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CITY OF YARRA

# Embedding Green Infrastructure Self-Assessment Tool

November 2018

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# Embedding Green Infrastructure Self-Assessment Tool

The City of Yarra engaged E2Designlab to develop indicators and measures for a GI self-assessment framework developed by Alluvium. The GI self-assessment tool enables councils to undertake a high-level understanding of their culture and structures, systems and delivery procedures that enable Green Infrastructure (GI) to be successfully delivered. In parallel to this GI assessment tool, an IWM/WSUD transition tool has been developed by the Living Rivers team at Melbourne Water that provides a more comprehensive assessment tool to assess council's status regarding IWM/WSUD delivery. The two tools are complimentary.

## 1.1 Overview of approach

The framework for embedding Green Infrastructure (GI) (Figure 1) sets out three Stages (plus evaluation and community feedback) and 12 Aspects that contribute to the embedding of GI into Council practices. The framework stages include:

1. Organisation culture and structure
2. Internal systems and processes
3. Delivery

A discussion of each Aspect within each of these Stages is included in Tables 2-4.

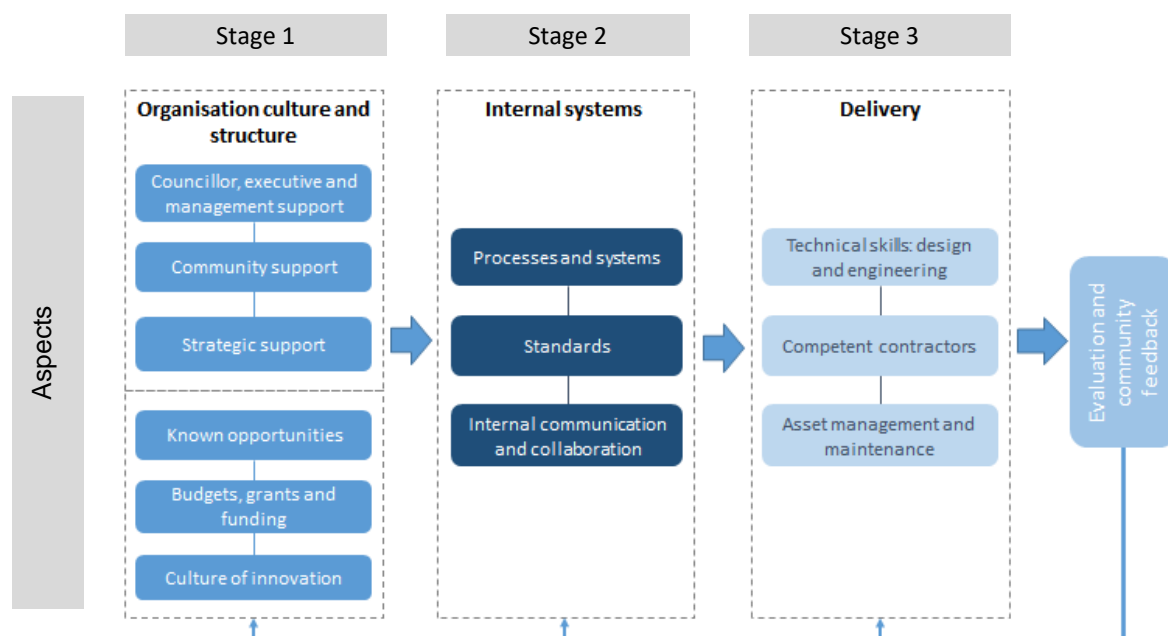


Figure 1. Framework for embedding GI into Council operations

For further information on this Green Infrastructure Framework please refer to *Embedding Green Infrastructure into Local Government Streetscapes, OCT 2018*



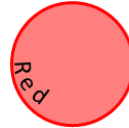
## 1.2 Method

Across the three Stages of the framework, each Aspect should be discussed in a group setting by a range of council staff from different areas of council (i.e. environment/sustainability, engineering and drainage, parks and recreation, WSUD asset maintenance, etc.). An assessment of how council perceive they are tracking with each Aspect should be documented. Council should note which Aspects attributes of the framework:

- are firmly in place,
- may be present or are in place and maybe at risk of going backwards, and
- are not evident.

