proposed to approach the site from the North-Western Motorway via St Lukes Road and Sandringham Road before turning into the site either via the bus interchange or via Gate Q direct from Sandringham Road. The painted flush median on Sandringham Road provides suitable refuge for trucks to wait while turning right into the site and avoid any disruption of through movement on Sandringham Road.

Both access points link to the tunnel under the southern stand and a loading area under the western stand. This provides some flexibility when accessing the site and depending on stage positions. Also, all trucks will therefore be able to enter and leave in a forward direction.

Furthermore, if necessary, the current TMP can be utilised to ensure that the heavy vehicle movement during the full course of the event can be conducted safely and not to impact on other vehicular or pedestrian activities.



6.0 CONCLUSIONS

The following conclusions can be made in respect of the proposal to vary the current conditions of consent for holding concert events in Eden Park:

- The effect of switching from a 12-month to a calendar year would be no different than using a 12-month period with the same number of concerts occurring and the transport effects would be the same. The difference in effect primarily relates to frequency of events and the cumulative effects.
- The traffic management response around the Eden Park environs can be designed to mitigate the effects of the event and ensure traffic flow and pedestrian safety is maintained while minimising the impact traffic management has on the surrounding neighbourhood.
- The cumulative traffic effects of holding six more concerts per year is mitigated by retaining other controls that manage the frequency of events over consecutive weekends and ensuring a minimum of one weekend does not have a large event every 35-day period.
- The proposal to increase the maximum crowd size for weekday concerts from 50,000 to 60,000 has been successfully undertaken with previous events with the correct traffic management plan in place. The added demand on the surrounding road network and public transport can be accommodated.
- The proposed methodology for transportation required for the set up and disestablishment of a concert stage and related infrastructure will ensure that any effects on the surrounding environment will be limited to truck movements to and from site. The intensity of truck movements can be accommodated on the surrounding network with minimal adverse effect such that no further mitigation is required.

Overall, it is considered that the transport effects of a concert can be accommodated without compromising its function, capacity, or safety.

Prepared by,

Todd Langwell

Elemit Fu

Attachment 1

Concert TMP Examples



TRAFFIC MANAGEMENT PLAN (TMP) INFORMATION

Parking Restrictions

Some areas around the stadium, including areas within the parking scheme, are reserved for traffic management. These are marked on the map and will be clearly signposted on event days. Parking restrictions will be enforced with tow trucks operating from **2pm-11.30pm.** Parking is available in surrounding streets not in use by the TMP.

Road Closures

Residents and their visitors will have access through road closures at all times, unless it is unsafe to do so. For best access, please refer to the map above.

Resident-only parking (ROP) scheme

The ROP scheme will be in operation from **2pm-11.30pm** during which time only registered vehicles with a valid parking permit (either registered digitally with AT or a physical permit displayed on dash) will be able to park in the areas shaded (pink) above

How to get a parking permit

Residents can apply for a **permanent parking permit** through Auckland Transport:

- Online at at.govt.nz/driving-parking/

If you need a **temporary permit** in the meantime, you can collect one at Eden Park Reception (Gate G) Monday - Friday 8am - 5pm, or on event day. Please note: you must bring evidence of address dated within the last two months.

Please keep your permit displayed in your vehicle to avoid being ticketed or towed.

Towing

Even with a valid permit displayed, you will be towed if you park in restricted areas (i.e. mobility, no parking, authorised parking or coach parking zones). Tow trucks will be operating from **2pm-11.30pm.**

^{*} Please note, unannounced changes may need to be implemented on event day for public safety reasons.





OTHER IMPORTANT EVENT-DAY UPDATES

Audio testing

Sound checks will be between 4-8pm on Thursday 9th and 11am-3.30pm on Friday 10th & Saturday 11th February 2023.

Toilets & rubbish bins

Additional rubbish bins and temporary toilet facilities will be placed around the outer environs of Eden Park. Clean-up of the area will be undertaken after 8am on Saturday 11 & Sunday 12 February 2023.

Need more information?

- For assistance or information during the event, please call our HOTLINE on (09) 815 4820.
- For general information or assistance during business hours, please call Eden Park reception on (09) 815 5551.
- To log a parking enforcement request or vehicle recovery, please call Auckland Transport on (09) 355 3553.

(09) 815 4820

If you need information or assistance during an event, please call our hotline in the first instance.



