

Management report to Council**Agenda item 6.1****Melbourne International Flower and Garden Show proposed new licence - 2024 - 2029****Council****Presenter:** Katrina McKenzie, General Manager City Economy and Activation**30 August 2022****Purpose and background**

1. The purpose of this report is to:
 - 1.1. recommend Council enter into a new six year licence with Flower and Garden Show Limited (the Licensee) for the Melbourne International Flower and Garden Show (MIFGS) to be held in Carlton Gardens South
 - 1.2. provide an assessment of MIFGS and the Licensee's past performance.
2. MIFGS is owned by the Nursery & Garden Industry Association of Victoria and the International Management Group of America and is a designated state major event. The five-day event has taken place in the Royal Exhibition Building and Carlton Gardens South since the late 1990s. A major highlight of Melbourne's events program, it is a gated, ticketed event that attracts up to 270 exhibitors and vendors and 100,000 visitors.
3. The distinguishing feature of MIFGS is the continued use of the 'exhibition' component which commenced with the First International Exhibition at the Royal Exhibition Building and Carlton Gardens in 1880, an arrangement which continues to attract visitors from across Melbourne, Victoria and interstate.
4. Council issues a licence under powers contained in the *Melbourne Parks and Gardens (Joint Trustee Reserves) Regulations 1994* (Regulations) and an annual event permit for the Carlton Gardens South component of MIFGS. The current licence expires in April 2023 following the 2023 event. This current licence covered the period from 2018 – 2023. MIFGS was cancelled in 2020 and 2021 due to COVID-19.
5. Michael Warner, Chairman of the Licensee and Marcus Gale, Event Director IMG Limited have submitted a written request (Attachment 2) for a new three year licence to run MIFGS from 2024 to 2026 with a three year option to extend the licence until 2029.
6. In light of exemplary performance over 26 years, management have commenced negotiations for the new licence from 2024 until 2029.

Key issues

7. The fee, bond and public projects contribution for the 2024–29 period have been considered. It is proposed that the fee remains in line with that set out under the previous licence with an annual increase reflecting CPI.
8. As part of the licence and permit, an exhibitors' handbook, setting out installation and operational requirements for MIFGS, has been used for many years and is continually updated. Regular soil testing is undertaken to measure soil compaction and a tree protection plan is prepared in advance of MIFGS. An onsite monitor is present during the installation and removal of all show exhibits. Soil compaction and arborist reports for MIFGS 2022 are attached. (Attachment 3 and 4).
9. A heritage permit for the event and a pre and post-occupancy event report are also required by Heritage Victoria. Although an event of the size of MIFGS has the potential to have a high impact on Carlton Gardens South, a review of test results and reports since 2005 shows that clear guidance, strict management and consistent onsite monitoring has served the site and exhibitors well, with no apparent cumulative impact on the heritage values of Carlton Gardens.

10. Schedules two and three of the proposed licence detail the event plan conditions and specification for turf reinstatement works and site protection responsibilities respectively. The schedules have been updated to ensure appropriate management is in place.
11. As part of the engagement undertaken in 2020 for the World Heritage Management Plan Review, survey participants were invited to comment on the following statement: “The events and exhibitions held on the Royal Exhibition Building and Carlton Gardens site are appropriate to the setting and the community”. In total, around 72 per cent of respondents ‘agreed’ or ‘strongly agreed’ with this statement. For this reason, it can be argued the public are generally comfortable with the current program of events at Carlton Gardens, with the strict management processes and clear limits on the use of the site likely to be key contributors to this perception.
12. During the community engagement phase of the draft Carlton Gardens Master Plan, public support was tested via survey for introducing a cap of 13 weeks for major event use in Carlton Gardens South. 64 per cent ‘supported’ or ‘strongly supported’ this idea, with the balance of responses either indicating they were unsure or not in support of this idea. Three direct public submissions argued against the principle of permitting major event use in the Gardens, two were generally in support and two did not express a specific view. Acknowledging there are a variety of community views on this matter, it is also noted that the Heritage Master Plan recognises the principle of using Carlton Gardens South for appropriate larger events.

Recommendation from management

13. That Council:
 - 13.1. subject to all necessary approvals from the Minister responsible for the *Crown Land (Reserves) Act 1978* first being obtained, grants to Flower and Garden Show Limited (Licensee) a licence to use the Carlton Gardens South for the running of the Melbourne International Flower and Garden Show for three years (2024-2026) with an option to extend the licence for a further three years (2027- 2029) by mutual agreement
 - 13.2. approves:
 - 13.2.1. an annual licence fee of \$160,000 in year one increasing by CPI each subsequent year
 - 13.2.2. an annual Public Projects Contribution of \$40,000 in year one increasing by CPI each subsequent year
 - 13.2.3. an annual bond amount of \$250,000
 - 13.3. notes that the final terms and conditions of the licence will be negotiated and agreed, and the licence entered into, under delegation.

Attachments:

1. Supporting Attachment (Page 3 of 47)
2. Letter from Flower and Garden Show Ltd to proposing new 6 year licence (Page 5 of 47)
3. Soil Compaction Report 2022 (Page 18 of 47)
4. Arborist Report 2022 (Page 32 of 47)

Supporting Attachment**Legal**

1. The purposes for which the Carlton Gardens may be used include public recreation (pursuant to the Order in Council of 1 February 1864) and horticultural exhibitions (pursuant to regulation 19 of the Regulations). The Carlton Gardens are managed by Council as the Committee of Management. As the Committee of Management, Council is able to allow the use of the Carlton Gardens in accordance with the provisions of the Regulations and apply controls on the event and remediation of the gardens after MIFGS. The Council is not responsible for the Royal Exhibition Building.
2. The Regulations prescribe the period the gardens can be closed off to the public for MIFGS and the entry fee payable by the public.
3. In 2008 an additional Part 4A was added to the *Crown Land (Reserves) Act 1978*, allowing the Governor in Council on the recommendation of the responsible Minister, to declare an event in the Carlton Gardens to be a 'special event'. Were this to occur, MIFGS could go ahead without express approval of Council and the City of Melbourne would be effectively removed as the committee of management in respect to the area occupied by the event and for the period of the event with:
 - 3.1. the Secretary of the Department of Environment Land, Water and Planning or the Melbourne Convention and Exhibition Trust assuming the role of management.
 - 3.2. Council's Local Laws and the Regulations being suspended.
4. Due to the World Heritage status of the Carlton Gardens, the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) has application ('EPBC Act'). Section 12 of the EPBC Act provides:
 - 4.1. (1) A person must not take an action that: (a) has or will have a significant impact on the world heritage values of a declared World Heritage property; or (b) is likely to have a significant impact on the world heritage values of a declared World Heritage property
 - 4.2. The EPBC Act defines "action" to include (a) a project; and (b) a development; and (c) an undertaking; and (d) an activity or series of activities; and (e) an alteration of any of the things mentioned in paragraph (a), (b), (c) or (d).
5. The proposed licence is for the purpose of continuing permission for an activity that had been carried out prior to the application of the EPBC Act.

Finance

6. The proposed licence fees and Public Projects Contribution (excluding GST and CPI) over the 2024-2029 license period would be as follows, subject to the renewal options being exercised:

| Year | Event year | Financial Year | License Fee (ex-GST) | Public Projects Contribution (ex-GST) | Bond |
|--------|------------|----------------|----------------------|---------------------------------------|-----------|
| Year 1 | 2024 MIFGS | FY23/24 | \$160,000 | \$40,000 | \$250,000 |
| Year 2 | 2025 MIFGS | FY24/25 | Year 1 fee + CPI | Year 1 contribution + CPI | \$250,000 |
| Year 3 | 2026 MIFGS | FY25/26 | Year 2 fee + CPI | Year 2 contribution + CPI | \$250,000 |
| Year 4 | 2027 MIFGS | FY26/27 | Year 3 fee + CPI | Year 3 contribution + CPI | \$250,000 |
| Year 5 | 2028 MIFGS | FY27/28 | Year 4 fee + CPI | Year 4 contribution + CPI | \$250,000 |
| Year 6 | 2029 MIFGS | FY28/29 | Year 5 fee + CPI | Year 5 contribution + CPI | \$250,000 |

7. The above proposed licence fees and Public Projects Contribution will be included through the FY23/24 planning and budgeting process.

Conflict of interest

8. No member of Council staff, or other person engaged under a contract, involved in advising on or preparing this report has declared a material or general conflict of interest in relation to the matter of the report.

Health and Safety

9. In developing this proposal, no Occupational Health and Safety issues or opportunities have been identified.

Stakeholder consultation

10. As part of the engagement undertaken in 2020 for the World Heritage Management Plan Review, survey participants were invited to comment on the following statement: "The events and exhibitions held on the Royal Exhibition Building and Carlton Gardens site are appropriate to the setting and the community". In total, around 72 per cent of respondents 'agreed' or 'strongly agreed' with this statement. For this reason, it can be argued the public are generally comfortable with the current program of events at Carlton Gardens, with the strict management processes and clear limits on the use of the site likely to be key contributors to this perception.
11. During the community engagement phase of the draft Carlton Gardens Master Plan, public support was tested via survey for introducing a cap of 13 weeks for major event use in Carlton Gardens South. 64 per cent 'supported' or 'strongly supported' this idea, with the balance of responses either indicating they were unsure or not in support of this idea. Three direct public submissions argued against the principle of permitting major event use in the Gardens, two were generally in support and two did not express a specific view. Acknowledging there are a variety of community views on this matter, it is also noted that the Heritage Master Plan recognises the principle of using Carlton Gardens South for appropriate larger events.

Relation to Council policy

12. This report is consistent with overall strategies contained in the Council Plan and is aligned to the strategic objectives in particular 'Economy of the Future' and 'Melbourne's unique identity and place'.

Environmental sustainability

13. The conditions of the licence, which are currently under negotiation, will include measures to protect the health of the gardens, particularly in relation to tree protection measures and soil compaction.
14. The applicant's submission (Attachment 2) outlines the event's key environmental messaging and education.



