### Document Information

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<table>
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<tr>
<th>Document Title</th>
<th>Brunswick Valley Sustainability Management Plan</th>
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<td>Date Adopted</td>
<td>Resolution No</td>
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</table>
EXECUTIVE SUMMARY

The purpose of this Management Plan (MP) is to provide a framework for the management, development and future use of the Brunswick Valley Sustainability Centre.

The land included in this Management Plan is a large parcel of land formed by several lots (cumulatively 112.77 ha) owned by Byron Shire Council (BSC).

The sites are located in Mullumbimby, to north-east of the township and bordered by the Brunswick River to the south. The land is locally known as the Vallances Road site and currently includes the Brunswick Valley Sewage Treatment Plant (BVSTP).

The Project Areas, outcomes and actions intended from this Management Plan include the following:

- **Environmental Land Use Project Areas**
  - Native trees and plants revegetation and rehabilitation.
  - Brunswick River bank stabilisation.
  - Boardwalks & walkways.
  - Irrigation with recycled BVSTP effluent.
  - Fertilising and soil amendment with BVSTP biosolids.

- **Affordable Housing & Community Initiatives Project Areas**
  - Affordable / community housing (subject to rezoning).
  - Use of existing corridors and rights-of-way.
  - Education & interpretation centre.
  - Community gardens.
  - Camping and tourist/visitor accommodation.

- **Brunswick Valley Sewage Treatment Plant (BVSTP) Project Areas**
  - Upgrades to BVSTP in order to accept the flow from the Ocean Shores STP.
  - Effluent storage ponds to buffer flows in order to facilitate effluent reuse and further polishing.
  - Constructed wetlands for effluent polishing.
  - Recycled water generation for irrigation and other valuable reuse.
  - Bioenergy from biomass, e.g., gasification and/or anaerobic digestion, to reduce waste, and generate electricity and other beneficial by-products.
  - STP biosolids dewatering for reuse as fertilizer and soil amendment.

- **Biomass Project Areas**
  - Biomass coppice crops cultivated for bioenergy and other valuable uses, e.g., woody crops or oil crops such as hemp.
Use of recycled water for crop irrigation.
- Land application of dewatered biosolids and/or other biomass for reuse as fertilizer and soil amendment.

- **Solar Farm Project Areas**
  - Solar photovoltaic arrays for electricity generation.
  - Community-funded and/or privately operated solar farm.

Please refer to **Map 1 – Project Areas** for the project areas.

The table overleaf summarises the intended actions for the Brunswick Valley Sustainability Centre in greater detail, and implementation processes for these actions. In doing so, Council may wish to consider the following issues in greater detail:

1. Prepare a detailed Project Execution Plan (PEP) for implementing the Actions contemplated within this Management Plan. The PEP will prioritise Actions and identify specific works.
2. Conduct a Request for Expressions of Interest for the "**Solar Farm Project Areas**."
3. Conduct a public review and consultation process for the Management Plan "**Affordable Housing & Community Initiatives Project Areas**." As part of this public consultation, review the rezoning and planning processes required to facilitate specific works in these areas.
4. Identify and consider the statutory instruments, reviews, and approvals that may be required for the broad Management Plan Actions and resulting specific works.
5. Conduct Ecological Assessments, as required, to confirm extent of threatened Species areas within the site.
6. Estimate the costs – and the funding sources and methods – for the Actions and specific works.
7. Estimate the timelines for implementation of the Management Plan Actions and specific works.

In addition to the table below, **Section 5** and **Appendix 1** summarise in detail the strategic actions of these projects, and the strategic objectives of the projects.

**Section 6** recommends actions to be implemented in order to achieve the outcomes intended by this Management Plan.
## Table 1
### Management Plan - Summary

<table>
<thead>
<tr>
<th>Action</th>
<th>Key Proposals</th>
<th>Area (Approx.)</th>
<th>Zoning</th>
<th>Summary of Permissible Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>o Native trees and plants revegetation and rehabilitation.</td>
<td>49.8 ha</td>
<td>Rural 2 – Rural Landscape</td>
<td>• Environmental Facility</td>
</tr>
<tr>
<td></td>
<td>o Brunswick River bank stabilisation.</td>
<td></td>
<td>Deferred Matter (LEP 2014)</td>
<td>• Environmental protection works</td>
</tr>
<tr>
<td></td>
<td>o Boardwalks &amp; walkways.</td>
<td></td>
<td>Coastal Habitat (LEP 88)</td>
<td>• Information and Education Facility</td>
</tr>
<tr>
<td></td>
<td>o Irrigation with recycled BVSTP effluent.</td>
<td></td>
<td></td>
<td>• Recreation Area</td>
</tr>
<tr>
<td></td>
<td>o Fertilising and soil amendment with BVSTP biosolids.</td>
<td></td>
<td></td>
<td>• Flood Mitigation Works</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Sustainable community housing (subject to rezoning).</td>
<td>20.0 ha</td>
<td>RU1 – Primary Production</td>
<td>• Affordable Housing (*Subject to re-zoning of the land)</td>
</tr>
<tr>
<td></td>
<td>o Use of existing rail corridor, bridge and Council road right-of-way to access the site</td>
<td></td>
<td>RU2 – Rural Landscape</td>
<td>• Community Facility</td>
</tr>
<tr>
<td></td>
<td>o Promote low-footprint development via foot traffic, bicycle, and/or e-vehicles</td>
<td></td>
<td></td>
<td>• Restaurant or Cafe</td>
</tr>
<tr>
<td></td>
<td>o Leading-edge, multi-purpose educational facility to highlight innovations in sustainable land management.</td>
<td></td>
<td></td>
<td>• Environmental Facility</td>
</tr>
<tr>
<td></td>
<td>o Provision of community gardens</td>
<td></td>
<td></td>
<td>• Information &amp; Education Facility</td>
</tr>
<tr>
<td></td>
<td>o Potential for camping and tourist/visitor accommodation.</td>
<td></td>
<td></td>
<td>• Recreation Area</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Camping Ground</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Eco Tourist Facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Tourist and Visitor Accommodation (ONLY Bed &amp; Breakfast and Farm-Stay Accommodation)</td>
</tr>
</tbody>
</table>
## BIOMASS PROJECT AREAS

<table>
<thead>
<tr>
<th>ACTION</th>
<th>KEY PROPOSALS</th>
<th>AREA (APPROX.)</th>
<th>ZONING</th>
<th>SUMMARY OF PERMISSIBLE USES</th>
</tr>
</thead>
</table>
|        | o Planting of biomass coppice crops for harvesting and use in generation of bioenergy and other valuable use, e.g., woody crops or oil crops such as hemp. | 23.8 ha | RU1 – Primary Production RU2 – Rural Landscape | • Agriculture  
• Extensive Agriculture  
• Intensive Plant Agriculture  
• Horticulture  
• Intensive Livestock Agriculture  
• Farm Building  
• Rural Industry |
|        | o Use of recycled BVSTP effluent for irrigation. |        |        |                             |
|        | o Land application of dewatered BVSTP biosolids for fertilizer and soil amendment. |        |        |                             |

