

ANNEXURE G

Landscape Philosophy,
landscape- and rehabilitation
plan

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TOWN AND REGIONAL PLANNING • PROJECT PLANNING • LANDSCAPE ARCHITECTURE • MASTER PLANNING



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GEORGE HOUSING ESTATE - LANDSCAPE DESIGN AND RESILIENCE STATEMENT

The components of landscapes, namely trees, plants, and soils, offer an opportunity for landscape architecture to participate as an agent of climate mitigation. Mitigation and adaptation measures for the project proposals are as follows:

1. The inclusion in the projects of green infrastructure, defined as the network of spaces and natural elements that are present in and interconnect our landscapes. It represents a holistic approach to the natural and built environment which recognises the important, multifunctional role the landscape plays in providing benefits for the economy, biodiversity, wider communities, and individuals as well as playing an important part in climate change adaptation. Components of green infrastructure included are street trees, pocket parks and the protection and enhancement of existing natural habitat. Green spaces and corridors help to cool our urban environments, improve air quality, and ameliorate surface run-off.
2. The creation of urban carbon sinks via the provision of green space which removes carbon from the atmosphere via storage in biomass and the release of oxygen.
3. Protection and enhancement of existing natural habitat to promote biodiversity.
4. Topsoil from site will be harvested for reuse on site.
5. Plant species selection – locally indigenous and waterwise trees and plants to promote resilience.
6. Removal of invasive alien plants.
7. Sustainable urban drainage - infiltration and ground water recharge.
8. Limited use of slow-release fertiliser, preferably organic fertiliser.
9. Responsibility for compliance with these items pass on to the HOA following completion of the construction of the development.


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ARBOUR ESTATE, GEORGE: LANDSCAPE PHILOSOPHY, Revision 1

The landscape can be divided into two main components, namely the residential development on the existing gently sloping grassy meadow area of the site, and the densely wooded steeply sloped riverine embankment.

The Residential Development

The residential development is envisaged as a “forest estate” with substantial tree planting on the road verges. The proposed tree species will be mixed indigenous medium sized forest edge trees to create a continuous tree canopy along the roads. Trees will provide shade to the “shared” road for cars, bicycles, and pedestrians. The trees and proposed mixed indigenous understory planting will also provide habitat for birds, butterflies, insects and other small reptiles and mammals. Lawn areas should be minimised in the common landscape areas to reduce relentless mowing and increase plant cover, diversity, and wildlife habitat. The proposed children’s playground area and communal clubhouse facilities include lawn areas for recreation purposes. The private home gardens will contribute significantly to the quality of the environment and indigenous planting will be promoted and managed through development guidelines and will be an extension of the rehabilitated riverine forest across not only the common areas, but the entire site.

Topsoil and a few existing plants will be harvested for later reuse, prior to the start of construction activities. Phasing of the development will limit the extent of exposing erodible soil and will limit the extent of potential destructive soil erosion and site damage. Careful construction activity programming and management is required on this site, particularly as it includes an extensive steep riverine slope of the Malgas River. The topsoil (minimum 300mm layer) will be stripped from site and stored in windrows maximum 2m high. Storage times to be as short as possible. Ongoing protection of the riverine slope from stormwater erosion is necessary, and stormwater detention areas and swales in the shared landscape areas and verges is included in the proposal. Irrigation to the planted landscape will be required, both 2-year establishment irrigation and reduced long-term irrigation, and a borehole water source is proposed.

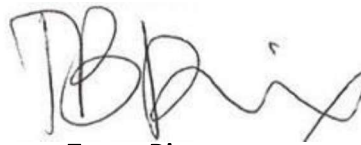
Malgas River Forest Edge

The site includes the riverine corridor down to and along the river, varying in width between 60m to 120m wide with an approximate 30m height difference. A security fence line is proposed at the top of the slope, set back 1m from the top of bank. Large gums trees and black wattle are the predominant trees in the corridor, and it is proposed that some selected gum trees would remain in the medium term to provide a treed backdrop to the development, and all black wattle trees (*Acacia mearnsii*) will be removed in the short term. A riparian corridor and riparian buffer revegetation programme to establish an indigenous riverine forest over an approximate 15-year period is proposed. Initial clearing will include the removal of all exotic invasive plants within the riparian corridor, and all black wattle 3m in height and below together with understorey invasives such as lantana in the riparian buffer. Replanting of indigenous trees, shrubs and groundcovers will be established in the riparian corridor and riparian buffer, including below existing gum trees selected to remain. Security trails along the fence line and recreational and maintenance paths on the slopes are included to negotiate the steep slopes with care. Localised stormwater flows over the top bank will be dissipated and spread by the inclusion of a stone gabion wall at the base of the fence line, while most of the stormwater will be directed towards the detention areas and swales in the shared landscape areas and verges.

The proposed indigenous riverine forest will extend beyond the riparian buffer to include the entire steeply sloped portion of the site. The proposed indigenous riverine forest will also extend beyond the top of the bank onto the gently sloping ground and open space around buildings, structures, infrastructure, and stormwater ponds, and even into the home gardens. The site in its entirety will be transformed from a degraded invaded river forest and kikuyu field to a vibrant local indigenous habitat for people and wildlife alike and aims to set the standard for responsible resilient development and be an example to what needs to be done up, down and across the river.



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