All notes should be accompanied with evidence to support it so that others in the future understand the basis for the assessment. This assessment can be supported with an external facilitator to help generate and moderate discussions, see that every member has a voice, and a consensus is reached for each Aspect. All collected data will inform a traffic light rating (Table 1) for each Aspect to provide a quick visual summary of council's strengths and where future action/change is required. An example output is provided in Figure 2. This will support council in embedding GI into everyday decisions and throughout streetscape projects.

*Table 1. Traffic light rating legend*

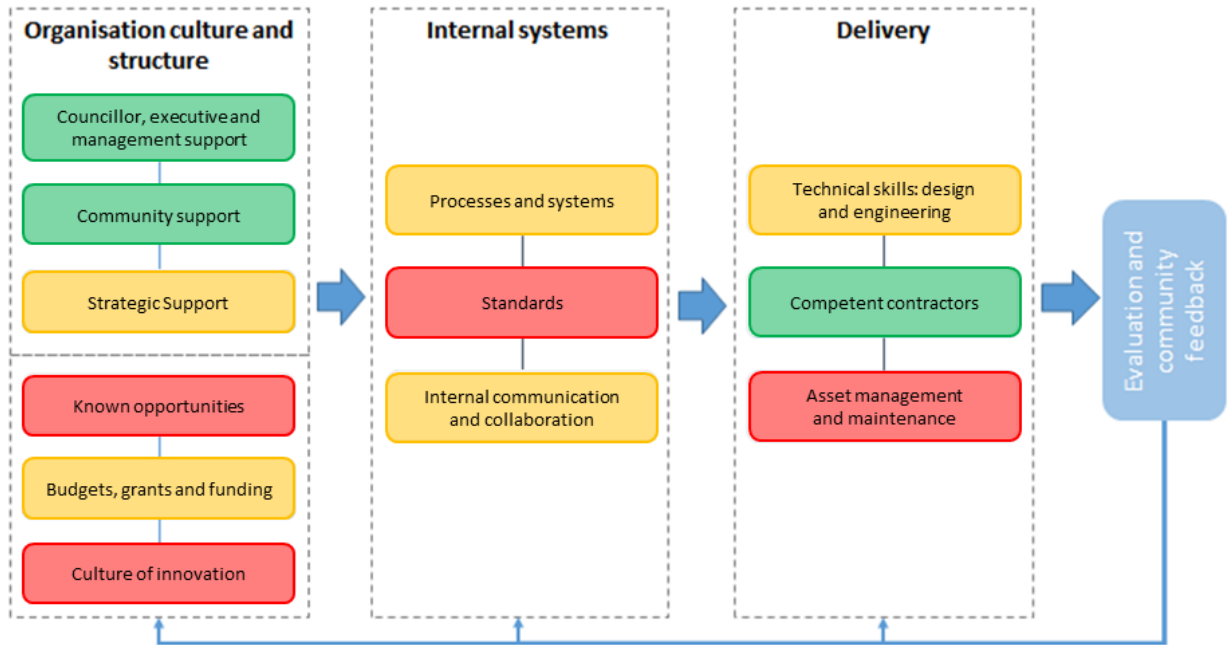
Overall Rating	Description
	All Aspects of the description is firmly in place
	Some Aspects of the description are present or some Aspects that are in place and maybe at risk of going backwards
	No Aspects of the description are evident

## 1.3 Steps

For each Stage of the framework:

1. Assemble an appropriate internal discussion group that can speak on behalf of each Aspect.
2. Facilitate a workshop style discussion on each Aspect and document which features of the Aspect's description are firmly in place, may be present but at risk of going backwards, and are not evident within the relevant tables below (Tables 2-4).
3. Conduct a traffic light assessment of how council perceive they are tracking with each Aspect from the collected evidence. Refer to Table 1 to guide the selection of the Aspect's overall rating and tick the corresponding circle provided.
4. Colour code the framework (Figure 1) with each Aspect's overall traffic light rating to provide a quick snapshot for identifying council's key challenges and opportunities to embed GI as best practice in the organisation.