## BVSTP PROJECT AREA

<table>
<thead>
<tr>
<th>ACTION</th>
<th>KEY PROPOSALS</th>
<th>AREA (APPROX.)</th>
<th>ZONING</th>
<th>SUMMARY OF PERMISSIBLE USES</th>
</tr>
</thead>
</table>
|        | o Upgrades to BVSTP to accept Ocean Shores STP flows  
  o Effluent storage ponds to buffer flows in order to facilitate effluent reuse and further polishing.  
  o Constructed wetlands for effluent polishing.  
  o Recycled water generation for irrigation and other valuable uses.  
  o Bioenergy from biomass to generate electricity.  
  o Biosolids reuse as fertilizer and soil amendment. | 14.1 ha | RU1 – Primary Production RU2 – Rural Landscape | • Sewerage System  
• Extensive Agriculture  
• Rural Industry  
• Intensive Plant Agriculture  
• Horticulture  
• Intensive Livestock Agriculture  
• Farm Building  
• Rural Industry |

## SOLAR FARM PROJECT AREAS

<table>
<thead>
<tr>
<th>ACTION</th>
<th>KEY PROPOSALS</th>
<th>AREA (APPROX.)</th>
<th>ZONING</th>
<th>SUMMARY OF PERMISSIBLE USES</th>
</tr>
</thead>
</table>
|        | o Installation of solar photovoltaic arrays for:  
  • Byron Shire Council for use in the operation of the BVSTP  
  • Opportunity for community-owned electricity retailer  
  o Excess electricity to be net-metered and sold to generate a sustainable source of revenue. | 3.6 ha | RU1 – Primary Production RU2 – Rural Landscape | • Electricity Engineering  
• Solar Energy System  
• Rural Industry |
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1. INTRODUCTION

The purpose of this Management Plan is to provide a framework for the management, development and future use of the Brunswick Valley Sustainability Centre.

The Plan is community driven and provides for the community’s vision for the land, including permitted uses and establishes strategies and an action plan for the implementation of the desired outcomes.

The land included in this Management Plan is Operational Land owned by Byron Shire Council (BSC) identified as:

- Lot 1 on DP 952598 (125 Vallances Road, Mullumbimby);
- Lot 1 on DP 129374 (Vallances Road, Mullumbimby);
- Lots 14-15, 17-19 on DP 251938 (Vallances Road, Mullumbimby).

The sites are located in Mullumbimby, to north-east of the township and bordered by the Brunswick River to the south.

The land is collectively known as the Brunswick Valley Sustainability Centre, and includes the Brunswick Valley Sewage Treatment Plan (STP). It is intended to develop the site as a whole for sustainable eco-pursuits, renewable energy technologies and innovative environmental processes.

1.1. Structure of this Management Plan

This Management Plan is divided into the following sections:

1. **Introduction** – provides the purpose of the Plan and the details of the land applicable under this Management Plan.
2. **Site Details** – Provides a description of the land, current uses and purposes, zoning, vegetation and locational context.
3. **Strategic Framework** – this section outlines the core objectives, strategic actions and policies shaping this Management Plan.
4. **Future Use and Development of the Land** – provides the authorised (proposed and potential) developments on the land.
5. **Recommendations** – provides recommendations in order to facilitate future use and development of the land
6. **Summary** – provides a synopsis of the Management Plan and intended outcomes.
7. **Appendices** – provide information applicable to this Management Plan.
1.2. Land covered by this Plan

The land covered by the Brunswick Valley Sustainability Centre Management Plan is shown on Map 2 – Project Boundary overleaf.

This Management Plan applies to the following individual land parcels shown in Table 2:

Table 2: Land Parcel details

<table>
<thead>
<tr>
<th>No.</th>
<th>Lot / DP</th>
<th>Physical Address</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lot 1 DP952598</td>
<td>125 Vallances Road, Mullumbimby</td>
<td>25.4 ha (254,189.32m²)</td>
</tr>
<tr>
<td>2</td>
<td>Lot 1 DP129374</td>
<td>Sewerage Woks – Vallances Road</td>
<td>85.9ha (859,015.52m²)</td>
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<tr>
<td>No.</td>
<td>Lot / DP</td>
<td>Physical Address</td>
<td>Area</td>
</tr>
<tr>
<td>-----</td>
<td>---------------</td>
<td>------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>3</td>
<td>Lot 14 DP 251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>5,452m²</td>
</tr>
<tr>
<td>4</td>
<td>Lot 15 DP 251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>445m²</td>
</tr>
<tr>
<td>No.</td>
<td>Lot / DP</td>
<td>Physical Address</td>
<td>Area</td>
</tr>
<tr>
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<td>----------</td>
</tr>
<tr>
<td>5</td>
<td>Lot 17 DP 251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>3,273m²</td>
</tr>
<tr>
<td>6</td>
<td>Lot 18 DP 251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>375m²</td>
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<tr>
<td>No.</td>
<td>Lot / DP</td>
<td>Physical Address</td>
<td>Area</td>
</tr>
<tr>
<td>-----</td>
<td>----------------</td>
<td>--------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>7</td>
<td>Lot 19 DP 251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>25m²</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>112.27 ha (1,122,774 m²)</td>
</tr>
</tbody>
</table>
2. SITE DETAILS

2.1. Condition of the Land

The subject site is a large parcel of land formed by a total of 7 lots (cumulatively 112.27ha) owned by Byron Shire Council (BSC), as shown in Map 2 – Project Boundary. The site is located within a rural area to the north of the Brunswick River, approximately 1km to the north-east of the Mullumbimby CBD.

The north-east portion of the site is the Brunswick Valley sewage treatment plant (BVSTP), operated by BSC. The remainder of the site is largely vacant and used for agistment and livestock grazing. The site accommodates two dwellings (one circa 1980’s, the other circa 1920’s) with other structures and features associated with an old plant nursery, all towards the south eastern corner.

The site’s natural features include about 2.4km of river frontage along the Brunswick River, two large oxbow lagoons (or billabongs) about 1 km in length each, and a small stream close to the south-western property boundary. The landscape is made up of gently undulating slopes and estuarine flood plains. The vegetation is largely disturbed as a result of the historical use of the site for agistment.

Figure 2 – Portion of Site as viewed from Vallances Road
2.2. Existing Zoning of the Land

The land is currently zoned RU1 (Primary Production), RU2 (Rural Landscape) and DM (Deferred Matter) under the Byron Local Environmental Plan 2014 (BLEP 2014).

DM (Deferred Matter) designated land is land that is zoned for environmental protection purposes under (the largely superseded) Byron Local Environmental Plan 1988 (BLEP 88). Where such an environmental protection zone applies, BLEP 88 provisions continue to apply. On the subject site, the DM designation primarily relates to environmental protection zone - 7(b) Coastal Habitat Zone.

It is noted that there are a number of zoning inconsistencies on the site, with several parts of the DM-designed land under BLEP 2014 being zoned 1(a) General Rural zone, 1(a)(h) – General Rural (Hatched) and 1(b)(1) – Agricultural Protection under BLEP 88, rather than for environmental protection purposes. These areas of inconsistencies are also subject to the provisions of BLEP 88.

The details of the existing zoning of the sites is shown below in Table 3, and identified in the maps overleaf (refer Map 3 – Zoning Plan (BLEP 88) and Map 4 – Zoning Plan (BLEP 2014).