MELBOURNE INTERNATIONAL FLOWER AND GARDEN SHOW

July 2022

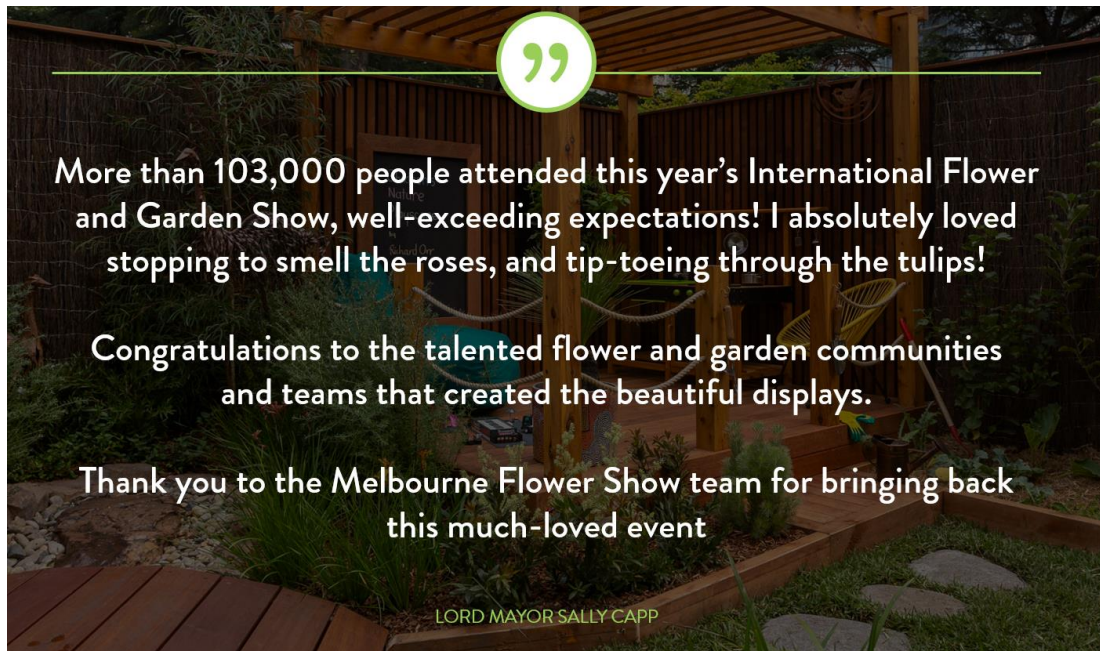
Attachment 2
Agenda item 6.1
Council
30 August 2022

Ms Louise Scott
City of Melbourne

Dear Louise

RE: Information for Melbourne International Flower and Garden Show (MIFGS) License

After two years of cancelled shows due to the global COVID19 pandemic, the Melbourne International Flower and Garden Show returned to the Royal Exhibition Building & Carlton Gardens in spectacular fashion. As one of the first major events to return to the public agenda the show continues to present the horticultural industry to the masses despite the hurdles faced during the pandemic.



In direct reference to the 2022 edition of the Show and in line with the City of Melbourne license, MIFGS once again fulfilled all the necessary license conditions as it has for each of the last 25 staging’s where the Show has been held in the Carlton Gardens. Although, it should be noted that the 33% or two of the six years from the current license were lost to the pandemic to great expense by the owners of the Show.

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The Show has numerous obligations under the existing license agreement that require the formal engagement of various specialist consultants to ensure the venue has all necessary protections and that the heritage conditions of the site are also adhered to throughout the events occupation.

These consultants specialize in the fields of engineering, soil compaction, tree protection, heritage, accessibility, and safety.

The following extract is from the 2022 Tree Protection Plan post event report, that assessed the overall impact and health of the park from tree protection to soil compaction.

*“After two years of MIFGS not being held due to the COVID-19 pandemic, it was interesting to see that bulk density values had increased from the 2019 soil testing findings in the pre-show sampling. The results from the post-show sampling across the twelve sites showed both insignificant increases and decreases in bulk density. We conclude that the initial, pre-show, increase observed is due to a change in technique from 2019. **The 2022 results indicate that over the sampling period there was no increase in bulk density.** Bulk density values were within the acceptable range for the soil texture class present at the site.”*

It should also be noted that aside from any permits and planning that the event does with the City of Melbourne, the event also must gain a permit from Heritage Victoria. In 2022 and all the years prior, the event once again received the permit to operate, and post the eventing reporting has always demonstrated there are no detrimental impacts to the park because of the staging of the Show.

For the first time in 2022 Heritage Victoria placed a mandatory requirement on the event to engage a third party Heritage consultant to liaise with Heritage Victoria on the event’s behalf adding additional cost to the events operations.

Over the life of the event MIFGS has never failed to deliver on all permit conditions for the City of Melbourne or Heritage Victoria, thus maintaining proudly what we consider to be an impeccable record.

The Melbourne International Flower and Garden Show is regarded as one of the top flower and garden shows in the world. MIFGS plays an integral role to support the City of Melbourne and keep the state of Victoria at the forefront of the international event market and further compliments its reputation as a major events capital on a global scale.

As we continue to emerge from the global pandemic Melbourne has been disproportionately impacted in comparison to other major cities in Australia due to the extensive lockdowns and work from home requirements and now culture. As a result, the staging of events in the City of Melbourne continues to be a major driver of economic impact, for its residents and businesses.



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MIFGS played a major part to the City of Melbourne's recovery in 2022 and will continue to drive over 100,000 consumers into the city from the suburbs of Melbourne, regional Victoria and from out of state.

The Melbourne International Flower and Garden Show continues to represent diversity for Victoria's event calendar to demonstrate its standing as the event capital of Australia, providing a range of quality events.

EVENT BACKGROUND

The Melbourne International Flower and Garden Show is owned by the Nursery & Garden Industry Association of Victoria (NGIV) and the International Management Group of America.

NGIV is the peak body for the state's horticulture sector and is one of the cornerstone owners of the Show. Founded in 1903, NGIV represents the interests of an industry worth \$1.6 billion and employing over 11,000 people.

The income from MIFGS assists the NGIV with employment, production, marketing, promotion and accreditation initiatives while also strengthening the sales and distribution of horticultural products and services.

EVENT OVERVIEW

2022 was the twenty-fifth edition of MIFGS. Over the 27 years of its existence MIFGS has become the best annual flower and garden in the Southern Hemisphere. It is also one of the top five shows of its type in the world. Its success continues to promote and enhance Melbourne and Victoria's reputation for horticulture both nationally and internationally.

In 2022 MIFGS was supported by Visit Victoria as a major event and previously designated by Tourism Victoria as a 'Hallmark Event' sharing this status with other world-class events such as the Australian Open Tennis Championship, the Melbourne Comedy Festival, Victorian Spring Racing Carnival and the Australian Formula One Grand Prix and traditionally drives an enormous month of events in March each year along with the start of the AFL season.

MIFGS drives a substantial amount of economic activity into the Victorian economy. The latest economic impact study put the value of positive impact of the show at approximate and conservative \$9 million to the State, with a substantial proportion generated by interstate and overseas visitors, whom we expect to see more of as the visitor economy returns to normal post pandemic.

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MIFGS annually conducts an extensive (media and television) advertising campaign to promote Melbourne and Victoria to enhance the reputation of our state.

Additionally, the license agreement is further supported the Carlton Gardens Master Plan where we take the following excerpt from its recent review and publishing:

While many events are held in the Royal Exhibition Building each year, contemporary major events involving both the Building and the Gardens are the Melbourne International Flower and Garden Show and in more recent years, the White Night Festival, or the Rising Festival.

A designated state major event, the five-day Melbourne International Flower and Garden Show has taken place in the Royal Exhibition Building and Carlton Gardens South since the late 1990s. A major highlight of Melbourne's events program, it is a gated, ticketed event that attracts up to 270 exhibitors and vendors and 100,000 visitors.

Given the nature of the displays, the event requires an exclusive two-week installation phase, followed by post show restoration works, primarily turf replacement, after which the Gardens are re-opened for public use. It takes around six weeks for Carlton Gardens South to revert to its usual presentation levels. The City of Melbourne issues a licence under the Crown Land (Reserves) Act and an annual event permit for this event.

As part of these procedures, an exhibitors' handbook, setting out installation and operational requirements for the Melbourne International Flower and Garden Show, has been used for many years and is continually updated. Regular soil testing is undertaken to measure soil compaction and an onsite monitor is present during the installation and removal of all show exhibits. A heritage permit for the event and a pre- and post-occupancy event report are also required by Heritage Victoria.

Although an event of the size of the Melbourne International Flower and Garden Show has the potential to have a high impact on Carlton Gardens South, a review of test results and reports since 2005 shows that clear guidance, strict management, and consistent onsite monitoring has served the site and exhibitors well, with no apparent cumulative impact on the heritage values of Carlton Gardens. Other factors contributing to this positive outcome are:

- *the time of year the event is held (autumn, where soils are not as likely to be impacted)*
- *returning exhibitors from the landscape management profession who understand the event well and are briefed annually on permit requirements and expectations.*

It is likely similar applications to use the Gardens will be made in the future. The distinguishing features of these events has been the continued use of the 'exhibition' concept (through horticulture and art) for which the Royal Exhibition Building and Carlton Gardens South were first established, which continue to attract visitors from across Melbourne, Victoria, and interstate.



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Furthermore, The State Government legislated in February 2008 to insert a new Part 4A into the Crown Land (Reserves) Act 1978 that provides for special event management of the Carlton Gardens. This allows the Governor in Council, on recommendation from the minister, to make a special event management declaration for the Government to be granted the powers to manage the Gardens if required.

Venue

MIFGS played an integral part in the World Heritage listing of the Royal Exhibition Building and Carlton Gardens as the only event that continues to utilise the entire venue to host an exhibition/event which reflected the original purpose it was built for as part of the World Expos of the 1880's.

World Heritage sites across the world are utilised for a myriad of events, tourism, and commercial use in general. MIFGS falls within a compatible use of World Heritage sites that are in Australia and around the world.

The event's location in the Royal Exhibition Building and Carlton Gardens South plays a large part in the event's success and beauty. The combined venue allows all aspects of the horticultural and garden design industry to be brought together in the one amazing venue. This aspect truly sets MIFGS apart from all other flower and garden shows around the world by allowing us to have cut flower designs and garden designs in the one unique venue. You cannot find this style of show anywhere else in the world which further enhances the uniqueness of MIFGS. Combine this aspect with a venue that is in a major City centre close to amenities, accommodation and transport and you have the ultimate flower and garden show venue.

MIFGS plays an on-going role in promoting the fact that the venue and garden is a World Heritage listed site and has delivered over 2.5 million people to the venue promoting the attributes of the Royal Exhibition Building and Carlton Gardens South over the life of the show.

The City of Melbourne over the life of MIFGS has conducted two independent reports on the suitability of the current venue as well as reviewing alternative venues and concluded in both reports that the current venue is the best suited for an event such as MIFGS.

We strongly believe that the use of the combined venue for a flower and garden show that delivers multiple community, social and economic benefits is fitting use and without doubt provides the best venue of any like it in the world.

Soil Compaction

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At first on an annual basis the City of Melbourne requested a soil compaction report to be commissioned and each year the report has concluded that the Show causes no damage to the health and well-being of the trees, the turf and soil. This is a fact the Show organisers pride themselves on and goes to prove why the Show is highly regarded for setting the benchmark for good practices in implementing events in parks and gardens throughout the City of Melbourne.

It is important to note that Dr Van de Graaff and in more recent years Tree Logic have reviewed the data from the reports over the period of 2003 to 2022 and concluded that the data showed that MIFGS has not caused any soil compaction over that period of testing. This is also referenced in the Carlton Gardens Masters Plans and detailed above.