## 1.4 Example summary output



### Legend



All Aspects of the description is firmly in place



Some Aspects of the description are present or some Aspects that are in place and maybe at risk of going backwards



No Aspects of the description are evident

Figure 2. Example of traffic light summary output

# Framework Aspects

## 1.5 Organisation culture and structure

Stage 1 highlights six Aspects (No. 1.1 - 1.6) of GI related to *Organisation Culture and Structure*. Whilst not listed in a strict hierarchy, support from within the organisation, across councillors, executive and management, the community and organisational strategy is critical.

Table 2. Organisation culture and structure


No.	Aspect	Description and Indicators for Assessment	Evidence	Overall Rating (tick)
1.1	Champions – Councillor, executive and management support	<p>Champions across multiple levels within council support the implementation and embedding of GI and aim to win support from higher management.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Champions are influencing senior people in council                             <ul style="list-style-type: none"> <li>o Champions across departments are connected and advocating to senior managers to prompt recognition that more actions needs to be taken</li> <li>o Champions are gaining support up to the line with CEO, senior executive, director and/or councillors</li> </ul> </li> <li>- Champions are gathering and sharing knowledge to influence change                             <ul style="list-style-type: none"> <li>o Expressing GI as a key plank of climate change adaptation works</li> <li>o Providing evidence of community support for existing GI assets</li> <li>o Developing a vision and identifying strategic drivers</li> <li>o Highlighting the good examples that other Councils provide implementing GI successfully (getting competitive!) and opportunities for collaboration</li> <li>o Identifying opportunities for funding and capacity building through Melbourne Water and other agencies</li> </ul> </li> </ul>		 <p>Green</p> <p>Yellow</p> <p>Red</p>

Table 2. Organisation culture and structure (continued)


No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
1.2	Community support	<p>The community needs to accept and be happy with the outcomes of GI designs and works to gain ongoing support and investment. Council's GI champions can support and inspire community groups to drive GI projects.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Building broader support across the community for outcomes associated with GI                             <ul style="list-style-type: none"> <li>o Understanding community values around GI (e.g. conducting surveys)</li> <li>o Clearly articulating key messages</li> <li>o Undertaking initiatives to build support across the community</li> <li>o Promoting the outcomes of successful GI projects to the community via showcase/demonstration projects</li> <li>o Developing and supporting relevant community sustainability programs</li> <li>o Attracting funding for community competitions</li> </ul> </li> </ul>		



Table 2. Organisation culture and structure (continued)


No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
1.3	Strategic support	<p>A specific GI strategy is appropriate to ensure successful implementation.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Council has a strategic document directed at driving the uptake of GI practices and these objectives, which may include:                             <ul style="list-style-type: none"> <li>o the strategic drivers of GI</li> <li>o the benefits of GI</li> <li>o why it is a priority</li> <li>o what the objectives and targets are, and</li> <li>o who is responsible</li> </ul> </li> <li>- The objectives of the GI strategic document are reinforced in other council strategies, including:                             <ul style="list-style-type: none"> <li>o Council Plan</li> <li>o Water related plans (e.g. Integrated Water Management Plan)</li> <li>o Open space and urban forestry strategy</li> <li>o Open space strategy</li> <li>o Community health plan</li> <li>o Climate adaptation plans</li> </ul> </li> </ul>		

Table 2. Organisation culture and structure (continued)


No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
1.4	Known opportunities	<p>Council should have a good understanding of where their GI opportunities exist and their level of priority for investment.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Council has clear processes and tools in place to ensure project opportunities across the municipality are identified, prioritised and tracked                             <ul style="list-style-type: none"> <li>o Prioritisation is supported by mapping of values and threats (existing GI, and threats (i.e. heat stress, stormwater pollution, nuisance flooding)</li> <li>o Recognition of community values (i.e. amenity, recreation, safety)</li> <li>o Known opportunities are tracked across department teams (and managed by GI working group if established) so they may be incorporated as relevant projects arise</li> <li>o Traditional Council activities (i.e. road or pavement renewals or open space upgrades) are also recognised and sought out by department teams as valuable opportunities to integrate GI assets</li> </ul> </li> </ul>		