NEW ZEALAND'S NATIONAL STADIUM

WWW.EDENPARK.CO.NZ





TRAFFIC MANAGEMENT PLAN (TMP) INFORMATION

Parking Restrictions

Some areas around the stadium, including areas within the parking scheme, are reserved for traffic management. These are marked on the map and will be clearly signposted on event days. Parking restrictions will be enforced with tow trucks operating from **2.30pm-11.30pm.** Parking is available in surrounding streets not in use by the TMP.

Road Closures

Residents and their visitors will have access through road closures at all times, unless it is unsafe to do so. For best access, please refer to the map above.

Resident-only parking (ROP) scheme

The ROP scheme will be in operation from **2.30pm-11.30pm** during which time only registered vehicles with a valid parking permit either digital or displayed on dash will be able to park in the areas shaded (pink) above.

How to get a parking permit

Residents can apply for a **permanent parking permit** through Auckland Transport:

- Online at at.govt.nz/driving-parking/
- On the phone by calling (09) 355 3553 to request a form sent to your home (5 days processing time).

If you need a **temporary permit** in the meantime, you can collect one at Eden Park Reception (Gate G) Monday - Friday 8am - 5pm, or on event day. Please note: you must bring evidence of address dated within the last two months.

Please keep your permit displayed in your vehicle to avoid being ticketed or towed.

Towing

Even with a valid permit displayed, you will be towed if you park in restricted areas (i.e. mobility, no parking, authorised parking or coach parking zones). Tow trucks will be operating from **2.30pm-11.30pm**.

^{*} Please note, unannounced changes may need to be implemented on event day for public safety reasons.





OTHER IMPORTANT EVENT-DAY UPDATES

Audio testing

Sound checks will be between 5pm-6.30pm on Friday 9th and 3.30pm to 4.30pm Saturday 10th December 2022.

Toilets & rubbish bins

Additional rubbish bins and temporary toilet facilities will be placed around the outer environs of Eden Park. Clean-up of the area will be undertaken after 8am on Sunday 11 December 2022.

Need more information?

- For assistance or information during the event, please call our HOTLINE on (09) 815 4820.
- For general information or assistance during business hours, please call Eden Park reception on (09) 815 5551.
- To log a parking enforcement request or vehicle recovery, please call Auckland Transport on (09) 355 3553.

HOTLINE

(09) 815 4820

If you need information or assistance during an event, please call our hotline in the first instance.



NEW ZEALAND'S NATIONAL STADIUM

WWW.EDENPARK.CO.NZ



Attachment 2

Ticket Scans for Concerts

Ticket Scan									
Time	SIX60 Wednesday, 9 September	SIX60 Saturday, 19 November	Billy Joel	Ed Sheeran	Ed Sheeran	P!NK	P!NK		
iiiie	2011	2022	Saturday, 3 December 2022	Friday, 10 February 2023	Saturday, 11 February 2023	Friday, 8 March 2024	Saturday, 9 March 2024		
Gate Opening	4:00pm	3:45pm	4:45pm	4:30pm	4:30pm	5pm	5pm		
Main Act Starts	8:30pm	8:30pm	8:00pm	8:15pm	8:15pm	8:10pm	8:10pm		
+15 min	1,571	965	1,251	709	930	4,740	4,975		
+30 min	896	803	1,375	536	946	2,318	2,427		
+45 min	1,243	626	1,784	836	1,041	2,781	2,947		
+60 min	1,034	784	2,255	1,210	1,672	3,008	3,474		
+75 min	1,775	971	2,850	1,670	2,310	4,226	4,068		
+90 min	2,202	1,061	3,327	2,281	2,405	4,715	4,477		
+105 min	2,891	1,029	3,901	2,466	3,097	5,235	5,322		
+120 min	3,389	1,181	4,394	3,576	3,033	4,966	5,794		
+135 min	4,599	1,369	4,886	4,181	3,461	3,905	4,928		
+150 min	5,358	1,569	3,281	4,947	5,159	3,089	3,401		
+165 min	4,789	1,437	1,864	5,252	4,785	2,070	2,488		
+180 min	4,229	1,782	964	5,939	4,407	1,083	1,202		
+195 min	3,193	1,559	280	6,004	3,743	631	440		
+210 min	3,055	1,519	60	5,154	2,540	203	233		
+225 min	1,801	1,570		1,391	1,801	72	64		
+240 min	1,455	1,748		269	435	40			
+255 min	982	1,463		85	188				
+270 min	682	1,362			63				
+285 min	274	1,177			47				
+300 min	77	632	_						
+315 min	48	239							
+330 mins		88							
+345 min		42							
+400 mins		28							
+415 min		14							
TOTAL	45,543	25,018	32,472	46,506	42,063	43,082	46,240		