Such long-term evidence cannot be refuted that the event causes no soil compaction.

In the most recent license and based on the consistent results the soil testing obligations were reduced to biannual occurrences and moving into the new license we would propose that soil compaction testing should occur in the middle year of each three-year term of the six year license.

Tree Protection Plan – Tree Logic

Tree logic is engaged annually by IMG to provide arboricultural services, including a post event report that is submitted to City of Melbourne and Heritage Victoria. A full copy of the report from 2022 has been submitted to both parties.

Heritage Victoria

IMG engage HML Heritage Consultants to ascertain the Heritage permit which over the past 25 editions has never failed to gain a permit from Heritage Victoria nor failed to deliver on the license conditions.

Industry Talent and Creativity

MIFGS has established itself as the event for garden/floral designers to display their creative talents. As such the City via its hosting of MIFGS is seen as providing the backdrop for the creative design talent that we then send to overseas shows to compete and win medals at.

By nurturing that design talent the City of Melbourne best in show and gold medal winners have gone on to compete and win awards in the following international shows/markets and thus been recognised as having come from MIFGS:

- Chelsea Flower Show, UK
- Singapore Flower Show
- Japan International Flower and Garden Show
- Pacific Flora Expo, Japan



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- Ellerslie Flower Show, New Zealand
- Philadelphia Flower Show, USA
- Alsmere Flower Show, Holland

Further to sending designers all round the world MIFGS has an important role in fostering young talent and providing a platform for professional development for training institutions and universities.

Each year students of horticulture, floristry, landscape design and fashion exhibit and compete at the show and many of the institutions use MIFGS as part of their core curriculum work. The continued development of the floral student competitions (Intermediate, Advanced and Open) and the introduction of the 'Emergent Gardens' competition in the landscape design category are delivered examples of MIFGS creating a tangible platform for aspiring students and budding professionals alike to showcase their skills and creativity.

MIFGS is great 'work experience' for all students taking part. It assists students with self-confidence and gives them an opportunity to show their skills to a broader audience. They gain a better understanding of teamwork and develop professional responsibility.

Most of all it's a celebration of young people and their talents.

MIFGS also leads by example in its student mentoring program. MIFGS as a leader in event management works with a number of colleges to accept students for work placements. In doing this we feel that the event is helping grow and nurture the next generation of event managers.

Positive Economic Impact

The goal of economic prosperity is not only a City of Melbourne goal but also one we have delivered for Visit Victoria over many years for this event to remain a designated state major event.

Since 1996 the show has brought over 2.5 million visitors to the City of Melbourne, with each new year welcoming over 100,000 visitors. Surveys over the years have shown that of the crowd that attends each year approximately 2% come from overseas and approximately 10% come from interstate. This generates a phenomenal direct economic and tourism impact for Melbourne and Victoria as a whole.

The event generates positive economic benefits via the following:

Exhibitor Impact

MIFGS stimulates the local economy by hosting over one hundred and thirty small businesses as retail exhibitors at the Show. These exhibitors come from greater Melbourne, regional Victoria, interstate and on occasions internationally to retail their goods and services to the motivated audience at the

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Show. Given that the majority of businesses are from outside of Melbourne many stay within the City during the event creating a direct spend in accommodation and restaurants in the Melbourne area.

Over up to sixty landscape design and construction companies and more than fifty floral designers and florists take part in the show each year which impacts heavily on the horticultural economy directly with each major floral display in the Royal Exhibition Building costing between \$8,000 and \$10,000 and each of the Garden landscape displays averaging investments between \$30,000 and \$100,000. These displays and exhibitions alone generate millions for the economy along with greater employment, marketing, and sponsorship opportunities to the industry.

The event also provides the platform for many small, medium, and large designers, landscape companies and florists to write business for the coming year.

Event Expenditure

The event spent approximately \$4.2million in 2022 to stage the event. This expenditure is spent within Melbourne and Victoria. The event employs more than five hundred staff per day to provide all the necessary services and set up.

Branding Benefits

Not only has the event provided direct economic benefit to the city but because of its world status has delivered untold \$millions in branding benefits both nationally and internationally to the City.

Overall MIFGS drives a substantial amount of economic activity into the Victorian economy and the most recent economic impact study put the value of positive impact of the show at approximately \$9 million to the State, with a substantial proportion generated by interstate and overseas visitors.

Community/charity and special interest group participation at MIFGS

Charity and community groups are significant beneficiaries of MIFGS both from the dollars raised at the event and the branding received.

Grass roots support of the event is crucial. MIFGS is about inclusion and getting as many people as possible involved. Community groups are passionate about flowers and gardens and are passionate about this event. Many of these groups have long and proud histories and relish the opportunity to give a broader audience an insight into their skills through their MIFGS exhibits.

Importantly, these groups take a sense of ownership from participating in such an event. Community and special interest groups that participate in MIFGS each year include:

- *Royal Horticultural Society of Victoria affiliate clubs and individual members*

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- *Victorian Schools' Gardens Awards*
- *Victorian Arts Societies*
- *Association of Sculptors of Victoria*
- *Bonsai Federation of Victoria*
- *Victorian Art Societies*
- *National Trust of Australia – Victoria*
- *Sustainable Gardening Australia*
- *Committee for Melbourne*

For many of these groups MIFGS gives them a voice that they might not otherwise have. Organisations such as these are often made up of volunteers with incredibly limited resources and so MIFGS is the centrepiece to their yearly marketing, promotional and membership initiatives. Without the show they would not have the capacity to reach such a crowd in a concentrated manner.

Each year MIFGS works closely with charity organisations that wish to exhibit at the event to enable them to reach an audience that they might otherwise not have access to. Some of the organisations that have exhibited at MIFGS to build their profile and raise funds have included: -

- *Kids under Cover*
- *Royal Children's Hospital*
- *The Alannah and Madeline Foundation*
- *The Asthma Foundation*
- *CFA Firestar Rose – Black Friday Appeal*
- *Cystic Fibrosis*
- *Guide Dogs Victoria*
- *Beyond Blue*
- *World Vision*
- *The Jane McGrath Foundation*
- *Cancer Council of Victoria*
- *Dementia Australia*
- *My Room Children's Cancer Charity*

Environmental Messaging/Education

Exhibitors in general and the NGIV use the event to educate Victorians about reducing energy consumption, reducing pollution and adapting to the impacts of climate change.

Key NGIV messaging at MIFGS in the past and continues to include:

- **Cooling the Planet, One Backyard at a Time.**
The home gardener is the collective custodian of by far the largest area of urban parkland in the state.

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Improving our gardens can have a powerful effect on reducing energy consumption, storing carbon and reducing pollution. Grass roots environmental messages provided by the association and its members, such as composting, recycling, and sensible water practices, resonate with the public, producing excellent conservation outcomes.

- Greenspace

By providing a strategic message/approach about planting and maintaining trees and green life this can help reduce energy use and the consequential carbon and other chemical emissions.

- Climate Change

The importance of plants, trees, shrubs and lawns in curbing greenhouse gas emissions, reducing the impact of climate change, reducing soil-erosion from salinity issues and addressing the myriad of man-made environmental issues cannot be overstated.



Waste Management and Plastic

MIFGS in recent years has partnered with Bio Gro who have supported the efforts from the show to reduce the waste to landfill. In 2019 and 2022 over 500m3 of organic waste including timber, green life, soil, mulch, and other organic waste was diverted and recycled.

MIFGS has also partnered with Closed Loop as a sponsor and the official waste management supplier. Closed Loop Site Services are experts in event waste management and sustainability. Their staff are trained, professional and uniformed and know what it takes to ensure the highest possible diversion of waste from landfill.

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MIFGS will continue to play an important role in relation to the environmental debate by providing information to the public in the areas of household water usage, recycling to the garden, dry climate planting, water harvesting, design trends for dry environments and many more areas of gardening and the environment.

Garden Protection

MIFGS works closely with the City of Melbourne to develop strategies & procedures to minimise the impact of the event in the Carlton gardens. The procedures are best practice and have been used to improve the practices of other City of Melbourne events held in parks and gardens in the City precinct.

Great care is taken to ensure the Carlton Gardens are looked after during the staging of the Show and therefore strict control measures are implemented by Show organisers. These measures include:

- No penetration of the ground surface within the SRZ of any tree.
- Where any marquee falls within a SRZ it will be weighted
- Protective flooring is laid over areas where increased foot traffic is expected
- Installation of safety barriers to protect the corners of the gardens during installation and pack up
- In the event of increased foot traffic near the base of trees, MIFGS will protect the area in one of the following manners:
 - o Restrict access
 - o Use of protective flooring
 - o Monitored pedestrian and vehicle traffic.
 - o Staggered days for installation
 - o Restricted parking in the gardens
 - o Unloading/loading bay set up in the Southern Drive
 - o one way traffic management system
 - o Rotation of landscape exhibitor sites

FUTURE

MIFGS has several long-term goals and objectives that are likely to align with the key goals and objectives of the City of Melbourne.

The full implementation of all goals does depend on funding be that from sponsors, increased ticketing and/or government support.

Grow the Brand / Show

| | | |
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MELBOURNE INTERNATIONAL FLOWER AND GARDEN SHOW

We will continue efforts to enhance the number and quality of the garden and floral displays. Whilst we successfully attract designers from within Australia, we believe that we also need to target and attract International Designers to further brand the show.

Through attracting international designers to MIFGS, we can achieve several positive outcomes including:

- Enhance the profile of the event within the industry
- Enhance the profile of the event within the designer community both nationally and internationally
- Gain coverage in broader lifestyle press

Over many years MIFGS has created marketing and promotional campaigns in several countries via key flower and garden shows in each market. These have included:

- Chelsea Flower Show, London
- Philadelphia Show, USA
- Aalsmeer Show, Holland
- Singapore Show, Singapore
- Nagoya Show, Pacific Flora and Tokyo Flower Show, Japan
- Ellerslie Flower Show, New Zealand

To achieve the above objective would require funding be it from Government or sponsorship.

Inspire, Educate, Unite & Entertain

These are the four key pillars of building a world-renowned festival and deliver a future focus as described below:

- Motivate people to garden
- Encourage and maintain post pandemic new demographics to garden
- Encourage innovative design and thought through horticulture
- Share the sustainable message and values of green life
- How to workshops and seminars
- Sustainable food production / paddock to plate
- How to get involved and promote the venue and Melbourne
- Partnering with Ambassadors (Dylan Alcott)
- Vary the experience and celebrate the industry

Victorian Aboriginal Culture



MELBOURNE INTERNATIONAL FLOWER AND GARDEN SHOW

Our event managers and part owners of the show IMG are currently in the process of developing a Reconciliation Action Plan. This plan will guide the progress for our business and our events in making the appropriate steps to showcase and celebration Victorian Aboriginal Culture.