Table 2. Organisation culture and structure (continued)



No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
1.5	Budgets, grants and funding	<p>Capital and maintenance budgets need to be allocated once GI programs and opportunities are identified. Clearly defined opportunities supported by concept designs (including their costs) provide powerful support for external funding applications.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Adequate budgets and procedures are available to support good on-ground capital works and maintenance activities of GI assets                             <ul style="list-style-type: none"> <li>o Locally relevant resources are available to design and deliver GI works</li> <li>o Mechanism for integrating GI costs into overall budgets as a small (beneficial) add-on to existing works exist</li> <li>o Resources to support auditing and maintenance of council owned assets</li> <li>o Business cases to demonstrate the value of integrating GI, to support funding applications</li> </ul> </li> </ul>		

Table 2. Organisation culture and structure (continued)

No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
1.6	Culture of innovation	<p>Innovation refers to the implementation of a new idea, method or product. It also implies drawing in ideas from other disciplines to improve the way things are done in other areas.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Council fosters a culture of innovation, where the organisation is willing and able to try something new               <ul style="list-style-type: none"> <li>o Council champion(s) lead multi-stakeholder networks in becoming aligned around GI policy and practice (e.g. GI working group involving external stakeholders meets regularly)</li> <li>o Reflection, evaluation and active feedback loops build knowledge for continued improvement across systems</li> <li>o Funding mechanisms provide flexibility in how GI practices are applied in order to support new thinking and approaches as they arise</li> </ul> </li> </ul> <p>Other elements critical to fostering a culture of innovation are addressed in other areas of this assessment, including having champions that drive change (see 1.1) with necessary strategic support (see 1.3), and having good platforms for connecting and collaborating (see 2.3).</p>		

## 1.6 Internal systems

Once there is support for GI, internal processes need to be established that ensure that consideration of GI opportunities is embedded into business as usual activities.

Table 3. Internal systems


No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
2.1	Processes and systems	<p>Clarity around process to develop GI opportunities is essential. Processes need to be collaboratively developed so that each team involved in delivering GI can own their part of the process. The processes need to be visible, transparent and well known so that each time is the same.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Formal multi-departmental processes in place that support transparency and alignment across council departments during the delivery of GI projects <ul style="list-style-type: none"> <li>o Opportunity identification, strategy development, asset design, construction and maintenance and planning provisions/referral for capital works</li> </ul> </li> <li>- Processes are visible, transparent and well known <ul style="list-style-type: none"> <li>o GI working group actively reviews and ensures processes are relevant and being used</li> <li>o Council may run internal GI awareness campaign</li> </ul> </li> </ul> <p>More details of what these processes may include:</p> <ul style="list-style-type: none"> <li>• <b>Identification:</b> How are opportunities identified? Who can identify them? What do they do when they do?</li> <li>• <b>Strategy:</b> Where is the strategic support? How can this opportunity be justified (in budgetary terms)?</li> <li>• <b>Collaboration and design:</b> Who will be involved in developing the idea? Who will co-ordinate this effort and what are the steps to progress this from concept through to detailed design? Are there existing design standards that are relevant?</li> <li>• <b>Construction:</b> Do we have trusted contractors? Are they knowledgeable of the critical design elements of GI?</li> <li>• <b>Maintenance:</b> How are GI assets accounted for when it comes to maintenance budgets? How often will asset maintenance occur? Who will do it? How will it be recorded?</li> </ul>		

Table 3. Internal systems (continued)



