

# Forestry Place, ACT

## Ecological Sustainable Development (ESD) Objectives Report

ESD Report for National Capital Plan Amendment

**Prepared for:** Oakstand Pty Ltd. On behalf of the Shepherd Foundation  
(as beneficiary Trustee of the Gunyar ACT Properties Trust)

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# Revision

Revision	Date	Comment	Prepared By	Approved By
1	15/03/21	Preliminary Issue	NCJ	NCJ
2	18/03/21	Authority Submission	NCJ	NCJ

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# 1. Executive Summary

The following Ecological Sustainable Development (ESD) objectives have been identified for inclusion within the proposed Forestry Place development, located on the former CSIRO Yarralumla site (Section 4, Block 7) now known as Forestry Place, ACT. The proposed development consists of a new masterplan community inclusive of multi-residential dwellings, hotel, aged-care facility and associated community amenities. The following statement of objectives has been prepared in order to accompany the application for amendment to the National Capital Plan associated with the development.

The identification of suitable ESD objectives for the development has been drafted in alignment with the existing National Capital Plan, relevant applicable legislation and the community expectations for a development of this scale.

The National Capital Plan identifies the following objectives relative to Sustainability:

- Objective One – Environmental sustainability & open space:

*Ensure the development of a city that both respects environmental values & reflects national concerns with the sustainability of Australia's urban areas.*

- Objective Two – Environmental sustainability & open space:

*Protect the nationally significant open-space network, visual backdrop & landscape setting of the National Capital.*

Further to the above, the National Capital Plan is supported by additional key themes of Liveability & Accessibility. These themes have also been taken into consideration when drafting the proposed sustainability objectives of the development.

The ESD objectives for the proposed development are underpinned by the following Development ESD Vision Statement:

*"...the development seeks to deliver new masterplan community that extends beyond responsible sustainable building design and delivers a higher quality of living & lifestyle for community residents. Carbon reduction, community & social equity, connectivity & accessibility are placed at the core of project..."*

In association with the above vision statement, the following key ESD themes have been established:

- Energy & Carbon Emissions Reduction
- Climate Impact Assessment
- Water Reduction & Urban Stormwater Quality
- Environmental Quality – including urban design, thermal comfort & indoor environment quality.
- Wellbeing - including social security, connectivity and active transport; and
- Biophilic design





**High performance** façades to improve **thermal comfort** and reduce operational energy



Best practise architecture design to enhance **Natural Daylight and Views** to the exterior



**Biophilic design** to connect people to nature, reduce stress and improve wellbeing



**Sustainable Material** selection through **Life Cycle Assessment** to reduce district's environmental footprint



**Human Scale Design** to enhance livability, by creating walkable, safe, inclusive environments

**Rainwater harvesting and tank storage** in all buildings to reduce potable water demand



**Photovoltaic Cells** on rooftop where practical to reduce energy consumption



**Potable Water Conservation** through efficient fixtures, services and dual water pipe provision



**Smart Buildings** to allow connectivity, analysis, and automatic regulation of building systems



**Bike Infrastructure + EoT Facilities** to discourage vehicle use and promote active transport



**Sustainable Commitment** through Best Practice Standards



**Australian Government**  
National Capital Authority

**Forestry Place, ACT**  
**ESD Objectives**



## 2. ESD Objectives

The following objectives have been identified in response to the National Capital Plan and its objectives as well as the identified project ESD vision.

Each of the following objectives have been carefully considered to ensure the proposed development provides an exemplary demonstration of ESD performance & improves resident health, amenity and wellbeing. In addition, the objectives are designed to ensure the proposed development does not adversely impact on the local ecology or surrounding environment and rather aims to enhance the overall ecological value of the precinct.




Theme	Sustainability Initiative	Forestry Place ESD Objectives
ENERGY & CARBON	<u>Energy Conservation – Holistic</u>	<p>The project is committed to implement <b>best-practice sustainable practises</b> across the entire development in order to reduce the energy demand.</p> <p>The Architectural expression will align to a <b>climate responsive design</b> achieving thermal comfort through a highly efficient building fabric. External shading devices, appropriately designed eaves and utilisation of existing site greenery will help reduce heat gains while enhancing the district's livability and visual comfort.</p> <p>Commercial developments (Hotel &amp; Aged Care) on site will achieve a minimum <b>4.5 Star NABERS Energy</b> Base Building, and will exceed compliance with requirements for <b>NCC Section J 2019</b></p> <p>Residential developments will achieve a minimum <b>NatHERS Average rating of no less than 6.0 Stars with an aspirational goal of 6.5 Star average.</b></p>
	<u>Energy Conservation – Design Specific</u>	<p>In addition to the initiatives identified above, the project will further reduce energy demands &amp; GHG emissions via the design specific response including:</p> <ul style="list-style-type: none"> <li>- On-site renewable energy supply</li> <li>- LED lighting throughout</li> <li>- High efficiency domestic hot water systems</li> <li>- Improved daylight for reduced reliance on artificial</li> <li>- High efficiency building fabric design</li> </ul>
CLIMATE ADAPTATION	<u>Disaster Response Management</u>	<p>The development acknowledges the challenges climate change and population growth will bring to our cities and aims to tackle these issues to make spaces safe and futureproof its buildings and community.</p> <p>A <b>Climate Adaptation Plan</b> will be developed to provide solutions for climate change, extreme weather conditions, bushfires, intense pollution, and potential flooding events.</p>