We have plans to increase integration with the traditional owners of the lands in which our events are conducted. Some of the initiatives we are considering and will work with the Wurundjeri people of the Kulin tribe to include the use of traditional names in our event collateral and marketing communications. Acknowledge indigenous landmarks of significance and of course Welcome to and Acknowledgement of country events and formalities as collectively determined.

We also aspire to deliver an indigenous show garden in partnership with the Wurundjeri people.

Accessibility, Diversity & Inclusion

2022 marked a highlight in this area, in partnership with Visit Victoria MIFGS partnered with Dylan Alcott, Australian of the Year and disability advocate to deliver an entirely accessible show garden. The first of its kind, designed from the beginning in conjunction with Vivid Design and constructed by Semken Landscaping with the support of Kevin Heinze Grow, an organization purposed to provide employment and opportunity for people with disability.

All the show features will continue to consider the lens of accessibility, diversity, and inclusion as we move into the future.

Summary

MIFGS will continue the work of promoting the show and the significance of the World Heritage listed Royal Exhibition Building and Carlton Gardens South with the City of Melbourne and Museum Victoria so that the city can continue to build and promote itself as a significant international event destination.

We also trust that the two years of losses and lost opportunity will be taken into consideration when renewing the license and the various commercial conditions of the license for the next term.

Yours sincerely

Michael Warner
Chairman
Flower & Garden Show Limited

Marcus Gale
Event Director
IMG

Arboricultural Assessment and Report

Attachment 3
Agenda item 6.1
Council
30 August 2022

Soil Compaction Assessment, MIFGS Carlton Gardens, Melbourne

Post-show results

3rd May, 2022

Tree Logic Ref. 011282

Prepared for Brad King – Senior Events Operations Manager, IMG Australia

Prepared by Kirsten Raynor – Consulting Arborist, Tree Logic Pty. Ltd.



Introduction

Reason for Assessment

The Melbourne International Flower and Garden Show is held each year at the Carlton Gardens, Melbourne. In 2019 103,000 visitors attend the show, along with 900 exhibitors. This volume of traffic over the open space must be carefully managed to avoid compacting the soil to an extent that could be detrimental to the trees and turf for which the Gardens are famous.

Numerous management systems are employed to minimise the compactive forces experienced by the soil at the Carlton Gardens during the staging of MIFGS.

In concert with the management systems, soil compaction data is collected and a visual assessment of the turf before and after the show is made. This allows soil conditions to be monitored and any change in conditions over the show period to be identified.

Overview

The Melbourne International Flower and Garden Show (MIFGS) is held each year at the Carlton Gardens. The Carlton Gardens is an extensive public open space which contains the Royal Exhibition Building and the Melbourne Museum. The Gardens are a World Heritage listed site. MIFGS occupies the southern section of the Gardens, bounded to the north by the Royal Exhibition Building, to the west by Rathdowne Street, to the east by Nicholson Street and to the south by Victoria Parade.

MIFGS is the largest flower and garden show in Australia and in 2022 was open to the public from 30th of March to 3rd April. Bump-in started on the 21st March and the show was clear from the gardens by 7th April.

Soil compaction data was last collected in 2019 by van de Graaff & Associates. Data had been collected annually from 2013 to 2017, at which point it was decided that soil compaction could be formally tested every second year. MIFGS was cancelled in 2020 and 2021 due to lockdowns in Melbourne caused by the COVID-19 pandemic. Soil testing that was scheduled for 2021 was postponed to 2022.

In 2022 pre-show soil data was collected on the 17th and 18th January and found that bulk density values had increased slightly from 2019. Given there were no shows held in 2020 and 2021 it was suggested that differing techniques may have contributed to this and possibly the increased general public use during the lockdowns experienced in Melbourne in 2020 and 2021.

Background

Soil compaction

Soil compaction occurs when the solid particles in a volume of soil are pushed closer together, reducing the open space, or porosity in the volume and increasing the percentage of solid matter. Soil compaction is more likely to occur on wet soils, as water decreases the friction between particles and allows them to be pushed together more easily.

Reduction of porosity is recognized as causing a wide range of issues that impact plant growth. Reduced infiltration rate, reduced water-holding capacity, reduced oxygen diffusion, and increased soil strength (impeding root penetration) are the main effects.

Compactive forces

During the holding of MIFGS the most common compactive forces that the soil is likely to experience come from pedestrian traffic, light vehicle traffic and the placing of equipment and temporary structures. It should be acknowledged that these forces are the same as those experienced in the gardens outside of MIFGS, as the open space is used by the public for recreation, ride-on mowers are used to manage the turf and light vehicles are used to transport equipment for tree and turf management.

During the show, pedestrian and vehicular traffic is largely confined to the asphalt paths that criss-cross the gardens, due to the careful siting and arrangement of the stalls and show gardens. Vehicle traffic during bump-in and bump-out is similarly confined to the paved paths.

The primary focus for monitoring compaction is the area covered by stands and tents, a relatively narrow zone on each side of the pathways where people congregate and material and equipment are stored.

Methods

Data was collected from each of 12 historically tested sites as per van de Graaff (2017, 2019) (see Figure 1). This ensured continuity for data comparison. These sites were selected to represent major use by stallholders and catering areas. For each site:

- Three (3) undisturbed core samples were collected for the calculation of bulk density;
- Twenty (20) penetrometer readings were taken for assessment of soil resistance and depth of resistant layers;
- A visual assessment of turf quality and health, including photographs, was made.

Bulk density was sampled and calculated in accordance with McKenzie et al. *Soil physical measurement and interpretation for land evaluation* (2002). An undisturbed soil core was extracted from the soil after removal of the top turf layer and the most dense portion of its roots. These turf sections were removed as a 20 cm x 20 cm square and were of varying depths depending on depth of rooting. The undisturbed cores were extracted from the sampling cylinder and placed in sealed bags and stored in an insulated, sealed

container. The cores were subsequently dried in a 110°C oven and then weighed to determine their dry weight. Bulk density is expressed as a measure of dry weight/volume.

Penetrometer readings were taken with consideration of the points made in *Methods of Soil Analysis* (2002). The penetrometer was slowly and steadily pushed into the soil until the pressure reading reached 300 psi (2000 kPa). At this point the marker on the shaft of the penetrometer was fixed into place and upon removal from the soil the distance from the tip of the shaft to the marker was measured. This represents the depth of soil at which soil strength is too great for a plant root to penetrate. Penetrometer readings are highly sensitive to soil moisture and even loose soil will show high resistance at low moisture content.



Figure 1: Sampling sites in relation to paths and open space (MIFGS 2019 Soil Sampling Report by van de Graaf and Associates, April 2019).

Observations and results

Pre-show sampling took place over two days, Monday 17th January and Tuesday 18th January, 2022. Both days were sunny and warm. These were reported in the Pre-show Soil compaction assessment report, by Tree Logic dated 8-Feb-22.

The post-show soil sampling took place on 12th April, 2022. The day was overcast and mild. Images and data are presented below.

Site A

Browning-off of turf, new growth emerging.

Bulk density:

Pre-show – 1.3 g/cm³

Post-show – 1.47 g/cm³

Moisture content:

Pre-show – 44%

Post-show – 33%

Penetrometer (depth of impedance):

Pre-show – 22.5 cm

Post-show – 13.1 cm

**Site B**

Mixed quality turf. Mixture of species, with varying levels of health between them. Browning off patches, some from mower scalping, some from dieback of certain grass species.

Bulk density:

Pre-show – 1.57 g/cm³

Post-show – 1.51 g/cm³

Moisture content:

Pre-show – 18%

Post-show – 22%

Penetrometer (depth of impedance):

Pre-show – 7.5 cm

Post-show – 9.0 cm

**Site C**

Turf dense, mid-green. Some brown patches, potentially dieback of cool season grass species.

Bulk density:

Pre-show – 1.38 g/cm³

Post-show – 1.46 g/cm³

Moisture content:

Pre-show – 32%

Post-show – 22%

Penetrometer (depth of impedance):

Pre-show – 18 cm

Post-show – 9.2 cm



Site D

Turf dense. Uneven ground showing scalping by mower.
Soil: large gravel inclusions. Large chunk of basalt at base of second sampling hole (abandoned).



Bulk density: Pre-show – 1.46 g/cm³
Post-show – 1.38 g/cm³

Moisture content:

Pre-show – 33%
Post-show – 30%

Penetrometer (depth of impedance):

Pre-show – 17.3 cm
Post-show – 12.3 cm

**Site E**

Turf finer, appears to have higher % of cool season grass species. Green and thick, though with some thin patches, possible mower scalping.

Bulk density:

Pre-show – 1.44 g/cm³
Post-show – 1.5 g/cm³

Moisture content:

Pre-show – 22%
Post-show – 21%

Penetrometer (depth of impedance):

Pre-show – 10.9 cm
Post-show – 7.4 cm

**Site F**

Moderate turf, partially shaded. Bare patches, sparse patches, though what was present was green and healthy. Some worn patches, new growth emerging.

Bulk density:

Pre-show – 1.40 g/cm³
Post-show – 1.31 g/cm³

Moisture content:

Pre-show – 28%
Post-show – 21%

Penetrometer (depth of impedance):

Pre-show – 8.1 cm
Post-show – 6.4 cm



Site G

Partly shaded. New turf laid on morning of sampling.

Bulk density:

Pre-show – 1.52 g/cm³
 Post-show – 1.31 g/cm³

Moisture content:

Pre-show – 15%
 Post-show – 13%

Penetrometer (depth of impedance):

Pre-show – 6.3 cm
 Post-show – 4.2 cm



Site H

Open lawn, edged by shade trees. Browned patches with new growth emerging. Soil presented as more sandy than at other sites.

Bulk density:

Pre-show – 1.38 g/cm³
 Post-show – 1.24 g/cm³

Moisture content:

Pre-show – 11%
 Post-show – 13%

Penetrometer (depth of impedance):

Pre-show – 5.8 cm
 Post-show – 5.8 cm



Site I

Open sunny position, turf thick. Patches of browning off from light exclusion.

Bulk density:

Pre-show – 1.43 g/cm³
 Post-show – 1.32 g/cm³

Moisture content:

Pre-show – 16%
 Post-show – 15%

Penetrometer (depth of impedance):

Pre-show – 8.3 cm
 Post-show – 6.0 cm



Site J

Thick, even turf, some mower scalping. Patches of browning off from light exclusion.

Bulk density:

Pre-show – 1.59 g/cm³

Post-show – 1.56 g/cm³

Moisture content:

Pre-show – 30%

Post-show – 27%

Penetrometer (depth of impedance):

Pre-show – 14.8 cm

Post-show – 9.5 cm

**Site K**

Turf patchy, moderately thick patches interspersed with sparse cover. A few areas of bare soil. Generally uneven ground with tree roots present at surface. All surface roots with existing mower damage.

