City of Greater Geelong, Statutory Planning - Date Received 9/09/2026

Project # 10E58F29
V2: 42 - 44 MICHIGAN AVE, CARIO
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44 Michigan Ave, Corio VIC 3214, Australia
08 September 2026 3:43 p.m.

BLUE FACTOR

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42 - 44 MICHIGAN AVE, CARIO

Nitrogen reduction target has been met, and a small low-risk project is deemed to comply. Higher risk projects need to meet all targets.

171%
SCORE

Project details

Name	V2: 42 - 44 MICHIGAN AVE, CARIO
Project ID	10E58F29
Street address	44 Michigan Ave, Corio VIC 3214, Australia
Municipality	Greater Geelong
Site area	1630.5 m^2
Planning Number	

Results

Item	Result	Target
Total suspended solids (%)	80%	>80%
Total phosphorus (%)	75%	>45%
Total nitrogen (%)	76%	>45%
Total gross pollutants (%)	84%	>70%
Mean annual runoff volume harvested or evapotranspired (%)	69%	>32%
Mean annual runoff volume infiltrated or filtered (%)	0%	>3%

For small low-risk sites, Total Nitrogen has been used as a proxy for other pollutants indicating compliance has been adequately met for many years. This has meant that if the Blue Factor score meets 100% based on Nitrogen, the Responsible Authority has the discretion to accept stormwater management design responses that do not meet all the individual pollutant load reduction targets on small low-risk sites.

Larger, high-risk projects, with roads, car parks or activities that may yield higher than typical pollutant loads, must meet all water quality targets fully. All projects should manage flow volume reductions through harvesting and evapotranspiration as well as infiltration to a level that is reasonably practicable.

Additional considerations

Flow and other pollutant load reductions should also be considered. The EPA Urban stormwater management guidelines (EPA - Publication 1739.1) are referenced in the VPPs as a policy document and support compliance with the General Environmental Duty.

You can use the guidelines to help minimise risks from urban stormwater so far as reasonably practicable (epa.vic.gov.au/about-epa/laws ew-laws/what-is-reasonablypracticable). Doing what is reasonably practicable means putting in proportionate controls to minimise the risk of harm to human health and the environment relative to the values being protected and risks presented by the site.

A completed small-scale low risk site with no public roads or external user parking areas will usually generate very little sediment, referred to as total suspended solids (TSS). It is common that the 80% TSS target will not easily be achieved for this type of site.

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Other sites may generate significant total suspended solids (TSS) as well as litter, referred to as gross pollutants and should meet all targets.

The generation of sediment and litter during the construction phase is a significant problem and must be addressed effectively for all developments.

You should demonstrate what appropriate controls will be used to ensure the generation of litter and sediment is prevented and controlled during construction to minimise risk of harm.

Blue Factor is designed to support a range of developments of less than 10,000 square metres including small scale residential, apartment developments, small scale commercial and small public use developments which must meet planning requirements including stormwater management quality objectives in the EPA Urban stormwater management guidelines (EPA - Publication 1739.1) It is recommended that MUSIC is used for larger and more complex projects to demonstrate compliance.

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Configuration 1



ROOF 1A Roof, 60m2



Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 2



Building 1 Residential Townhouse, 3 bedroom(s)

Configuration 2



ROOF 2A Roof, 63m2



Rainwater Tank 2
Rainwater tank retention volume in kilolitres: 2



Building 2 Residential Townhouse, 4 bedroom(s)

Configuration 3



ROOF 3A Roof, 69m2



Rainwater Tank 3
Rainwater tank retention volume in kilolitres: 2



Building 3 Residential Townhouse, 3 bedroom(s)

Configuration 4

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ROOF 4A Roof, 71m2



Rainwater Tank 4
Rainwater tank retention volume in kilolitres: 2



Building 4 Residential Townhouse, 3 bedroom(s)

Configuration 5



ROOF 5A Roof, 69m2



Rainwater Tank 5
Rainwater tank retention volume in kilolitres: 2



Building 5 Residential Townhouse, 3 bedroom(s)

Configuration 6



ROOF 6A Roof, 70m2



Rainwater Tank 6
Rainwater tank retention volume in kilolitres: 2



Building 6 Residential Townhouse, 3 bedroom(s)

Configuration 7



ROOF 7A Roof, 69m2



Rainwater Tank 7
Rainwater tank retention volume in kilolitres: 2



Building 7 Residential Townhouse, 3 bedroom(s)

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Configuration 8



ROOF 8A Roof, 78m2



Rainwater Tank 8
Rainwater tank retention volume in kilolitres: 2



Building 8 Residential Townhouse, 3 bedroom(s)

Configuration 9



ROOF 9A Roof, 69m2



Rainwater Tank 9
Rainwater tank retention volume in kilolitres: 2



Building 9 Residential Townhouse, 3 bedroom(s)

Configuration 10



ROOF 10A Roof, 65m2



Rainwater Tank 10
Rainwater tank retention volume in kilolitres: 2



Building 10 Residential Townhouse, 3 bedroom(s)