Table 3 – Land Zoning

<table>
<thead>
<tr>
<th>Lot / DP</th>
<th>Physical Address</th>
<th>Zoning (BLEP 88)</th>
<th>Zoning (BLEP 2014)</th>
</tr>
</thead>
</table>
| Lot 1 DP 952598 | 125 Vallances Road, Mullumbimby | 1(a) – General Rural  
7(b) – Coastal Habitat Zone | RU1 – Primary Production  
RU2 – Rural Landscape  
DM – Deferred Matter |
| Lot 1 DP 129374 | Sewerage Works – Vallances Road, Mullumbimby | 1(a) – General Rural  
1(a)(h) – General Rural (Hatched) – subject to Clause 38A  
1(b)(1) – Agricultural Protection  
7(b) – Coastal Habitat Zone (Part Lot) | RU1 – Primary Production  
RU2 – Rural Landscape  
DM – Deferred Matter |
| Lot 14 DP 251938 | Vallances Road, Mullumbimby | 1(a) – General Rural | RU1 – Primary Production  
RU2 – Rural Landscape |
The primary development opportunities of the Brunswick Valley Sustainability Centre eco-pursuits are focused within those areas of land Zoned RU1 (Primary Production) or RU2 (Rural Landscape) under LEP 2014 (refer Map 5 – Zoned Land).

All areas of the site designated as Deferred Matter (for environmental protection purposes or otherwise) are subject to BLEP 88 provisions. These areas are not suitable for development and have been retained as a wildlife corridor for environmental and conservation purposes. This is discussed further in the subsequent sections.

<table>
<thead>
<tr>
<th>Lot</th>
<th>DP</th>
<th>Address</th>
<th>Zoning</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>1(a) – General Rural</td>
<td>RU2 – Rural Landscape</td>
</tr>
<tr>
<td>17</td>
<td>251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>1(a) – General Rural</td>
<td>RU2 – Rural Landscape</td>
</tr>
<tr>
<td>18</td>
<td>251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>1(a) – General Rural</td>
<td>RU2 – Rural Landscape</td>
</tr>
<tr>
<td>19</td>
<td>251938</td>
<td>Vallances Road, Mullumbimby</td>
<td>1(a) – General Rural</td>
<td>RU2 – Rural Landscape</td>
</tr>
</tbody>
</table>
Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this map is free from error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it.

Note: The information shown on this map is a copyright of the Byron Shire Council and the 'Land Information Centre (1991)'.
MAP 4 - ZONING PLAN
BYRON LOCAL ENVIRONMENTAL PLAN 2014
MAP 5 - ZONED LAND
AVAILABLE FOR DEVELOPMENT UNDER THE
BYRON LOCAL ENVIRONMENTAL PLAN 2014

LEGEND
ZONED LAND AVAILABLE FOR LAND USES & DEVELOPMENT UNDER LEP 2014
DEPENRED MATURE ZONE
2.3. Zone Objectives

Below is a summary of the zone objectives and the permissible uses (with /without consent) in each zone. The land uses relevant to the ecological and sustainable development intent of the site have been highlighted in bold where relevant. These uses are discussed further in Section 5.

RU1 – Primary Production

The relevant LEP 2014 objectives for the RU1 – Primary Production zone are:

• To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
• To encourage diversity in primary industry enterprises and systems appropriate for the area.
• To minimise the fragmentation and alienation of resource lands.
• To minimise conflict between land uses within this zone and land uses within adjoining zones.
• To encourage consolidation of lots for the purposes of primary industry production.
• To enable the provision of tourist accommodation, facilities and other small-scale rural tourism uses associated with primary production and environmental conservation consistent with the rural character of the locality.
• To protect significant scenic landscapes and to minimise impacts on the scenic quality of the locality.

Works on this portion of land which would be permissible without development consent include:

• **Environmental protection works; Extensive agriculture; Home-based child care; Home occupations**

The following land uses, activities and development on this portion of land would be permissible, subject to development consent:

• Airstrips; Animal boarding or training establishments; Business identification signs; **Camping grounds; Community facilities; Dual occupancies; Dwelling houses; Environmental facilities; Extractive industries; Farm buildings; Flood mitigation works; Forestry; Helipads; Home businesses; Home industries; Industrial retail outlets; Industrial training facilities; Intensive livestock agriculture; Intensive plant agriculture; Landscaping material supplies; Open cut mining; Places of public worship; Plant nurseries; Recreation areas; Restaurants or cafes; Roads; Roadside
stalls; Rural industries; Rural supplies; Rural workers’ dwellings; Secondary dwellings; Tourist and visitor accommodation; Veterinary hospitals

RU2 – Rural Landscape

The relevant LEP 2014 objectives for the RU2 – Rural Landscape zone are:

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To enable the provision of tourist accommodation, facilities and other small-scale rural tourism uses associated with primary production and environmental conservation consistent with the rural character of the locality.
- To protect significant scenic landscapes and to minimise impacts on the scenic quality of the locality.

Works on this portion of land which would be permissible without development consent include:

- Environmental protection works; Extensive agriculture; Home-based child care; Home occupations

The following land uses, activities and development on this portion of land would be permissible, subject to development consent:

- Agricultural produce industries; Agriculture; Airstrips; Animal boarding or training establishments; Business identification signs; Camping grounds; Cemeteries; Child care centres; Community facilities; Crematoria; Depots; Dual occupancies; Dwelling houses; Eco-tourist facilities; Environmental facilities; Extractive industries; Farm buildings; Flood mitigation works; Forestry; Funeral homes; Garden centres; Health consulting rooms; Helipads; Home businesses; Home industries; Hostels; Industrial retail outlets; Industrial training facilities; Information and education facilities; Landscaping material supplies; Livestock processing industries; Neighbourhood shops; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Respite day care centres; Restaurants or cafes; Roads; Roadside stalls; Rural supplies; Rural workers’ dwellings; Secondary dwellings; Stock and sale yards; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Veterinary hospitals; Warehouse or distribution centres.
DM - Deferred Matter

The DM - Deferred Matter designation under LEP 2014 consists of the following zonings under LEP 88:

- 1(a) – General Rural;
- 1(a)(h) – General Rural (Hatched);
- 1(b)(1) – Agricultural Protection; and
- 7(b) – Coastal Habitat Zone.

Although each of these areas has specific objectives and land use permissibility under LEP 88, these are not addressed in this Management Plan as all works proposed are to take place outside of the DM area.

Any future works on this land will be required to be in accordance with the relevant provisions of LEP 88.

2.4. Existing Uses and Facilities

The majority of the site is largely vacant and used for agistment and livestock grazing. The site accommodates two dwellings (one circa 1980’s, the other circa 1920’s) with other structures and features associated with an old plant nursery, all towards the south eastern corner.

The primary use of the north-eastern corner of the site is the Brunswick Valley Sewage Treatment Plant (BVSTP), constructed and operated under the Brunswick Valley Sewage Augmentation scheme. The STP requires a 500m radius buffer around the sewerage infrastructure, which extends outside the subject sites’ boundaries (refer Map 6 - Constraints).

The BVSTP has been operating since 2010. The BVSTP was constructed to facilitate better wastewater management practices in the Mullumbimby and Brunswick Heads areas, and improved water quality in the Brunswick River estuary.