Bulk density:

Pre-show – 1.48 g/cm³

Post-show – 1.35 g/cm³

Moisture content:

Pre-show – 18%

Post-show – 18%

Penetrometer (depth of impedance):

Pre-show – 6.3 cm

Post-show – 4.8 cm

**Site L**

Open turf, dense. Varying textures due to species mix. Patches of browning off from light exclusion.

Bulk density:

Pre-show – 1.58 g/cm³

Post-show – 1.4 g/cm³

Moisture content:

Pre-show – 26%

Post-show – 25%

Penetrometer (depth of impedance):

Pre-show – 11.8 cm

Post-show – 8.4 cm



Analysis and interpretation

Bulk density

The soil at the Carlton Gardens shows heterogenous properties across the site. This is typical of urban landscapes where soil disturbance is generally high and where activities and sources of fill soil vary over time. Generally, the soil at the Carlton Gardens has characteristics of a loam soil, with varying proportions of clay, gravel, and other inclusions at different points across the site.

According to Brady and Weil (2014) cultivated silt loam soils to sandy loam soils can be expected to have bulk densities in the range of 1.2 to 1.75 g/cm³. Higher figures in this range, for this texture class, can become somewhat limiting to root growth.

Before the staging of MIFGS the highest bulk density values for the site were 1.57, 1.58, and 1.59 g/cm³, at sites B, L, and J respectively. While higher than in the past, these bulk densities are still acceptable for the soil texture and site use, especially under irrigation. After the show the highest bulk densities recorded were 1.47, 1.50, and 1.56 g/cm³, this time at sites A, E, and J respectively.

As suggested in the pre-show report, it would appear that the slight increase in bulk density values from the 2019 is due to a change in sampling technique. The bulk density values recorded post-2022 show are very close to the pre-show values, some sites showing insignificant increases and some sites showing insignificant decreases (See Figure 2).

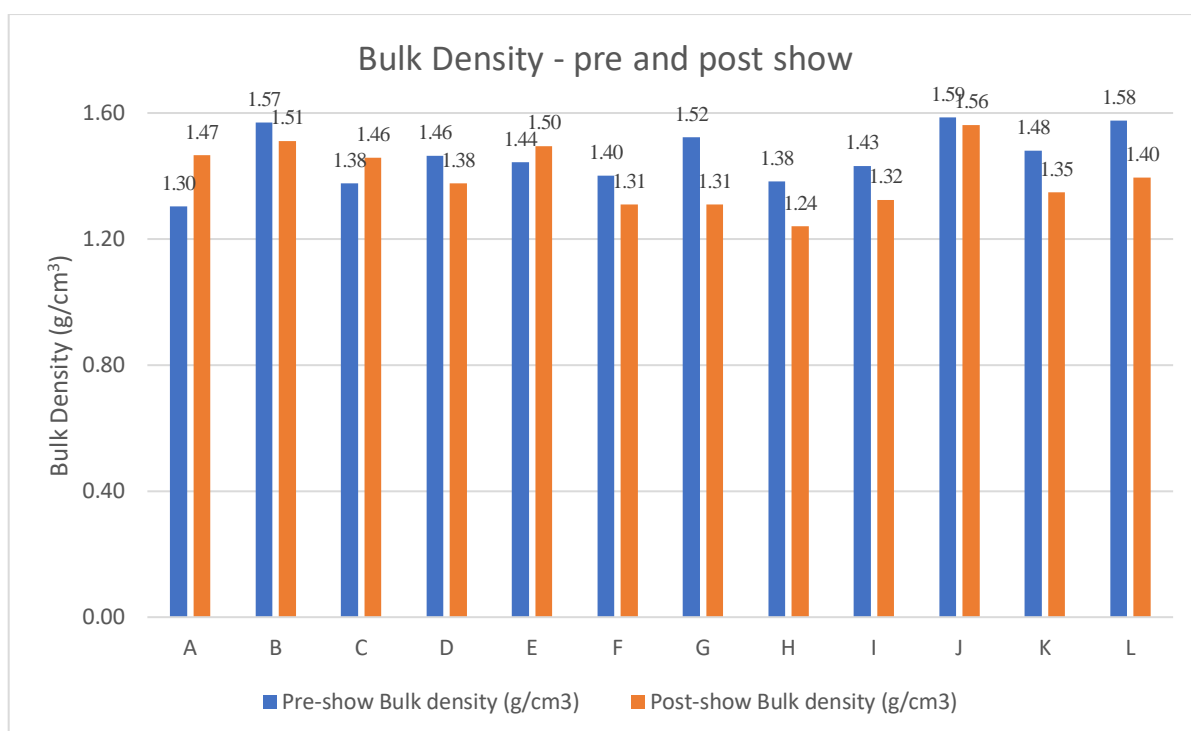


Figure 2: Bulk density values for each site, pre-show and post-show.

Overall the bulk density values for the site did not indicate an increase in soil compaction during the staging of MIFGS.

Moisture content

Soil moisture levels tended to drop slightly across the site over the study period, though two sites (B and H) showed a slight increase. G, H, and I remained the driest sites, with values under 15% indicating they were still moving towards water content that could induce stress, especially in the turf. Pre-show Site H had the lowest volumetric water content (11%) and the turf at this site was showing rolled in leaf margins, a sign of water stress. Post-show Site H had actually shown a slight increase in water content to 13%, though this is still considered in the range of impending water stress. As per the before show results, the remaining sites had moisture contents in the readily available water range (10 – 1500 kPa suction).

Rainfall in February 2022 (the month after the pre-show soil test dates) was very low at 6.8 mm. However, March 2022 had 54.2 mm of rainfall, approximately 20 mm higher than its average. The first half of April (before the post-show sampling date) had approximately 5 mm of rain. The moisture levels across the site did not change significantly. This is consistent with the weather conditions experienced over the sampling period.

Depth of impeding soil strength

Soil strength is a measure of the pressure required to push through soil and is considered limiting to root growth at around 2000 kPa (300 psi). While compaction of soil can lead to soil strength in this range, low water content also influences this measure.

In loose, well-aggregated soils, soil strengths of 2000 kPa occur at water contents close to the wilting-point. As soils become more compacted, the limiting soil strength is reached at higher water contents. At the Carlton Gardens, with generally moderate bulk densities measured across the site, the pre-show depth of impeding soil strength for each site was strongly correlated with the level of soil moisture at each site (see Figure 2). Where soil moisture was highest, the depth of soil without impediment was deepest. Post-show results indicated a continuation of this correlation. Where moisture content dropped, depth to impeding soil strengths became shallower.

Site B saw an increase in moisture content (18% to 22%) and an improvement in unimpeded depth (7.5 cm to 9.0 cm), as would be expected from the relationship between moisture content and soil strength. Site H had a very slight increase in moisture content (11% to 13%) and the unimpeded depth at this site remained the same.

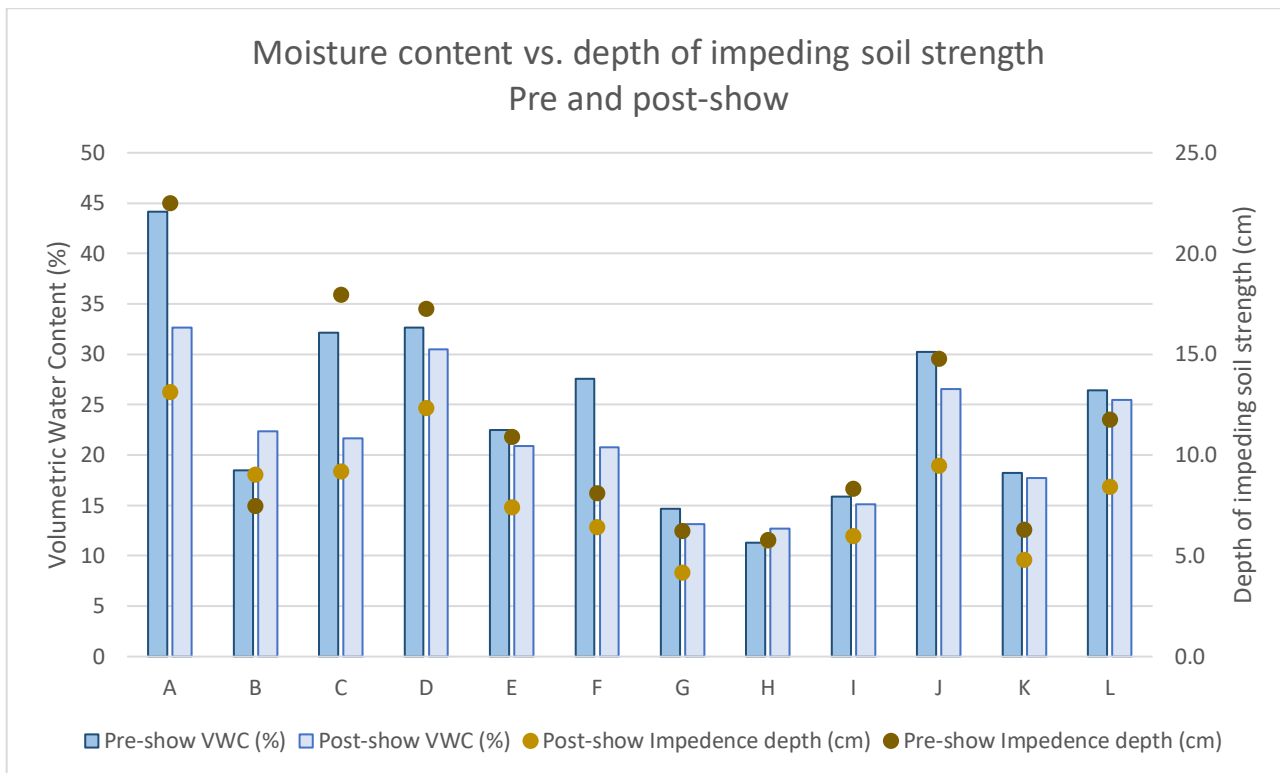


Figure 3: Moisture content and depth of impeding soil strength for each site.

Conclusion

After two years of MIFGS not being held due to the COVID-19 pandemic, it was interesting to see that bulk density values had increased from the 2019 soil testing findings in the pre-show sampling. The results from the post-show sampling across the twelve sites showed both insignificant increases and decreases in bulk density. We conclude that the initial, pre-show, increase observed is due to a change in technique from 2019. The 2022 results indicate that over the sampling period there was no increase in bulk density. Bulk density values were within the acceptable range for the soil texture class present at the site.

The depth of impeding soil strength varied across the site was closely correlated to the moisture content of the soil at each of the test sites. This correlation was observed in both pre-show and post-show sampling. This indicates the soil strength findings are a function of soil moisture content rather than intrinsic compaction. No increase in soil strength due to compactive forces over the sampling period is indicated by the data.