No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
2.2	Standards	<p>Effective and agreed design and engineering standards that are locally relevant provide an advantage when translating opportunities and concepts to successful assets.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Practical and locally relevant guidance provides consistent application of GI                             <ul style="list-style-type: none"> <li>o Effective and agreed design and engineering standards have been established</li> <li>o Case studies that detail best practice examples</li> </ul> </li> <li>- Standards and guidelines are kept up to date with new knowledge and experience                             <ul style="list-style-type: none"> <li>o Lessons from implemented projects are used to develop new standards or refine existing ones</li> <li>o Standards and guidelines are accepted across council departments as live documents subject to revision based on ongoing feedback loops</li> </ul> </li> </ul>		

Table 3. Internal systems (continued)

No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
2.3	Communication and collaboration	<p>To compliment the technical processes and standards in place, communication structures connect the right people. Strong relationships and clear lines of communication are critical.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Established GI working group that includes members from urban design, engineering, landscape architecture, roads and drainage, parks and gardens (open space), maintenance, sustainability and risk environment                             <ul style="list-style-type: none"> <li>o Working group is underpinned by Terms of Reference, or similar, to strengthen commitment and provide longevity to the group</li> <li>o Regular meetings to build relationships, highlight works being done, and provide project updates</li> </ul> </li> <li>- Processes and procedures are in place that connect people and organisations                             <ul style="list-style-type: none"> <li>o Processes and procedures are supported and managed by GI working group</li> <li>o Council attend catchment wide planning groups</li> <li>o Dedicated role of GI co-ordinator may be established to co-ordinate works and teams across departments</li> <li>o Systems and structures in place that support groups of councils working together to tackle common issues (i.e. GI forums, data platform for information sharing)</li> </ul> </li> </ul>		

## 1.7 Delivery

The successful delivery of GI, through detailed design, construction and operation requires council staff and contractors to have the necessary skills and capability.

Table 4. Delivery


No.	Aspect	Description	Evidence	Overall Rating (tick)
3.1	Technical skills	<p>The delivery of GI requires technical skills in the fields of civil infrastructure design, landscape design, landscape architecture, urban planning and water sensitive urban design (WSUD) and others.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Building internal knowledge and capabilities to improve practice               <ul style="list-style-type: none"> <li>o Individuals attending professional development forums</li> <li>o Internal multi-departmental design reviews undertaken regularly to ensure technical knowledge from relevant fields is being incorporated on projects</li> <li>o Groups of councils sharing resources and knowledge</li> <li>o Using consultants to guide and upskill council officers through GI projects</li> </ul> </li> </ul>		



Table 4. Delivery (continued)


No.	Aspect	Description	Evidence	Overall Rating (tick)
3.2	Competent contractors	<p>Contractors will need to be engaged to deliver capital works. Sound construction is critical in gaining positive community feedback that encourages Councillor, executive and management support.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- Council providing capacity building to construction industry and contractors                             <ul style="list-style-type: none"> <li>o Construction guidelines and checklists exist and are used regularly</li> <li>o Investing in early construction meetings (e.g. pre-tender, pre-start) to ensure GI objectives and purpose are well understood by the contractor</li> <li>o Incentives/awards for outstanding contract work on innovative projects (e.g. annual award for Best Constructed and Coordinated Project)</li> </ul> </li> </ul>		 <p>Green</p> <p>Yellow</p> <p>Red</p>

Table 4. Delivery (continued)

No.	Aspect	Description	Evidence	Overall Rating ( <i>tick</i> )
3.3	Asset management and maintenance	<p>GI assets should be recorded in an asset register alongside hard assets with corresponding maintenance requirements, schedules and budgets. GI assets will depreciate and need to be renewed as per traditional civil assets. Maintenance of GI is important to ensure that assets meet the design intent and contribute to strategic outcomes.</p> <p>Indicators (dashes) and examples of what you may see (dots):</p> <ul style="list-style-type: none"> <li>- GI assets are recorded in an asset register                             <ul style="list-style-type: none"> <li>o Asset management systems exist where information is thorough and complete, including mapping of assets</li> <li>o GI asset register supports scheduled maintenance that is recorded and kept up to date</li> <li>o Asset audits and/or performance of assets are recorded and stored in a useful format that integrates with the asset management system</li> <li>o Maintenance agreements between stakeholders exist, where required</li> </ul> </li> </ul>		