

11 August 2025

234338

Solutions Consulting
Level 14, 130 Pitt Street
Sydney NSW 2000

Attention: Gary Singh

WSU Indigenous Centre of Excellence

TTW-CIV-CAN-002 – Turf Cell Installation and Maintenance Strategy & Responses to NSW Heritage

Dear Gary,

This memo outlines the details and standard maintenance requirements for the proposed turf cell system to be used in the new P1 carparks as part of the WSU Indigenous Centre of Excellence project. TTW Civil responses to queries from NSW Heritage are also summarised in the memo.

The turf cell systems are proposed for use in parking bays only. Areas subject to frequent vehicle movements, including driveways and traffic aisles, are more susceptible to wear that can damage the turf and lead to loss of grass cover. Accordingly, conventional asphalt pavement is proposed for driveways and traffic aisles within the car parks. This approach is supported by correspondence with turf cell suppliers, as provided in the attachments.

The turf cell installation detail is shown in Figure 1 below.

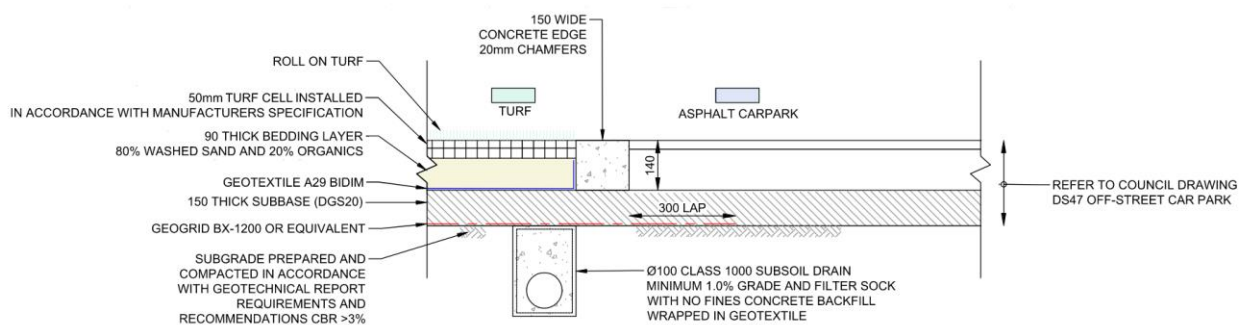


Figure 1. Turf Cell Installation Details

To ensure long-term health and performance of the turf cells, the following maintenance measures are recommended:

Table 1. Typical Turf Cell Maintenance Schedule

Maintenance	Frequency	Notes
Mowing	As required (typically fortnightly during growing seasons)	Avoid scalping. Ensure mower blades do not damage turf cell surface
Fertiliser Application	2–3 times per year (spring, summer, autumn)	Apply balanced fertiliser suitable for grass species used

Irrigation	As required, especially during establishment and dry periods	Focus on deep watering to encourage root penetration through the cells
Topdressing (sand/topsoil mix)	Annually, or as required following heavy use	Use free-draining sand/topsoil mix as per detail
Aeration (optional, based on usage)	Every 1–2 years, or as required	Only required if signs of compaction or poor infiltration are observed
Visual Inspection of Turf Surface	Biannually, and after heavy usage	Look for thinning turf, rutting, or soil settlement
Drainage Performance Check	Annually, or after significant rainfall events	Check for ponding or silt build-up, Scarify or topdress as required
Repairs to Turf or Cell Structure	As required, following inspection	Replace or realign turf cells. Refill with sand/soil mix and re-turf as necessary

The recommended installation detail and maintenance schedule are intended to ensure the long-term health, performance, structural stability, and appearance of the reinforced turf areas.

TTW Civil responses to NSW Heritage queries as of 11 August 2025 are summarised in the table below.

Table 2. Responses to NSW Heritage Queries

Queries	TTW Response
Heritage NSW continues to advise that the east and west parking areas, which will replace areas of soft landscaping, will have an adverse impact on the landscape character of the SHR item. We note the proposed use of turf cell to reduce visual impacts, but this will not reduce the visual impact of the cars themselves. We recommend that the east and west carparks be reduced in area and number of parking spaces to reduce their visual dominance. We also recommend that the carparks be laid out more efficiently to minimise the amount of bitumen driveway required to service the parking spaces. Obviously, the optimal heritage outcome would be that no temporary parking be provided within the SHR curtilage but it is noted that the loss of the existing 284 spaces is significant in number. Please provide detailed justification for the proposed number of carparking spaces. Limiting the temporary parking to 150-200 parking spaces and the resulting redesign of the east and west carparks would reduce the impacts to the heritage significance of the SHR Item.	The most efficient layout for any car park is to provide double-sided aisles with 90-degree parking spaces. This is implemented in almost all areas of the proposal except for the northern aisle of the east car park and the southern section of the west car park. In both cases, only a single-sided aisle has been provided because to expand the footprint any further would require removal of existing trees. The proposed layout achieves a balance between parking efficiency and impacts to planting and landscaping. The planning application for the ICoE development already relies on an improvement in travel behaviour and a shift away from car travel. Both TfNSW and Council have specifically provided comments through the planning process outlining the importance of providing the full capacity of replacement parking, to alleviate parking impacts on the surrounding residents.
Is the proposed detention tank permanent? Is there flexibility in its location? Why is it required – is it needed as a result of the temporary parking?	The proposed detention tank is required to attenuate post-development stormwater flows. It is located inground at the low point of the eastern car park, near the downstream end, and is positioned within the car park to limit the footprint of works.
Are there any new pedestrian paths proposed in the vicinity of the east and west carparks? Do the civil drawings represent the scope of works for the carparks?	No new pedestrian paths have been proposed. AS2890.1 does not require internal pedestrian paths to be provided. The civil drawings represent the civil scope of works for the car parks.

Yours faithfully,
TTW (VIC) PTY LTD

A handwritten signature in black ink, appearing to read 'R Penwell', is written over a light gray rectangular background.

RICHARD PENWELL
Associate (Civil)

June Leung

From: Riddha Ali <riddha@atlantiscorporation.com.au>
Sent: Monday, 4 August 2025 1:56 PM
To: June Leung
Cc: Richard Penwell; Greg Manoukian
Subject: RE: Atlantis Turf Cell Pavement Profile Queries

You don't often get email from riddha@atlantiscorporation.com.au. [Learn why this is important](#)

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Hi June,

It is true that higher frequency driving areas will have more wear on the turf, removing blades of grass in those areas. Nevertheless the roots will remain intact and protected by the Turf Cell. The lower frequency areas such as parking bays will have less damage to the blades of grass.

Your understanding is correct and you can choose to limit it to the bays only.

Kind regards,

Riddha Ali

Technical Manager BE (Civil)



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June Leung

From: Tim Sharpe <tim.sharpe@stratagreen.com.au>
Sent: Monday, 4 August 2025 12:54 PM
To: June Leung
Cc: Richard Penwell
Subject: RE: Turf Cell installation

[External Email]: Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello June,

The turf cells can be used for driveways, however you are correct in the fact that if there is very frequent traffic the grass can still be worn away down to the cells.

The cells will stop deeper rutting and hollows but the top of the cells can be exposed.

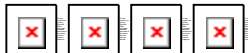
Kind regards,

Tim Sharpe

Sales Director

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