The BVSTP facilities include the operation of a physical, chemical and biological treatment plant and off-site recycled water irrigation storage. Treated effluent is available to the Main Arm Irrigation Scheme which currently irrigates treated effluent onto dairy pasture. Biosolids recycling is also available to local farms for use as a soil conditioner.
A table of existing uses is provided below:

<table>
<thead>
<tr>
<th>Lot / DP</th>
<th>Physical Address</th>
<th>Existing Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot 1</td>
<td>125 Vallances Road, Mullumbimby</td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
<tr>
<td>DP 952598</td>
<td></td>
<td>• Dwelling (x 2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Farm Building</td>
</tr>
<tr>
<td>Lot 1</td>
<td>Sewerage Woks – Vallances Road, Mullumbimby</td>
<td>• Sewerage System</td>
</tr>
<tr>
<td>DP 129374</td>
<td></td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Environmental protection Works</td>
</tr>
<tr>
<td>Lot 14</td>
<td>Vallances Road, Mullumbimby</td>
<td>• Vacant – Closed Road Reserve</td>
</tr>
<tr>
<td>DP 251938</td>
<td></td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
<tr>
<td>Lot 15</td>
<td>Vallances Road, Mullumbimby</td>
<td>• Vacant – Closed Road Reserve</td>
</tr>
<tr>
<td>DP 251938</td>
<td>Road, Mullumbimby</td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
<tr>
<td>Lot 17</td>
<td>Vallances Road, Mullumbimby</td>
<td>• Vacant – Closed Road Reserve</td>
</tr>
<tr>
<td>DP 251938</td>
<td>Road, Mullumbimby</td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
<tr>
<td>Lot 18</td>
<td>Vallances Road, Mullumbimby</td>
<td>• Vacant – Closed Road Reserve</td>
</tr>
<tr>
<td>DP 251938</td>
<td>Road, Mullumbimby</td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
<tr>
<td>Lot 19</td>
<td>Vallances Road, Mullumbimby</td>
<td>• Vacant – Closed Road Reserve</td>
</tr>
<tr>
<td>DP 251938</td>
<td>Road, Mullumbimby</td>
<td>• Extensive Agriculture (Agistment/Grazing)</td>
</tr>
</tbody>
</table>

The extent of the Extensive Agriculture (Agistment/Grazing) is shown in Figure 5 below, while the BVSTP area is shown in Figure 6 below.
Figure 5 - Historical Grazing Lease Areas
Source: Byron Shire Council

Figure 6 – Existing Sewage Treatment Plant area
Source: SIXmaps, 2017
2.5. Existing Vegetation

With approximately 2.5 km of frontage to the Brunswick River and associated riparian riverbank vegetation, the site is a significant ecological zone and provides an important fish habitat leading into the Cape Byron Marine Reserve.

About 80% of the site consists of cleared land that supports exotic pasture and has been used for cattle grazing since the 1940s. The remaining 20% consists of heavily vegetated areas of mangrove forest and woodland, saltmarsh, swamp sclerophyll forest and woodland, wet sclerophyll forest, rainforest (some dominated by Camphor Laurel), and Brushbox forest (refer Map 7 – Vegetation Mapping).

Endangered Ecological Communities represented on the site include Coastal Saltmarsh, Swamp Oak Floodplain Forest, Swamp Sclerophyll Forest on Coastal Floodplains, Subtropical Coastal Floodplain Forest, Lowland Rainforest on Floodplain and Freshwater Wetlands. These areas are designated as High Value Conservation Vegetation and form part of the wildlife corridor through the site (refer Map 8 – Vegetation Mapping – High Conservation & Wildlife Corridors).

Eight threatened flora species have been recorded: Hairy Joint Grass (*Arthraxon hispidus* – V), Marblewood (*Acacia bakeri* - V), White Lace Flower (*Archidendron hendersonii* – V), Giant Ironwood (*Choicarpa subargentea* – E), Davidson’s Plum (*Davidsonia jersyana* - E), Rough Shelled Queensland Nut (*Macadamia tetraphylla* – V) and Spiny Gardenia (*Randia moorei* – E).

Three threatened fauna species have been recorded in native vegetation at the site. The Koala (*Phascolarctos cinereus* - V), the Bush Hen (*Amaurornis olivaceus* - V), and the Rose-Crowned Fruit Dove (*Ptilinopus regina* –V).

Native vegetation on the site is severely fragmented and occurs in narrow corridors along riparian zones. The site has historically suffered from edge effects and was moderately to severely infested with over 40 species of environmental weeds. However; the subject site has undergone extensive regeneration and revegetation projects between 2006 and 2009 (*Bush Generation Outcomes for Vallances Road 2007-2009, Byron Shire Council 2009*).

Revegetated areas focused on the Camphor Laurel Forest; Swamp Sclerophyll Forest and Woodland; Swamp Sclerophyll Forest; Grey Mangrove/River Mangrove Forest and Woodland; Salt marsh, with the removal of Weeds including Camphor Laurel, Groundsel, Grasses, Coastal Morning Glory, Winter Senna, and Lantana.
MAP 7 - VEGETATION MAPPING
BRUNSWICK VALLEY SUSTAINABILITY CENTRE
MAP 8 - VEGETATION MAPPING
HIGH CONSERVATION VALUE & WILDLIFE CORRIDOR
2.6. Existing Fauna

The subject site plays an important ecological role in the Brunswick Valley, forming part of an important wildlife corridor that connected the coastal floodplains with the sub-coastal hinterland.

Fauna Surveys conducted in 2009 revealed the site had at least 133 terrestrial invertebrate species inhabiting the site. This included 104 bird species (two threatened), 13 mammal species (three threatened), nine frog species and seven reptile species (refer Map 9 – Fauna Mapping).

There is evidence that the rehabilitated native vegetation has improved the habitat for threatened fauna species previously recorded at Vallances Road. While bush regeneration works were underway at the site, Bush Hens and Rose-Crowned Fruit Doves have been heard calling in the surrounding vegetation.

Prior to bush regeneration activities commencing, repeated and targeted searches failed to locate any Koalas in the vegetation of the eastern oxbow. In 2009, Koalas have been sighted on two separate occasions feeding and resting in Tallowwoods in the eastern oxbow. The removal of Lantana from the understory may have facilitated the return of koalas to this forested area (Bush Regeneration Outcomes for Vallances Road 2007-2009, Byron Shire Council).
3. LEGISLATIVE FRAMEWORK

Under the legislative requirements of the *Local Government Act 1993*, Council is required to classify all public land. Public Land is defined as:

*Public Land* means any land (including a public reserve) vested in or under the control of the council, but does not include:

(a) a public road, or
(b) land to which the *Crown Lands Act 1989* applies, or
(c) a common, or
(d) land subject to the *Trustees of Schools of Arts Enabling Act 1902*, or
(e) a regional park under the *National Parks and Wildlife Act 1974*.

Public land is to either be classified as ‘Community Land’ or ‘Operational Land’. The purpose of classification is to identify clearly that land which should be kept for use by the general public (community) and that land which need not (operational). The major consequence of classification is that it determines the ease or difficulty with which land may be alienated by sale, leasing or some other means.

Community land is relatively restricted in that it must not be sold, or be leased or licensed for more than 21 years and may only be leased or licensed for more than 5 years if public notice of the proposed lease or licence is given and, in the event that an objection is made to the proposed lease or licence, the Minister’s consent is obtained. No such restrictions apply to operational land. Classification or reclassification of land does not affect any estate or interest a council has in the land.

Community land would ordinarily comprise land such as a public park. Operational land would ordinarily comprise land held as a temporary asset or as an investment, land which facilitates the carrying out by a council of its functions or land which may not be open to the general public, such as a works depot or a council garage or, in this instance, the varied uses that incorporate the Brunswick Valley Sustainability Centre.