Configuration 11

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ROOF 11A Roof, 80m2



Rainwater Tank 11
Rainwater tank retention volume in kilolitres: 2



Building 11 Residential Townhouse, 3 bedroom(s)

Configuration 12



ROOF 12A Roof, 76m2



Rainwater Tank 12
Rainwater tank retention volume in kilolitres: 2



Building 12 Residential Townhouse, 4 bedroom(s)

Configuration 14



ROOF 1B Roof, 21m2



Raingarden 1 Area: 1.1 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 15



ROOF 2B Roof, 22m2



Raingarden 2 Area: 1.1 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 16



ROOF 3B Roof, 10m2



Raingarden 3 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

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Configuration 17



ROOF 4B Roof, 10m2



Raingarden 4 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 18



ROOF 5B Roof, 10m2



Raingarden 5 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 19



ROOF 6B Roof, 28m2



Raingarden 6 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 20

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ROOF 7B Roof, 10m2



Raingarden 7 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 21



ROOF 8B Roof, 26m2



Raingarden 8 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 22



ROOF 9B Roof, 10m2



Raingarden 9 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

Configuration 23



ROOF 10B Roof, 21m2



Raingarden 10 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

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Catchments



ROOF 1A Roof, 60m2



ROOF 2A Roof, 63m2



ROOF 3A Roof, 69m2



ROOF 4A Roof, 71m2



ROOF 5A Roof, 69m2



ROOF 6A Roof, 70m2



ROOF 7A Roof, 69m2



ROOF 8A Roof, 78m2



ROOF 9A Roof, 69m2



ROOF 10A Roof, 65m2



ROOF 11A Roof, 80m2



ROOF 12A Roof, 76m2



ROOF 1B Roof, 21m2

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ROOF 2B Roof, 22m2



ROOF 3B Roof, 10m2



ROOF 4B Roof, 10m2



ROOF 5B Roof, 10m2



ROOF 6B Roof, 28m2



ROOF 7B Roof, 10m2



ROOF 8B Roof, 26m2



ROOF 9B Roof, 10m2



ROOF 10B Roof, 21m2



ROOF 11C Roof, 1m2

Untreated



PAVED DRIVEWAY Paved, 174m2

Untreated



GARDEN AREA Pervious (garden and lawn), 367m2



PERMEABLE DRIVEWAY Pervious (garden and lawn), 82m2

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Treatments



Rainwater Tank 1
Rainwater tank retention volume in kilolitres: 2

210%



Rainwater Tank 2
Rainwater tank retention volume in kilolitres: 2

210%



Rainwater Tank 3
Rainwater tank retention volume in kilolitres: 2

205%



Rainwater Tank 4
Rainwater tank retention volume in kilolitres: 2

203%



Rainwater Tank 5
Rainwater tank retention volume in kilolitres: 2

205%



Rainwater Tank 6
Rainwater tank retention volume in kilolitres: 2

204%



Rainwater Tank 7
Rainwater tank retention volume in kilolitres: 2

205%



Rainwater Tank 8
Rainwater tank retention volume in kilolitres: 2

198%



Rainwater Tank 9
Rainwater tank retention volume in kilolitres: 2

205%



Rainwater Tank 10
Rainwater tank retention volume in kilolitres: 2

207%

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Rainwater Tank 11
Rainwater tank retention volume in kilolitres: 2

197%



Rainwater Tank 12
Rainwater tank retention volume in kilolitres: 2

204%



Raingarden 1 Area: 1.1 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

181%



Raingarden 2 Area: 1.1 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

180%



Raingarden 3 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

187%



Raingarden 4 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

187%



Raingarden 5 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

187%



Raingarden 6 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

180%



Raingarden 7 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

187%



Raingarden 8 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

180%



Raingarden 9 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

187%



Raingarden 10 Area: 0.9 m^2,
Extended detention depth: 0.3 m,
Submerged zone depth: 0.3 m, Site soil type: Lined

180%

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Building 1 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 2 Residential Townhouse, 4 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	3
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 3 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 4 Residential Townhouse, 3 bedroom(s)

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Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 5 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water

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Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 6 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 7 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0

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Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 8 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 9 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2

• **Recycled Water**	0 m^2
Garden water use efficiency	



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Building 10 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	



Building 11 Residential Townhouse, 3 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	2
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	

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Building 12 Residential Townhouse, 4 bedroom(s)

Water sources	I want to use the average efficiency for a typical new dwelling or building
Basin taps - Primary water source	Mains water
Showers - Primary water source	Mains water
Clothes Washer - Primary water source	Rainwater
Toilets connected to mains water	0
Toilets connected to rainwater	3
Toilets connected to recycled water	0
Garden water use	Garden water demands are in use
Garden primary water source	Rainwater
• **Mains**	0 m^2
• **Rainwater Tank**	0 m^2
• **Recycled Water**	0 m^2
Garden water use efficiency	