Turf quality had reduced in certain areas, constrained to patches where the turf had experienced light exclusion. More shaded sites had lower quality turf, and mower scalping was observed at a number of test sites. New growth was observed in all browned-off areas of turf.

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Kirsten Raynor

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Consulting Arborist

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Appendix 1: Soil analysis data, Post-show

Penetrometer readings (mm) – Depth of 300 psi soil strength

| Field site | A | B | C | D | E | F | G | H | I | J | K | L |
|-------------|--------|-------|-----|--------|------|-------|-------|------|----|-------|----|-------|
| 1 | 135 | 85 | 100 | 130 | 70 | 55 | 30 | 70 | 70 | 90 | 55 | 120 |
| 2 | 130 | 100 | 95 | 125 | 75 | 70 | 40 | 55 | 75 | 105 | 65 | 75 |
| 3 | 105 | 80 | 75 | 115 | 75 | 75 | 50 | 45 | 45 | 95 | 60 | 135 |
| 4 | 135 | 95 | 90 | 130 | 75 | 50 | 30 | 50 | 65 | 100 | 45 | 85 |
| 5 | 155 | 120 | 80 | 130 | 75 | 70 | 40 | 75 | 70 | 115 | 45 | 85 |
| 6 | 120 | 70 | 95 | 130 | 75 | 40 | 40 | 45 | 65 | 100 | 25 | 85 |
| 7 | 105 | 75 | 85 | 140 | 85 | 65 | 40 | 45 | 45 | 90 | 70 | 75 |
| 8 | 125 | 75 | 110 | 120 | 80 | 45 | 35 | 55 | 75 | 110 | 30 | 100 |
| 9 | 140 | 100 | 135 | 90 | 60 | 65 | 40 | 70 | 60 | 65 | 70 | 70 |
| 10 | 125 | 100 | 100 | 100 | 65 | 75 | 45 | 50 | 70 | 70 | 55 | 75 |
| 11 | 150 | 100 | 90 | 150 | 70 | 65 | 40 | 55 | 40 | 80 | 35 | 80 |
| 12 | 110 | 85 | 100 | 120 | 80 | 70 | 45 | 65 | 65 | 85 | 40 | 60 |
| 13 | 130 | 90 | 100 | 110 | 70 | 45 | 45 | 75 | 50 | 105 | 35 | 90 |
| 14 | 145 | 80 | 90 | 110 | 90 | 70 | 55 | 50 | 90 | 100 | 35 | 75 |
| 15 | 140 | 80 | 100 | 130 | 85 | 75 | 45 | 85 | 60 | 130 | 40 | 105 |
| 16 | 140 | 80 | 85 | 110 | 65 | 70 | 50 | 60 | 60 | 70 | 40 | 65 |
| 17 | 130 | 95 | 100 | 155 | 55 | 70 | 40 | 50 | 40 | 110 | 55 | 85 |
| 18 | 135 | 95 | 75 | 135 | 75 | 60 | 35 | 60 | 50 | 110 | 70 | 90 |
| 19 | 140 | 95 | 65 | 115 | 75 | 65 | 40 | 40 | 45 | 105 | 50 | 60 |
| 20 | 130 | 105 | 70 | 120 | 70 | 85 | 50 | 50 | 60 | 60 | 40 | 70 |
| Mean | 131.25 | 90.25 | 92 | 123.25 | 73.5 | 64.25 | 41.75 | 57.5 | 60 | 94.75 | 48 | 84.25 |

Bulk Density values and Volumetric Water Content

| Field Site | Bulk density (g/cm ³) | Volumetric Water Content (%) |
|------------|-----------------------------------|------------------------------|
| A | 1.47 | 33 |
| B | 1.51 | 22 |
| C | 1.46 | 22 |
| D | 1.38 | 30 |
| E | 1.50 | 21 |
| F | 1.31 | 21 |
| G | 1.31 | 13 |
| H | 1.24 | 13 |
| I | 1.32 | 15 |
| J | 1.56 | 27 |
| K | 1.35 | 18 |
| L | 1.40 | 25 |

Bulk Density values and Volumetric Water Content, Pre-show and Post-show, showing change in value.

| | Pre-show | Post-show | | Pre-show | Post-show | | Pre-show | Post-show | |
|------|-----------------------------------|-----------------------------------|--------|----------|-----------|------------|----------------------|----------------------|-------------|
| Site | Bulk density (g/cm ³) | Bulk density (g/cm ³) | Change | VWC (%) | VWC (%) | Change (%) | Impedence depth (cm) | Impedence depth (cm) | Change (cm) |
| A | 1.30 | 1.47 | 0.16 | 44 | 33 | -11 | 22.5 | 13.1 | -9.4 |
| B | 1.57 | 1.51 | -0.06 | 18 | 22 | 4 | 7.5 | 9.0 | 1.6 |
| C | 1.38 | 1.46 | 0.08 | 32 | 22 | -10 | 18.0 | 9.2 | -8.8 |
| D | 1.46 | 1.38 | -0.09 | 33 | 30 | -2 | 17.3 | 12.3 | -5.0 |
| E | 1.44 | 1.50 | 0.05 | 22 | 21 | -2 | 10.9 | 7.4 | -3.5 |
| F | 1.40 | 1.31 | -0.09 | 28 | 21 | -7 | 8.1 | 6.4 | -1.7 |
| G | 1.52 | 1.31 | -0.21 | 15 | 13 | -2 | 6.3 | 4.2 | -2.1 |
| H | 1.38 | 1.24 | -0.14 | 11 | 13 | 1 | 5.8 | 5.8 | 0.0 |
| I | 1.43 | 1.32 | -0.11 | 16 | 15 | -1 | 8.3 | 6.0 | -2.3 |
| J | 1.59 | 1.56 | -0.02 | 30 | 27 | -4 | 14.8 | 9.5 | -5.3 |
| K | 1.48 | 1.35 | -0.13 | 18 | 18 | -1 | 6.3 | 4.8 | -1.5 |
| L | 1.58 | 1.40 | -0.18 | 26 | 25 | -1 | 11.8 | 8.4 | -3.4 |

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There can be no guarantees provided for on-going tree safety. It should be noted that not all of the potential structural concerns associated with trees can be eliminated and that there will always be a residual risk following any mitigation works. Also, not all tree defects are observable and extreme weather events are unpredictable. Since trees are complex, living organisms, it is difficult to quantify and precisely measure all variables when inspecting a standing tree for hazard.

Trees should be reassessed on a regular basis; the scheduled period of reassessment will be dependent on the characteristics of the tree, the landscape context and perceived targets, and resources available to maintain them.

Arboricultural assessment and report

Carlton Gardens -
Melbourne International
Flower and Garden Show
2022
City of Melbourne
- post-event report

11 May 2022
TreeLogic Ref. 011282

Prepared for IMG Management

Prepared by Andrew Traczynski
Consultant Arborist

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Objectives

Treelogic was engaged by IMG Management, on behalf of the Flower and Garden Show Limited (FGS), to provide arboricultural services, including this **post-event report** as required by Heritage Victoria. This post-event report is to be prepared and submitted after the completion of activities associated with the Melbourne International Flower and Garden Show 2022 (MIFGS 2022) at the Carlton Gardens.

The Post Event report was to determine if any lasting issues or damage to the Carlton Gardens had occurred. It also includes a record, both photographic and of any notations taken of any incidents that may have occurred. This report is to be submitted to **City of Melbourne** 30 days after the activities associated with the 2022 MIFGS have been completed.

The arboricultural consultancy was required to;

- Undertake a general site inspection of the Carlton Gardens of the high trafficked areas of activities associated with the MIFGS 2022 after the completion of activities.
- Undertake scheduled site inspections throughout the entirety of the MIFGS 2022 event including 'bump-in', the event and 'bump-out'.
- Additional notes and information on the site as required.
- Advice and guidance on any site amelioration if required.

This report was developed with guidance from the supplied documents specifically for the MIFGS 2022 event including; **tree protection plan (TPP)** for MIFGS 2022 by Treelogic, '2022 Outdoor Retail Exhibitor Manual.pdf', '2022 Landscape Designers Guide.pdf', HEXAPRO Fast, Flexible, Tough Temporary Flooring', (2015), 'HEXAPRO Fast, Flexible, Tough Temporary Flooring (2016), and 'SUPA TRAC No Fuss Event Hire have you covered in any event' (2013).

The TPP was created to provide advice and guidance for activities associated with the MIFGS 2022 event to prevent and minimise the potential for damage to the trees. The TPP allocated **tree protection zones (TPZ)** and indicative **structural root zones (SRZ)** for each individual tree as outlined in the *AS 4970-2009 Protection of trees on development sites* and was to be compliant with City of Melbourne (CoM) 'Tree Retention and Removal Policy (2012)'.

The MIFGS 2022 site is not a development where the objective was to change or modify the site and was temporary in nature. The MIFGS event consisted of temporary exhibits and fencing erected that was all removed at the completion of the event. A permit (P29375) for the use of the Royal Exhibition Building and Carlton Gardens had been issued with conditions to facilitate the MIFGS 2022 event.

Given the temporary nature of the works, FGS and/or their representatives, and the consulting arborist, implemented impact mitigation measures to eliminate or reduce the potential impact to trees as far as was reasonably practicable. These measures utilised were listed in the TPP.

It must be noted that over the life of the MIFGS event, no reports have found that trees have been adversely impacted or that the site had been overly compacted. The TPP help ensures

that this record is maintained by providing guidance in relation to the updated requirements for the protection of vegetation on the site.

Site summary and observations

The site of the MIFGS 2022 event was located within the southern Carlton Gardens and Royal Exhibition Centre in Carlton, between Victoria Street, Rathdowne Street and Nicholson Street. The subject site is part of an expansive historical gardens and public open space close the Melbourne CBD.

The site is within the City of Melbourne (CoM) and is subject to Heritage Overlay Schedule (HO89) - the Heritage Victorian Register (VHR) Number 1501, and the CoM Tree Retention and Removal Policy (2012).

The initial site inspection was carried out on the 22nd of January 2022. The trees were inspected from the ground, were not climbed, and no samples of the tree or site soil were taken. Regular inspections were carried out as described in the TPP during all three phases of the event; bump in, show days and bump out.

All scheduled site inspections were carried out by Kirsten Raynor and Andrew Traczynski, both of Treelogic.

As part of the TPP, a total of 332 trees on the subject site were measured (measurements taken in December 2020 by Treelogic and updated in 2022) and located on the supplied survey plans. Please refer to Appendix 1 for what mitigation measures were to be taken to reduce the impact to those trees.

In the TPP each tree had been allocated TPZ's and indicative SRZ's as described in AS 4970 and was based on their individual attributes. The MIFGS 2018 event saw the introduction of specific TPZ and SRZ relating to the measurement of each tree as described by AS4970 which was carried into the 2022 event.