Byron Shire Council confirmed the classification of all the subject land as Operational Land.
4. STRATEGIC FRAMEWORK

4.1. Strategic Objectives

The objective of this Management Plan is to provide for a range of sustainable land use initiatives that meet Council’s sustainability strategies and environmental intents in the following general areas:

- Environmental Initiatives
- Community & Housing Initiatives
- Sewerage Treatment Plant Initiatives
- Biomass Initiatives
- Solar Initiatives

Byron Shire Council’s applicable sustainability and environmental policies are summarized below.

4.2. Biodiversity Conservation Strategy

The Byron Biodiversity Conservation Strategy (BCS) is a long term, on-going project that is intended to provide a range of biodiversity conservation directions, on-ground actions and funding options that will work toward improving biodiversity management and practices across the Shire.

The Byron Biodiversity Conservation Strategy aims to:
- Protect, restore and maintain ecosystems and ecological processes through the delivery of on-ground works and planning controls;

The Vallances Road site can deliver on the aims and objectives of the Strategy through:
- Improvement of the condition of ecosystems and increase the extent of native vegetation cover through targeted ecological restoration works;
- Rehabilitate riparian zone along the Brunswick River;
- Establish environmental corridor through the site; and
- Community education map and engagement opportunities.

Refer to the Key Project Areas in Section 5 and Appendix 1 for further details.

4.3. Sustainable Agriculture Strategy

- A range of agricultural opportunities are able to be conducted.
- The intensity, scale and mix of these land uses will be driven by the community and provides the opportunity to deliver a Food Empowerment Project (FEP).
- By integrating and valuing by-products from the STP such as heat and biosolids, a closed loop system can be developed.
• Through this closed loop system recovery, re-use or recycling, this project can reduce emissions, waste and raw materials requirements.

Refer to the Key Project Areas in Section 5 and Appendix 1 for further details.

4.4. Low Carbon Strategy 2014

Council’s Low Carbon Strategy 2014 targeted a minimum 30% reduction in greenhouse gas emissions below 2003/04 levels by 2020. In March 2017, BSC issued a report (Report No. 13.7) on Council's Low Carbon Target. It was resolved [emphasis added below]:

1. That Council note the 2014/15 and 2015/16 greenhouse gas emission status;
2. That Council note the progress of completed actions from the Low Carbon Strategy.
3. That Council commits to achieving a 100% net Zero Emissions Target by 2025 in collaboration with Zero Emissions Byron (ZEB).
4. That, as such, Council congratulates the community for its efforts thus far to realise the employment, national leadership and sustainability benefits that come from the commitment to a zero emissions future
5. That Council commit itself to source 100% of its energy through renewable energy within 10 years.
6. That Council supports the goals of Zero Emission Byron for a net zero emissions Shire in the areas of building, energy, land use, transport and waste.
7. That, to support the Sustainability Team, a two day a week Emissions Reduction role be established to lead the project and liaise with ZEB.
8. That to support the realisation of this goal in these sectors, Council provide for both Council and the community:
   i. Within Council’s upcoming Waste Strategy, a waste emissions reduction plan provided
   ii. Within Council’s upcoming Transport Strategy, a transport emission reduction modelling report be provided
   iii. Within Council’s upcoming Rural Land Use Strategy, a land use emission reduction modelling report be provided
   iv. a more detailed 100% Renewable Energy Plan be commissioned and provided
   v. a Building Emissions Reduction Plan be commissioned and provided.

The projects contained within the Brunswick Valley Sustainability Centre and the actions and uses detailed by this Management Plan are a strong step towards meeting the Zero Emissions Target intentions of Byron Shire Council.

As part of achieving this target Council is investigating all potentials to utilise sources of organic waste materials, termed “biomass”, produced in the Shire. Biomass is organic matter, typically from commercial or farming activities, which could be put to its highest available reuse value as feedstock to a bioenergy plant. Municipal STPs produce biosolids as a waste, which is a source of biomass that can be anaerobically digested to produce biogas that, in turn, has
high energy value. A review of the relevant scheme and legislative controls does enable the use of the site for a bioenergy facility.

Obviously, solar projects also form a part of the means to achieve Council’s Low Carbon objectives, and these will be investigated for implementation on the subject properties.

Refer to the Key Project Areas in Section 5 and Appendix 1 for further details.

4.5. Climate Change Strategic Planning Policy

The Climate Change Strategic Planning Policy provides climate change flood planning scenarios for the years 2050 and 2100. The 2050 flood planning scenario is to be used for any Council strategic, infrastructure and operational planning document or designs that may be affected by climate change. The 2050 flood planning scenario will apply to most development for land use planning.

The Vallances Road site is affected by flooding and consistent with this policy land uses decisions are informed by flooding and ecosystem buffering. The Conceptual land use plan identifies an environmental zone which seeks to protected/restore the riparian zone of the Brunswick River.

This area also incorporates land which is flood affected. The passive land use area also contains land which is flood affected but removed from desired ecological corridor.

Changes to landform may extend the range of uses permitted.

Refer to the Key Project Areas in Section 5 and Appendix 1 for further details.

4.6. Community Gardens Policy

Council recognises community gardens as social assets that enhance local food security and provide opportunities for recreational, cultural, economic, health and educational pursuits.

The Vallances Road site is able to fulfil a number of the objectives of this policy through:

• Provision of new community gardens on Council owned and managed land.
• Promote knowledge and access in relation to nutritious, organic and locally produced foods to enhance regional food security within the context of climate change and peak oil
• Provide opportunities for outdoor learning that support Council’s sustainability education Initiatives
• Position Byron Shire Council as a leader in advancing sustainability within the community
• Community gardens may be able to be established in the passive or active land use area of the site.
Refer to the Key Project Areas in Section 5 and Appendix 1 for further details.

4.7. Corporate Sustainability Policy

The policy objectives include:

- Continually improve the sustainability performance of Council.
- Support the efforts of the wider Byron Shire community in the transition to a low carbon community.
- Acknowledge the inter-relationships between social, economic and environmental considerations in all decision-making.
- Support efforts to reduce Council's ecological footprint, including corporate energy consumption, potable water consumption, greenhouse emissions and waste generation across all programs, assets and services.

Vallances Road provides the opportunity to integrate a range of complementary and interrelated land uses and management actions that can achieve the sustainability objectives.

Refer to the Key Project Areas in Section 5 and Appendix 1 for further details.
## 5. FUTURE USE AND DEVELOPMENT OF THE LAND

The following table details the developments that this Management Plan expressly authorises for the Brunswick Valley Sustainability Centre at Vallances Road, Mullumbimby. The definitions of these uses are as per the Byron Local Environmental Plan 2014, except where otherwise noted.