Theme	Sustainability Initiative	Forestry Place ESD Objectives
WATER	<u>Potable Water Conservation</u>	<p>All buildings will install <b>high WELS rated efficient fixtures</b> in alignment with industry best practice standards and will have a <b>dual water pipe</b> provision for the inclusion of rainwater reuse, reducing the project's overall demands on potable water supply.</p> <p>The district will include roof water harvesting and tank storage reducing the district potable water demand for sources such as toilet flushing and landscape irrigation.</p>
	<u>Water Sensitive Urban Design (Stormwater Management)</u>	<p>The project is committed to implement <b>water sensitive urban design</b> across the entire development in order to reduce the direct environmental &amp; ecological impacts on the development on the natural environment.</p> <p>Urban Stormwater management shall be implemented in alignment with the <b>best practice urban stormwater guidelines</b> as defined by the CSIRO. The district will include roof water harvesting and tank storage within buildings, whilst additional treatment trains such as gross pollutant traps and stormwater quality treatment devices will ensure precinct urban stormwater quality.</p>
ENVIRONMENTAL QUALITY	<u>Sustainable Urban Design</u>	Through its masterplan design, the development has been careful not to block or diminish the quality of fresh air, sunlight and manage impacts to the existing natural environment. This will ensure the <b>natural biophilic design</b> of the site is captured and maintained improving living conditions and resident health & wellbeing.
	<u>Thermal Comfort</u>	<p>The design approach takes into consideration natural climatic variables include peak heat days and cooler winter periods. High performance NatHERS dwellings will ensure effective <b>passive thermal comfort</b> reducing the developments reliance on HVAC services for heating &amp; cooling demands.</p> <p>Non-residential buildings will include high performance facades and demonstrate thermal comfort compliance via PMV compliance method.</p>
	<u>Indoor Environmental Quality</u>	All buildings will include high levels of sustainably preferred materials including lower levels of VOC, formaldehyde, etc. designed to achieve enhanced indoor environment quality. <b>91% of dwellings achieve effective natural cross-flow</b> whilst <b>86.5% of dwellings receive in excess of 3hrs direct solar gain</b> improving indoor comfort & passive thermal performance.



Theme	Sustainability Initiative	Forestry Place ESD Objectives
WELLBEING	<u>Liveability, Transport &amp; Connectivity</u>	<p>The district will be design in accordance with industry best practice principals that <b>promote an equitable society</b> with an inclusive sense of community and with the <b>necessary infrastructure to encourage physical and outdoor activity</b> including:</p> <ul style="list-style-type: none"> <li>• <b>Human scale design</b> to create pedestrian safe and accessible environments</li> <li>• Cycling infrastructure, bike parking and end of trip facilities in to encourage <b>active transport</b></li> <li>• <b>Public amenities and social spaces</b> that promote civic engagement for neighbours to gather and colleagues to encounter</li> <li>• <b>Mixed – Use developments</b> to encourage a diverse community and housing type</li> </ul> 
	<u>Biophilic Design</u>	<p>The masterplan proposal for the Forestry Place development seeks to enhance occupant wellbeing by incorporating biophilic features across the whole development. The proposed development <b>seeks to protect and retain mature trees</b> within the existing site, allowing for improved resident amenity.</p> <p><b>High quality views</b> and <b>daylighting</b> will be pursued wherever possible to promote connection to nature.</p> <p><b>Use of timber, greenery and environmentally preferred materials</b> will also be preferred to generate naturally appealing whilst at the same time reducing embodied energy and associated GHG emissions.</p>
EMBODIED ENERGY	<u>Material Selection and Life Cycle</u>	<p>Increase use of <b>natural materials</b> throughout the development. The district design will encourage dematerialisation and seek to reduce embodied energy via material substitution or replacement in traditional building materials such as steel, concrete and masonry.</p> <p>Preference given to materials that include re-used/recycled content, have an Environment Product Declaration (EPD), certification such as greentag or the like or are considered low-carbon in design and/or construction.</p>

Design with  
**community** in mind

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