Some MIFGS activities extended further north and into areas that are paved. Compaction and damage to trees located near these activities were considered to have been unlikely and so were not covered in this report.

The likely high traffic areas were again photographed from set locations prior to the event activities commencing and after the event bump out as per the Pre-Event report for comparison. The bump out pictures are included in the Photographs section of this report.

The Carlton Gardens in general appeared to be neat and tidy with trees, garden beds and lawns being in a reasonable and presentable state.

Lawn / turf areas

During the 'bump in' phase, it was noted that several vehicles did venture onto the lawn areas. In all cases, one side of the vehicle was parked on the grass. The owners of these vehicles were notified to move them onto the pathways which was done so quickly. Continual

communication and monitoring is recommended to help avoid these occurrences. It must be noted that most vehicles stayed completely on the pathways as required.

At the time of the final inspection, only areas where activities related to MIFGS, and the ground protection have shown minor impacts to turf. Some of these areas have been identified to be replaced as it has in past events.

While the ground protection performed the function of minimising ground compaction, some areas lawn appears to be impacted.

A recommendation going forward is to utilise more extensively the tougher ground protection that had been installed in some areas. Where the tougher ground protection was installed, the areas appeared to be the least impacted even with vehicle and heavy pedestrian loads.

Although it is of my opinion that given enough time, sunlight and moisture, the impacted lawns for the most part would return to a reasonably good condition without intervention. However, some areas of lawn would not receive enough sunlight or would soon become dormant and so the damage would likely remain into the Spring season.

Council have identified areas of lawn that either require re-turfing, or direct seeding with some minor decompaction work. These have been marked and noted by Council as part of the joint walk-around at the re-opening of the park and was conducted with IMG, Council, Serco, and those supplying the turf. Hopefully the more expansive use of the tougher ground protection would reduce amount of turf being replaced.

Trees

In general, the tree population appeared relatively healthy. Some trees did appear to have deadwood, hollows and cavities.

The tree age was varied, from recently planted through to mature specimens. Recently planted trees did have stakes and guards installed around them, and many maturing trees had possum guards installed around their main parts.

As indicated under the lawn section, that a more balanced approach to the overall ground protection could be considered for future MIFGS events that would both provide adequate protection from soil compaction while minimising the footprint and the amount of turf required to be replaced and reseeded. As lawn is replaceable in the short term, significant tree roots are not. Any ground protection measures should still provide enough protection to prevent soil compaction.

Garden beds

The garden bed displays generally appear to be in good condition and appearance. They did not appear to be impacted by the MIFGS event.

Soil

A separate soil report is to be completed and submitted to Council as part of the reporting for the MIFGS event. A summary of 2022 results indicate that over the sampling period there was

no increase in bulk density. Bulk density values were within the acceptable range for the soil texture class present at the site.

The depth of impeding soil strength varied across the site was closely correlated to the moisture content of the soil at each of the test sites. This correlation was observed in both pre-show and post-show sampling. This indicates the soil strength findings are a function of soil moisture content rather than intrinsic compaction. No increase in soil strength due to compactive forces is indicated by the data.

Tree protection

A requirement of the CoM is that all exhibitors based in the Carlton Gardens observe & adhere to the TPP report and material supplied by IMG Management for tree protection. The MIFGS 2018 event saw the introduction of specific TPZ and SRZ relating to the measurement of each tree as described by AS4970, which continued into 2022 event.

Please refer to the TPP document for more details regarding tree protection.

Avoiding tree impacts is the best approach as it is almost impossible to rectify damage to trees that has occurred during construction activities. Tree protection cannot be achieved without a proactive approach. Similarly, a basic understanding of how trees grow and develop is needed. The planning and design stages of any construction project will determine the success of tree preservation.

The hierarchy of principles for tree protection relating to the event are:

Avoid damage to trees

or

Minimise potential damage to trees

Tree protection requirements have been modified from previous years of MIFGS with more allowances given for pegging inside the TPZ away from the large and heavy concrete blocks for the weighing down of temporary structures. Pegging is not allowed in the SRZ.

Mitigation option measures include; pegging, foot traffic ground protection, heavy duty ground protection, Plates to disperse the load of structures with underlay materials such as geo membrane, hessian, mulch, trakmats, rumble boards or steel plates, or other / specialised that is tailored to an individual circumstance with guidance provided by site arborist.

Tree protection has been put in place to minimise any impacts associated activities of the MIFGS 2022 event has on the roots of the trees within the gardens. Extreme care is required in & around the tree trunks to avoid damage.

Adherence to the TPZ rules will ensure that damage to trees & their surrounding roots systems is avoided or at least minimised. This will be strictly enforced by IMG Event Management and CoM.

Tree protection plan (TPP)

The **tree protection plan (TPP)** (Treelogic 2022) report provided planners and designers with information on the measures required to protect trees. The TPP identified and provided guidance for tree protection. These measures were monitored throughout the MIFGS 2022 event by the site arborist and IMG. Please refer to the TPP document for more details regarding tree protection.

A requirement of the CoM was that all exhibitors based in the Carlton Gardens observe & adhere to the TPP report and material supplied by IMG Management for tree protection.

The Australian Standard for Protection of trees on development sites

The Australian Standard for Protection of trees on development sites (*AS4970 – 2020*) has been used as the method for calculating a TPZ and the indicative SRZ. The TPZ defines an area in which activities are either avoided, or at least controlled, to successfully sustain a tree. The TPZ and SRZ measurements are provided in the tree assessment data in Appendix 1. It must be noted that the activities associated with the MIFGS events are not development by nature, they are temporary. No root or above ground part of the tree is to be pruned, torn, ripped, removed or destroyed as is likely to occur on development sites.

All ground protection installed and utilised was appropriate to the potential loads expected so that soil compaction and therefore damage to tree roots was avoided.

The area of the SRZ was to be considered a restricted area where certain activities are prohibited or done so with the guidance of the site arborist. This includes but not limited to;

- the use of vehicles,
- the storage of equipment, vehicles, toilets, materials, chemicals, seating,
- the cleaning of equipment and materials

A "tree protection zone" induction was provided by management to personnel at the exhibitor briefing.

The indicative SRZ is the area around trees that all activities were excluded from except where guidance from the site arborist had occurred. This included prohibiting the use of any ground penetrating or compacting elements required for the erecting of any marquee, tent, display or display garden. Any installation in the SRZ of a tree was of a 'No Dig' methodology ensuring that the tree roots were not damaged.

The SRZ also prohibited the use of any vehicles within this space except on existing hard paved surfaces and paths. If vehicles were required to go off the hard-paved surfaces or paths, then appropriate protective protection (i.e. trakmats) were used.

Temporary structures: marquees, tents and displays

The installation of temporary structures, such as marquee's tents and displays, utilised methods and materials sympathetic to tree roots when inside a TPZ, however, under certain circumstances, a site-specific solution was made under the guidance of the site arborist. The

area of the SRZ was considered a restricted area where certain activities were prohibited or with guidance from the site arborist.

It was recommended not to use concrete blocks within the TPZ. The preferred method of safe installation for the marquees inside the TPZ but outside the SRZ was via pegging. The recommended option was to utilise pegging for temporary structures provided that all pegging is outside the SRZ and is located to avoid conflict with tree roots. Pegging affects a much smaller area than does the concrete weights and under AS4970 would be considered a minor encroachment.

In cases where show gardens or displays were displaying small pots or items that would not be considered heavy or moderate loads, then extra ground protection was not necessary.

The site arborist provided guidance where the ground protection requirements can be assessed on an individual basis.

For Show Gardens or display structures with greater than moderate weight loadings, ground protection measures were required that accommodated and disperse the loads. Options included the 'No Fuss' Hexapro or Supa Trac products or similar with a hessian or material underlay. Other options were to use an underlay material (i.e. hessian or geo fabric) with a layer of mulch / thick layer of straw, and depending on the loads, trakmats or wooden pallets.

Temporary structures: containers and toilet blocks

Soil compaction was a potential for larger container-based structures, such as the toilets and individual site storage. Some of these containers were required to be craned or lifted into place using a large vehicle.

Logistical issues included the size of these larger and heavier structures and the site constraints for the traversing of the vehicles. This had to be balanced with the protection of trees and lawns on the site with the use of trakmats where a vehicle was required to traverse off a path and onto grass. However, most of the toilet blocks were located on hard paved areas.

Fencing

The installation of the outer perimeter fencing is part of the permit conditions for the site usage. The perimeter fencing posts were installed into the ground with resulting with incursions into the TPZ and SRZ of some trees. In these cases, the project arborist identified the early phases of the installation and alerted IMG management. A more sympathetic method was then utilised that was more inline with the TPP (please refer to Photo 3 and 4). It is recommended that this method be used for future MIFGS events.

Tree branches

No trees were noted to have been interfered with in any way including nailing, pruning, cutting or tying back of branches.

Temporary bollards were used to ensure large vehicles did not enter restricted areas under Trees.

On final inspection some collision damage was noted on a major branch of Tree 1440714. It appears that while this damage was relatively recent, based on the colouration and cleanliness of the wound, it looks like it occurred prior to the MIFGS activities.

Works required to trees

All works required to trees were carried out by the CoM preferred contractor or a representative of CoM. Works included temporary removal of possum guards, removal a small number of low hanging branches and deadwood near display gardens. A branch was inspected by CoM representative that was resting on a marquee, with the CoM representative verbally confirming that they would be dealing with the branch.

Other tree protection guidelines

Machinery operated inside the TPZ was of a small skid drive machine (i.e. Dingo or similar) and operated only on trakmats when inside the TPZ.

There was evidence of tire tracks, however, from the movement of a forklift or smaller crane type vehicle on soil within the TPZ and SRZ of trees upon final inspection (please refer to Photo 9). While the trees were not likely adversely impacted by these movements, it was against the recommendations of the TPP and the permit conditions for site usage. It is recommended to place more emphasis on all personnel who will be performing works on the site the importance of tree protection requirements and that the project arborist is to be consulted when a situation arises that requires movement off the hard paved areas.

There were cases where the temporary storage of items was observed to be placed well within the TPZ and SRZ of a tree. It was of the opinion of the project arborist that the infractions were minor. These infractions were dealt with quickly by the IMG management. It is recommended that tree protection requirements be reiterated to all personnel working on the site and made part of the work culture on the site.

It must be noted, that in the majority of sites, tree protection was respected regarding the storage of materials, plant and equipment, spoil or debris within or near the TPZ of a tree with appropriate ground protection utilised.

No washing of equipment or release of chemicals was noted to have occurred within the Carlton Gardens.

Inspections

Daily scheduled site inspections occurred from event set up bump-in, show event and bump-out. These scheduled site inspections occurred on;

- 'Bump in' Monday 8th March to Tuesday 29th March
- Show days – Wednesday 30th March to Sunday 3rd April
- 'Bump out' Sunday 4th April to Thursday 7th April

Temporary fence was dismantled, and public have access to the gardens from 12.01am Thursday 7th April.