### Note:

<table>
<thead>
<tr>
<th>LEGEND</th>
<th>Description</th>
</tr>
</thead>
</table>
| O      | Permitted Without Consent  
[Assessment under Part 5 of the EP&A Act (Review of Environmental Factors) still required] |
| C      | Permitted With Consent  
[Assessment under Part 4 of the EP&A Act (Development Consent) required] |
| X      | Prohibited |

### 1. ENVIRONMENTAL LAND USE PROJECT AREA

<table>
<thead>
<tr>
<th>Action</th>
<th>Environmental Land Use &amp; Wildlife Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>49.8 ha total</td>
</tr>
<tr>
<td>Detailed Description</td>
<td></td>
</tr>
</tbody>
</table>
- **Revegetation / Rehabilitation:** Revegetation of wetland areas disturbed by historical grazing; removal of weed species; replanting of wildlife corridors with native species. This will include ongoing follow-up maintenance of already worked areas and expansion into new areas as time and resources permit.  
- **Bank Stabilisation:** Brunswick River bank stabilisation works to occur in specific locations, and sediment and erosion control measures implemented. Use of log treatment method, whereby large logs are driven vertically into the river bed at approximately 2-4 metre spacing at various angles to the river bank. By angling the poles, the waters energy is dissipated, slowing the flow thereby reducing the impact on the river bank. In addition, debris is slowed and settles behind the logs providing valuable real estate for trees and mangroves to gain a foothold and stabilise the river bank.  
- **Boardwalks & Walkways:** A series of connected walkways winding around the wetlands and raised boardwalks through the billabongs as not to impact on the billabong sensitive habitat, is envisaged for this site. These walkways and raised boardwalks |
would ultimately enhance the access and enjoyment for people with disabilities, the elderly, their families and carers.

| Zoning (LEP 2014) | RU2  
| DM - Deferred Matter*  
*Deferred Matter under LEP 2014 relates to land zoned 1(a) General Rural; 1(a)(h) General Rural (Hatched); 1(b)(1) Agricultural; and 7(b) Coastal Habitat under LEP 88.  
| Authorised Scale of Development | Development and/or works permitted on the land include, but are not limited to:  
- Environmental Facility (1)  
- Environmental Protection Works (2)  
- Information and Education Facility (3)  
- Recreation Area (4)  
- Flood Mitigation Works (5)  
| Existing Permissibility | (1) | (2) | (3) | (4) | (5)  
| RU2 | C | O | C | C | C  
| DM | Subject to provisions of LEP 88  
| Possible exemptions under SEPP Infrastructure? | Possible SEPP exemptions for Environmental Protection Works (2) and Flood Mitigation Works (5). Further planning investigations to be undertaken  


### 3. AFFORDABLE HOUSING & COMMUNITY INITIATIVES PROJECT AREA

<table>
<thead>
<tr>
<th>Action</th>
<th>Affordable Housing, Community Gardens, and Education &amp; Interpretive Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>20.0 ha total</td>
</tr>
<tr>
<td><strong>Detailed Description</strong></td>
<td></td>
</tr>
<tr>
<td>• Affordable / Community Housing:</td>
<td>It is intended to work towards innovative sustainable community housing provision, there may be the potential, subject to re-zoning, to create affordable housing on the land.</td>
</tr>
<tr>
<td>• Use of Existing Rail Corridor:</td>
<td>It is intended to utilise the existing rail corridor, bridge and Council road right-of-way to allow for pedestrian access to the site. The innovative use of these existing corridors will allow ease of access to the community land from Mullumbimby Town Centre. This will result in a low-footprint development, with an emphasis on foot traffic, bicycle, and/or e-vehicles.</td>
</tr>
<tr>
<td>• Education and Interpretation Centre:</td>
<td>There is the potential to create a leading-edge educational facility to highlights innovations found in the nexus between sewage treatment innovations, bioenergy and biomass management, native plant replanting, and many other aspects of sustainable land management.</td>
</tr>
<tr>
<td>• Community Gardens:</td>
<td>Provision of community gardens that serve the local community. The gardens could be used as educational and information centres promoting sustainable living initiatives, job-creation, and to increase the provision of fresh and affordable produce to the local community. This facility could host school groups, drop-ins from the general public, residential caretakers, and on-site experts-in-residence programmes.</td>
</tr>
<tr>
<td><strong>Zoning (LEP 2014)</strong></td>
<td>RU1</td>
</tr>
<tr>
<td></td>
<td>RU2</td>
</tr>
<tr>
<td><strong>Authorised Scale of Development</strong></td>
<td>Development and/or works permitted on the land include, but are not limited to:</td>
</tr>
<tr>
<td></td>
<td>• Community Facility (1)</td>
</tr>
<tr>
<td></td>
<td>• Community Garden (2) (defined under Community Gardens Policy)</td>
</tr>
<tr>
<td></td>
<td>• Restaurant or Café (3)</td>
</tr>
<tr>
<td></td>
<td>• Environmental Facility (4)</td>
</tr>
<tr>
<td></td>
<td>• Information and Education Facility (5)</td>
</tr>
<tr>
<td></td>
<td>• Recreation Area (6)</td>
</tr>
<tr>
<td></td>
<td>• Camping Ground (7)</td>
</tr>
<tr>
<td></td>
<td>• Eco Tourist Facilities (8)</td>
</tr>
</tbody>
</table>
### Brunswick Valley Sustainability Centre Management Plan
Vallances Road, Mullumbimby
Byron Shire Council
December 2017

- **Tourist and Visitor Accommodation** (ONLY Bed & Breakfast and Farm Stay Accommodation) (9)
- **Affordable / Community Housing** (10)

<table>
<thead>
<tr>
<th>Existing Permissibility</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU1</td>
<td>C</td>
<td>N/A</td>
<td>C</td>
<td>C</td>
<td>X</td>
<td>C</td>
<td>C</td>
<td>X</td>
<td>C</td>
<td>X</td>
</tr>
<tr>
<td>RU2</td>
<td>C</td>
<td>N/A</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>X</td>
</tr>
</tbody>
</table>

Possible exemptions under SEPP Infrastructure? No exemptions permissible.

### 4. BVSTP PROJECTS AREA

<table>
<thead>
<tr>
<th>Action</th>
<th>Brunswick Valley Sewage Treatment Plant and associated by product technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>14.1 ha total</td>
</tr>
</tbody>
</table>

**Detailed Description**
- **Upgrades to BVSTP**: Upgrades to the BVSTP to include capacity from the Ocean Shores STP.
- **Effluent storage ponds & Wetlands Effluent polishing**: wetlands and an effluent storage pond will create a community resource that not only further “polishes” already high quality treated effluent but also achieves an innovative and integrated range of environmental and social objectives. These objectives included:
  - Maximise the resource value of recycled water.
  - Further polish and limit the nutrient input to the sensitive waters of the Brunswick River.
  - Create a natural and effective assimilation pathway to return surplus flows to the water cycle.
  - Restore an area of pre-disturbance vegetation and habitat.
  - Integrate operational objectives with broad regional environmental objectives including the creation of an extended and extensive wildlife corridor.
  - Preserve, protect and encourage threatened species and associated habitat areas.
  - Buffer and protect billabong and wetland areas.
- Achieve sustainable constructed wetlands that are reliable and flexible.
- Incorporate innovative water management approaches and technology.
- Deliver an asset that the Byron Shire community is proud of and recognised as a model for environmental protection and sustainable water management.

**Recycled water:** Innovative recycling of tertiary-treated STP effluent as irrigation water for use on coppice crops on the site, as well as for re-establishment and expansion of native plants. This recycled water also has nutrient value to the crops, providing nitrogen and phosphorous required for plant growth.

**Bioenergy from Biomass:** Advanced sustainable bioenergy technologies exist which can produce from biomass electricity, heating, cooling, biofuels and other valuable by-products for reclamation and reuse. These technologies divert wastes from landfill and displace the use of fossil fuels. It is intended to consider the use of technologies for the generation of bioenergy from biomass, such as gasification and/or anaerobic digestion.

**Dewatered biosolids:** Biosolids represent a sustainable biomass supply to bioenergy facilities, and are also a high-value soil amendment and fertilizer for coppice crops and native plants. Utilising this STP by-product results in the diversion of what may otherwise be a waste stream, with potential savings of the disposals costs.