These daily inspections were to;

Ensure that tree protection guidelines were adhered to during all stages of associated activities for the 2022 MIFGS.

- Maintain a photographic record of the site.
- Any required notes taken.
- Provide advice and guidance where required.

Notification of IMG Management where issues were found to have occurred was prompt.

On finding an incident it was recorded and reported to IMG by the site arborist. The incident was documented, photographed, described, and mitigation measures recommended.

Incident severity grading was based upon existing CoM Non-Compliance Issue reporting. Severity is to be listed as;

| C Grade | Minor Breach | B Grade | Medium Breach | A Grade | Major Breach |
|---------------------------------------|--------------|--|---------------|---|--------------|
| Requiring minor to no re-instatement | | Requiring only medium re-instatement | | Requiring major re-instatement | |
| Immediate action will alleviate issue | | Immediate action to rectify will only partly alleviate issue / repair damage | | Immediate action cannot alleviate issue / repair damage | |

If it was found that the severity of the incident was of **medium (B)** and **major (A)** breaches, then CoM would have needed to be notified. The site arborist was to be notified of these events also and would have performed an additional site visit to inspect and notarise the incident and provide guidance. It must be noted that no medium (B) and major (A) breaches had occurred.

All photos of incidents can be made available upon request.

Recommendations

1. IMG to look into utilising more of the heavy-duty ground protection as it appeared very effective in reducing impacts to turf.
2. Movement and operation of ALL forklifts, cranes or other vehicles must occur on hard paved surfaces or on appropriate ground protection as per the TPP or with guidance from the project arborist.
3. Further develop the TPP to accommodate any ideas or methodologies that would be acceptable to both Council and Heritage Victoria in the ongoing MIFGS event at Carlton Gardens.
4. Continue to communicate the importance of tree protection and associated methodologies to all staff and personnel who will perform works on the site during all stages of the event. This information is facilitated by tree protection requirement summary documents, designer and management meetings, inductions, 'toolbox talks', and continual on-site supervision by IMG management.

5. Pre marking of TPZ and SRZ on the ground to aid in placement and inform tree protection measures for all display garden areas.
6. Ensure that all light cabling that is approved to be installed or placed into the canopy of trees are appropriately protected.
7. Ensure that the permitter fencing complies with the TPP. Where this is not possible, an alternative is to be sought with the guidance of the project arborist.

I am available to answer any questions arising from this report.

No part of this report is to be reproduced unless in full.



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Infractions

The following table is the list of all incidents observed and noted. All infractions were of the lower grade and did not require the notifying CoM.

| Non Compl. No. | Date | Nature of Problem | Location / description | Immediate action | Infraction class | For future action | Photo Y/N |
|----------------|------------|---|---|---|------------------|---|-----------|
| 1 | 17/03/2022 | fence posts for perimeter security fencing in SRZ of trees | various points along perimeter fence | spoke to site manager in person, seek alternative fencing solutions | C | for those fence posts in SRZs remove, use concrete feet and stabilising bars with weighted support | Y |
| 2 | 21/03/2022 | rolls of trak mat stored in SRZ of a number of trees | tree # 1288416, 1037265, 1037235, 1037103, 1037175, | spoke to contractors about placing track mats outside SRZ | C | Brad King communicating to all contractors and designers that no materials or equipment are allowed in SRZ. Marking out SRZ with visible perimeters | Y |
| 3 | 21/03/2022 | rocks stored in SRZ | tree # 1036958 | spoke to Brad King | C | Brad King communicating to all contractors and designers that no materials or equipment are allowed in SRZ. Marking out SRZ with visible perimeters | Y |
| 4 | 21/03/2022 | equipment placed in SRZ | tree #1037177 | spoke to contractors on site, asked to move | C | Brad King communicating to all contractors and designers that no materials or equipment are allowed in SRZ. Marking out SRZ with visible perimeters | Y |
| 5 | 21/03/2022 | shipping container corner in SRZ | tree #1037130 | spoke to Brad King about moving container outside of SRZ | C | load dispersing layers to be inserted under subject corner. Trak mat and sleepers to disperse weight over a wider area. Container is empty while in position. | Y |
| 6 | 22/03/2022 | Material leaning on tree | Warners/Robert Boyle site | spoke to contractors on site, asked to move | C | IMG managed site induction for all workers on site. | N |
| 7 | 22/03/2022 | Truck wheels on TPZ at edge of path | southern end | spoke to driver, asked to move | C | IMG managed site induction for all workers on site. | N |
| 8 | 22/03/2022 | Materials and rocks in SRZ | Aus Ecosystems site | spoke to contractor, asked to move | C | IMG managed site induction for all workers on site. | N |
| 9 | 22/03/2022 | materials in SRZ, tools leaning against tree | Closed Loop site | spoke to contractor, asked to move | C | IMG managed site induction for all workers on site. | N |
| 10 | 24/03/2022 | equipment in SRZ, tools leaning on tree | Lawn Solutions | spoke to contractor, asked to move | C | IMG managed site induction for all workers on site. | N |
| 11 | 24/03/2022 | containerised trees in SRZ | NGIV | spoke to site personnel, asked to move | C | IMG managed site induction for all workers on site. | N |
| 12 | 24/03/2022 | stone cutting in SRZ | Mark Browning | asked contractor to stop work and move outside of SRZ | C | IMG managed site induction for all workers on site. | N |
| 13 | 25/03/2022 | cardboard boxes stacked in SRZ | tree #157091 | spoke to site manager, boxes to be removed | C | IMG managed site induction for all workers on site. | Y |
| 14 | 25/03/2022 | crates in SRZ | B51A, tree #1036999 | spoke to site manager about moving | C | IMG managed site induction for all workers on site. | Y |
| 15 | 25/03/2022 | rocks stored in SRZ | tree # 1036998 | spoke to contractor on site, asked to move | C | IMG managed site induction for all workers on site. | Y |
| 16 | 25/03/2022 | trak mat roll against trunk of tree | tree #1037181 | spoke to site manager, asked to organise moving | C | IMG managed site induction for all workers on site. | N |
| 17 | 28/03/2022 | materials/equipment under/against tree | tree # 1036894 | spoke to site manager | C | IMG managed site induction for all workers on site. | Y |
| 18 | 28/03/2022 | site signage pegs inserted into SRZ | tree #1036908 | spoke to site manager, discussed alternatives | C | Signs in SRZs to be fitted with flat, crossbar feet, no ground penetration | Y |
| 19 | 28/03/2022 | seats in SRZ of tree, no ground protection | Osmocote stand | spoke to contractors, asked them to install ground protection or move seats onto trak mat | C | IMG managed site induction for all workers on site. | Y |
| 20 | 29/03/2022 | star pickets supporting lattice and Colourbond fencing panels. Ground penetration by star pickets in TPZ, approx. 250-400 mm deep | Assorted sites | spoke to site manager, discussed alternatives | C | Recorded for future reference. Peg type penetrations to be used in the future. | Y |

| Non Compl. No. | Date | Nature of Problem | Location / description | Immediate action | Infraction class | For future action | Photo Y/N |
|----------------|------------|---|--------------------------------|--|------------------|---|-----------|
| 21 | 30/03/2022 | wooden pegs for signs penetrating ground in SRZ | Beyond Blue | spoke to stallholders, moved sign outside of SRZ | C | IMG managed site induction for all workers on site. | Y |
| 22 | 31/03/2022 | rope tied around tree - light weight | Margaret River Trees | spoke to site manager, rope to be moved from tree | C | Recorded for future reference | Y |
| 23 | 31/03/2022 | materials/equipment in SRZ | Honda and Squeaky clean | spoke to stallholders, asked to move materials etc. | C | IMG managed site induction for all workers on site. | N |
| 24 | 3/04/2022 | clippings and shredded materials in SRZ | Honda | asked stallholders to move materials | C | IMG managed site induction for all workers on site. | N |
| 25 | 3/04/2022 | sign tied to tree | Streak free Cleaning | asked stallholder to remove tie | C | IMG managed site induction for all workers on site. | Y |
| 26 | 4/04/2022 | materials in SRZ | tree #1533868 | spoke to site manager | C | IMG managed site induction for all workers on site. | N |
| 27 | 4/04/2022 | materials in SRZ | Husqvarna site, tree # 1036960 | spoke to contractors on site, asked to move | C | IMG managed site induction for all workers on site. | N |
| 28 | 6/04/2022 | materials in SRZ | tree # 1037165 | spoke to site manager, asked to organise moving | C | IMG managed site induction for all workers on site. | Y |
| 29 | 6/04/2022 | superficial (bark) damage to surface root from vehicle wheels | tree # 1037013 | spoke to contractors on site, emphasised careful placement of vehicles - remain on asphalt | C | IMG managed site induction for all workers on site. | Y |
| 30 | 6/04/2022 | turf damage in TPZ (vehicle traversing) | tree # 1036990 | spoke to site manager about communicating restrictions | C | IMG managed site induction for all workers on site. | Y |

Photographs

The following photos are of the most major of the several infractions noted.



Photo 1: A branch that was inspected by CoM representative for removal.



Photo 2: A view of the proximity of the external fencing posts to the trees (incident 1).



Photo 3: A view of the amended fence line treatment more in line with both the project arborist guidance and the TPP.



Photo 4: A view of a site where minor items were inappropriately stored near and against a tree (incident 4).



Photo 6: A shipping container placed inappropriately (incident 5).



Photo 7: Possible collision damage to a major branch on Tree 1440714. It is unknown if this damage was made prior to MIFGS. The wound does not appear to be fresh based on the darker colouration but it would have been recent.



Photo 8: Vehicle tracks were noted, likely from a forklift, that traversed the ground near Trees 1036994.

Appendix:

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- The Report and any values expressed therein represent the opinion of Treelogic's consultant and Treelogic's fee is in no way conditional upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
- Sketches, diagrams, graphs and photographs used in the Report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural drawings, reports or surveys.
- Unless expressed otherwise: i) Information contained in the Report will cover those items that were outlined in the project brief or that were examined during the assessment and reflect the condition of those items at the time of inspection; and ii) The inspection is limited to visual examination of accessible components without dissection, excavation or probing unless otherwise stipulated.
- There is no warranty or guarantee, expressed or implied by Treelogic, that the problems or deficiencies of the plants or site in question may not arise in the future.
- All instructions (verbal or written) that define the scope of the Report have been included in the Report and all documents and other materials that the Treelogic consultant has been instructed to consider or to take into account in preparing the Report have been included or listed within the Report.
- The Report is strictly limited to the matters stated in it and does not apply by implication to any other matters.
- To the writer's knowledge all facts, matter and all assumptions upon which the Report proceeds have been stated within the body of the report and all opinion contained within the report will be fully researched and referenced and any such opinion not duly researched is based upon the writer's experience and observation.