<table>
<thead>
<tr>
<th>Zoning (LEP 2014)</th>
<th>RU1</th>
<th>RU2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Authorised Scale of Development</strong></th>
<th>Development and/or works permitted on the land include, but are not limited to:</th>
</tr>
</thead>
</table>
|                                    | **Sewerage System (1)**  
 **Extensive Agriculture (2)**  
 **Rural Industry (3)**  
 **Environmental Protection Works (4)**  
 **Intensive Plant Agriculture (5)**  
 **Horticulture (6)** |

<table>
<thead>
<tr>
<th><strong>Existing Permissibility</strong></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU1</td>
<td>See below</td>
<td>O</td>
<td>C</td>
<td>O</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>RU2</td>
<td>See below</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>
5. BIOMASS PROJECTS AREA

<table>
<thead>
<tr>
<th>Action</th>
<th>Biomass Coppice Crops and associated bio-projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>23.8 ha total</td>
</tr>
<tr>
<td>Detailed Description</td>
<td></td>
</tr>
<tr>
<td>• <strong>Biomass Coppice Crops</strong>: Planting of coppice crops for harvesting and use in generation of bioenergy and other sustainable uses/products to occur across the project area. This may include other valuable uses, such as the growth of oil crops like hemp. This will be the primary source of bioenergy across the site, and will utilize recycled water for irrigation. Byron Council is currently conducting a Bioenergy feasibility study that will determine what coppice crops and biomass will be most suitable for a bioenergy facility. Biosolids application for beneficial agricultural use will continue on site for the time being.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Recycled Water</strong>: Innovative recycling of tertiary-treated STP effluent as irrigation water for use on coppice crops on the site, as well as for re-establishment and expansion of native plants. This recycled water also has nutrient value to the crops, providing nitrogen and phosphorous, which are required for plant growth.</td>
<td></td>
</tr>
<tr>
<td>• <strong>Land Application of Biomass</strong>: Biosolids represent a sustainable supply of high-value soil amendment and fertilizer for coppice crops and native plants.</td>
<td></td>
</tr>
<tr>
<td>Zoning (LEP 2014)</td>
<td>RU1&lt;br&gt;RU2</td>
</tr>
<tr>
<td>Authorised Scale of Development</td>
<td>Development and/or works permitted on the land include, but are not limited to: &lt;br&gt;• Agriculture (1) &lt;br&gt;• Extensive Agriculture (2) &lt;br&gt;• Intensive Plant Agriculture (3) &lt;br&gt;• Horticulture (4) &lt;br&gt;• Intensive Livestock Agriculture (5) &lt;br&gt;• Farm Building (6) &lt;br&gt;• Rural Industry(7)</td>
</tr>
</tbody>
</table>
6. SOLAR PROJECTS AREA

<table>
<thead>
<tr>
<th>Action</th>
<th>Renewable Solar PV Energy farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>3.6 ha total</td>
</tr>
</tbody>
</table>
| Detailed Description        | • Solar photovoltaic arrays: Solar photovoltaic arrays are intended to be installed in proximity to the STP and the electricity produced can be used in many fashions, including: to power the many electric motors in the STP treatment process; heating and cooling of STP or other nearby buildings; drying biomass crops, if necessary; and export to the grid.  
  • Subject to market sounding, these projects may be installed by the single or combined efforts of Council, community groups and/or other proponents with beneficial community-oriented attributes embedded in their execution plans in the pursuit and promotion of a 100% renewable energy future for the region.  
  • Electricity Generation: Excess electricity to be net metered and sold to generate a sustainable source of revenue. |
| Zoning (LEP 2014)           | • RU1                            |
| Authorised Scale of Development | • RU2                            |
|                             | Development and/or works permitted on the land include, but are not limited to:  
  • Electricity Generating Works (1)  
  • Solar Energy System (2)  
  • Rural Industry (3) |

<table>
<thead>
<tr>
<th>Existing Permissibility</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RU1</td>
<td>See below</td>
<td>See below</td>
<td>C</td>
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<tr>
<td>RU2</td>
<td>See Below</td>
<td>See Below</td>
<td>X</td>
</tr>
</tbody>
</table>
### Possible exemptions under SEPP Infrastructure?

|                        | SEPP exemptions for **Electricity Generating Works (1)** and **Solar Energy System (2)**, subject to conditions. Further planning investigations to be undertaken |
6. RECOMMENDATIONS

In the next phases of follow-on work regarding implementing the Actions from this Management Plan, Council may wish to consider the following tasks:

1. Prepare a detailed Project Execution Plan (PEP) for implementing the Actions contemplated within this Management Plan. The PEP will prioritise Actions and identify specific works.

2. Conduct a Request for Expressions of Interest for the “Solar Farm Project Areas.”

3. Conduct a public review and consultation process for the Management Plan “Affordable Housing & Community Initiatives Project Areas.” As part of this public consultation, review the rezoning and planning processes required to facilitate specific works in these areas.

4. Identify and consider the statutory instruments, reviews, and approvals that may be required for the broad Management Plan Actions and resulting specific works.

5. Conduct Ecological Assessments, as required, to confirm extent of threatened Species areas within the site.

6. Estimate the costs – and the funding sources and methods – for the Actions and specific works.

7. Estimate the timelines for implementation of the Management Plan Actions and specific works.
APPENDIX 1. SUMMARY & STRATEGIC GUIDANCE

<table>
<thead>
<tr>
<th>PROJECT AREA</th>
<th>PROJECT DESCRIPTION/ACTIONS</th>
<th>POTENTIAL PARTNERS</th>
<th>POTENTIAL FUNDING SOURCES</th>
<th>TIMELINE (data from Council)</th>
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</thead>
</table>
| Environmental Land Project Area | **Revegetation / Rehabilitation:** Revegetation of wetland areas disturbed by historical grazing; removal of weed species; replanting of wildlife corridors with native species. This will include ongoing follow-up maintenance of already worked areas and expansion into new areas as time and resources permit.  
**Bank Stabilisation:** Brunswick River bank stabilisation works to occur in specific locations, and sediment and erosion control measures implemented. Use of log treatment method, whereby large logs are driven vertically into the river bed at approximately 2-4 metre spacing at various angles to the river bank. By angling the poles, the waters energy is dissipated, slowing the flow thereby reducing the impact on the river bank. In addition, debris is slowed and settles behind the logs providing valuable real estate for trees and mangroves to gain a foothold and stabilise the river bank.  
**Boardwalks & Walkways:** A series of connected walkways winding around the wetlands and raised boardwalks through the billabongs as not to impact on the billabong sensitive habitat, is envisaged for this site. These walkways and raised boardwalks would ultimately enhance the access and enjoyment for people with disabilities, older people, their families and carers.  
**Constructed Wetlands:** The construction of wetlands will create a community resource that not only further “polishes” already high quality treated effluent but also achieves an innovative and integrated range of environmental and social objectives, including restoration of areas of pre-disturbed vegetation; creation of an extended and extensive wildlife corridor; and preserve, protect and encourage threatened species and associated habitat areas. | Brunswick Valley Land Care  
Mudgha Magogen  
Community NGOs  
Other departments in Byron Shire Council (Biodiversity Regeneration Crew)  
Sewer fund  
Grant Funding | Can commence immediately | TBA |
# Brunswick Valley Sustainability Centre Management Plan

**Vallances Road, Mullumbimby**

**Byron Shire Council**

**December 2017**

<table>
<thead>
<tr>
<th>PROJECT AREA</th>
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</table>
| **Community & Housing Project Area** | • **Affordable / Community Housing:** It is intended to work towards innovative sustainable community housing provision, there may be the potential, subject to re-zoning, to create affordable housing on the land.  
  • **Use of Existing Rail Corridor:** It is intended to utilise the existing rail corridor, bridge and Council road right-of-way to allow for pedestrian access to the site. The innovative use of these existing corridors will allow ease of access to the community land from Mullumbimby Town Centre. This will result in a low development footprint, with an emphasis on foot traffic, bicycle, and/or e-vehicles.  
  • **Education and Interpretation Centre:** There is the potential to create a leading-edge educational facility to highlights innovations found in the nexus between sewage treatment innovations, bioenergy and biomass management, native plant replanting, and many other aspects of sustainable land management. There is also the potential to add tourist / visitor accommodation to this centre.  
  • **Community Gardens:** Provision of community gardens that serve the local community. The gardens could be used as educational and information centres promoting sustainable living initiatives, job-creation, and to increase the provision of fresh and affordable produce to the local community. This facility could host school groups, drop-ins from the general public, residential caretakers, and on-site experts-in-residence programmes. | Affordable Housing  
  • Third Party Developers  
  • Community Development & Housing Agencies  
  • Community NGO’s Education Centre  
  • Primary & Secondary Schools  
  • Tertiary Education Users  
  • Community Groups | Affordable Housing  
  • Third Party Developers  
  • Grant Funding | Affordable Housing  
  • Third Party Developers  
  • Grant Funding | **Estimation to be undertaken first** |

Community Consultation to be undertaken first: TBA
### Brunswick Valley Sewage Treatment Plant Project Area

<table>
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</thead>
<tbody>
<tr>
<td><strong>Upgrades to BVSTP:</strong> Upgrades to the BVSTP to include capacity for flows from the Ocean Shores STP.</td>
<td>Other Council department</td>
<td>BSC Sewer Fund</td>
<td>2020 Subject to Council Approval</td>
<td>$10,000K</td>
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<tr>
<td><strong>Effluent Storage Ponds &amp; Wetlands Effluent Polishing:</strong> wetlands and an effluent storage pond will create a community resource that not only further “polishes” already high quality treated effluent but also achieves an innovative and integrated range of environmental and social objectives. These objectives included:</td>
<td>Wildlife groups</td>
<td>Grant funding</td>
<td>Can commence immediately</td>
<td>$3,000K</td>
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<tr>
<td>• Buffering to maximise the resource value of recycled water.</td>
<td>Farmers for agistment and irrigation</td>
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<tr>
<td>• Further polish and limit the nutrient input to the sensitive waters of the Brunswick River.</td>
<td>Technology companies for R&amp;D purposes</td>
<td></td>
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<tr>
<td>• Create a natural and effective assimilation pathway to return surplus flows to the water cycle.</td>
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<tr>
<td>• Integrate operational objectives with broad regional environmental objectives including the creation of an extended and extensive wildlife corridor.</td>
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<tr>
<td>• Preserve, protect and encourage threatened species and associated habitat areas.</td>
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<td>• Restore areas of pre-disturbance vegetation and habitat; protect billabong and wetland areas.</td>
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<td>• Achieve sustainable constructed wetlands that are reliable and flexible.</td>
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<tr>
<td>• Incorporate innovative water management approaches and technology.</td>
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<tr>
<td>• Deliver an asset that the Byron Shire community is proud of and recognised as a model for environmental protection and sustainable water management.</td>
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<tr>
<td><strong>Recycled Water:</strong> Innovative recycling of tertiary-treated STP effluent as irrigation water for use on biomass coppice crops on the site, as well as for re-establishment and expansion of native plants. This recycled water also has nutrient value to the crops, providing nitrogen and phosphorous, which are required for plant growth.</td>
<td></td>
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<tr>
<td><strong>Biomass Anaerobic Digestion:</strong> Advanced sustainable bioenergy technologies exist which can produce electricity, heating, cooling, biofuels, and other valuable by-products for reclamation and reuse. These technologies divert wastes from landfill, displace the use of fossil fuels. It is intended to use Biomass Anaerobic Digestion for biogas generation.</td>
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<tr>
<td><strong>Dewatering Biomass:</strong> Biosolids represent a sustainable supply of high-value soil amendment and fertilizer for coppice crops and native plants. Utilising this STP by-product results in the diversion of what would otherwise be a waste stream, and savings of the disposals costs.</td>
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<tr>
<td>Biomass Project Areas</td>
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<tr>
<td></td>
<td><strong>Biomass Coppice Crops</strong>: Planting of coppice crops for harvesting and use in generation of bioenergy and other sustainable uses/products to occur across the project area. This may include other valuable uses of oil crops such as hemp. This will be the primary source of bioenergy across the site and will utilize recycled water for irrigation. Byron Council is currently conducting a Bioenergy feasibility study that will determine what coppice crops and biomass will be most suitable for a bioenergy facility. Biosolids application for beneficial agricultural use will continue on site for the time being.</td>
<td>Universities, Private third parties for R&amp;D</td>
<td>BSC Sewer Fund, grant funding, Third party R&amp;D programmes</td>
<td>Dependent on Biomass Pre-Feasibility Project – possible start 2020</td>
</tr>
<tr>
<td></td>
<td><strong>Recycled Water</strong>: Innovative recycling of tertiary-treated STP effluent as irrigation water for use on coppice crops on the site, as well as for re-establishment and expansion of native plants. This recycled water also has nutrient value to the crops, providing nitrogen and phosphorous, which are required for plant growth.</td>
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<td></td>
<td><strong>Application of Dewatered Biomass</strong>: Dewatered biosolids represent a sustainable supply of soil amendments and fertilizer for coppice crops and native plants. Utilising this STP by-product results in the diversion of what would otherwise be a waste stream, and savings of the disposals costs.</td>
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### Solar Farm Project Areas

<table>
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<tbody>
<tr>
<td><strong>Solar Photovoltaic Arrays</strong>: Solar photovoltaic arrays are intended to be installed in proximity to the STP and the electricity produced can be used in many fashions, including: to power the many electric motors in the STP treatment process; heating and cooling of STP or other nearby buildings; and drying biomass crops, if necessary.</td>
<td>Community Council</td>
<td>Community Community Not-for-profit entity Byron Shire Council (in-kind funding)</td>
<td>Immediately</td>
<td>$200K</td>
<td></td>
</tr>
<tr>
<td><strong>BVSTP Solar Farm</strong>: 1.6 ha of land adjacent to the BVSTP to be used by Byron Shire Council for solar electricity generation and use in the operation of the BVSTP</td>
<td>Council</td>
<td>Byron Shire Council BSC Sewer Fund Other departments in Byron Shire Council</td>
<td>Immediately</td>
<td>In kind funds (land, rental income)</td>
<td></td>
</tr>
<tr>
<td><strong>Community Solar Farm</strong>: 2.0 ha of land adjacent to the BVSTP to be used by a not-for-profit community group.</td>
<td>Community</td>
<td>Community Not-for-profit entity Byron Shire Council (in-kind funding)</td>
<td>Immediately</td>
<td></td>
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</tr>
<tr>
<td><strong>Electricity Generation</strong>: Excess electricity to be net metered and sold to generate a sustainable source of revenue.</td>
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