THE MILL TREAM VILLAGE PARK & GREENWAY

STANFORD, WESTERN CAPE

CONCEPT MASTER PLAN

August 2018

PREPARED FOR

Overstrand Municipality

SUBMITTED BY

Stanford Ward Committee, Overstrand Municipality

COMPILED BY

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EXECUTIVE SUMMARY

Acknowledging cultural-historical antecedents in the planning of environmental improvement actions is key to ensuring the sustainability of the work to be done, particularly in the case of a centrally situated urban river system such as Stanford's Mill Stream. One cannot ignore the human impacts on the stream nor the opportunity to creatively couple community needs to the needed river improvement work to be done. To capture the social-ecological realities, inclusive and transparent participative processes with Stanford community leaders and key stakeholders were followed and captured as a revision of the Stanford Urban Renewal Plan.

An environmental management and hydrological study was completed in 2016 and one annual cycle of water testing and frog, bird, dragonfly and plant monitoring, was completed in 2017. The results informed the community engagement process and this concept document. The water tests and symptoms seen in the Mill Stream indicate that current levels of water pollution are high and result in the eutrophic condition of the borrow pit known as the Willem Appel Dam. The enreedment of most of the system supports this, as does the low levels of faunal and floral biodiversity in the lower three-quarters of the stream. The stream is captured by the borrow pit even though there is an overflow which allows water to trickle out. The 'dam' stores water which is infrequently tapped to supplement leiwater during the dry season of some years. The leiwater system is a heritage feature pre-dating the town itself, which provisions the northern, older portion of town with free irrigation water.

In principle improvement actions must achieve the free flow of water through the Mill Stream, improve water quality and restore the extensive wetland system between the R43 and Vlei Street with plantings of indigenous wetland plants. This must be done carefully and sensitively to maintain and improve habitats for existing fauna like the endangered Western Leopard Toad, water fowl and insects, and the creation of recreation and outdoor learning areas, as well as multi-purpose walkways, can be included in the improvement plan with negligible ecological impact.

The updated urban renewal plan re-prioritises activities towards a better integrated Stanford and caters for emergent community development needs while also incorporating recovery of ecological infrastructure and ecosystem functioning. The goodwill and co-operation of community leaders, stakeholders and local government is crucial for the realisation of this plan.

CONTENTS

ACRONYMS

IDP	Integrated Development Plan
SCT	Stanford Conservation Trust
SRA	Stanford Ratepayers Assocation
WCC	Whale Coast Conservation
WWTW	Waste Water Treatment Works

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1 INTRODUCTION

1.1 Project definition

This document sets out the concept master plan for the proposed Mill Stream improvement project and for the establishment of the Mill Stream village park and greenway, located at the core or heart of the Village of Stanford, in the Overstrand Municipality, Western Cape (refer Figure 1).

Stanford is a socio-economically divided community with a more affluent northern part and to the South, less affluent and poor areas. The Mill Stream, located at the centre of this community, is currently ecologically degraded because of damming and other negative urban impacts, and the social, educational, recreational and tourism opportunities it offers is untapped.

The Mill Stream improvement project provides an opportunity to address the socio-ecological well-being of the area. The project may not address all the social-economic issues of the village but can contribute significantly towards integration and the common good of the community of Stanford.

The conceptualisation of the project adopted inclusivity at all stages and captures the needs and desires of the community at large – on both sides of the stream (see Section 1.2). It is supplementary to the current urban renewal plan which was developed in 2015 and is focused on pedestrian needs in the commercial center of Stanford, which has been incorporated in principle, in the Municipal Integrated Development Plan (IDP) (refer Figure 1).

Figure 1. Aerial view of The Mill Stream and project focus area

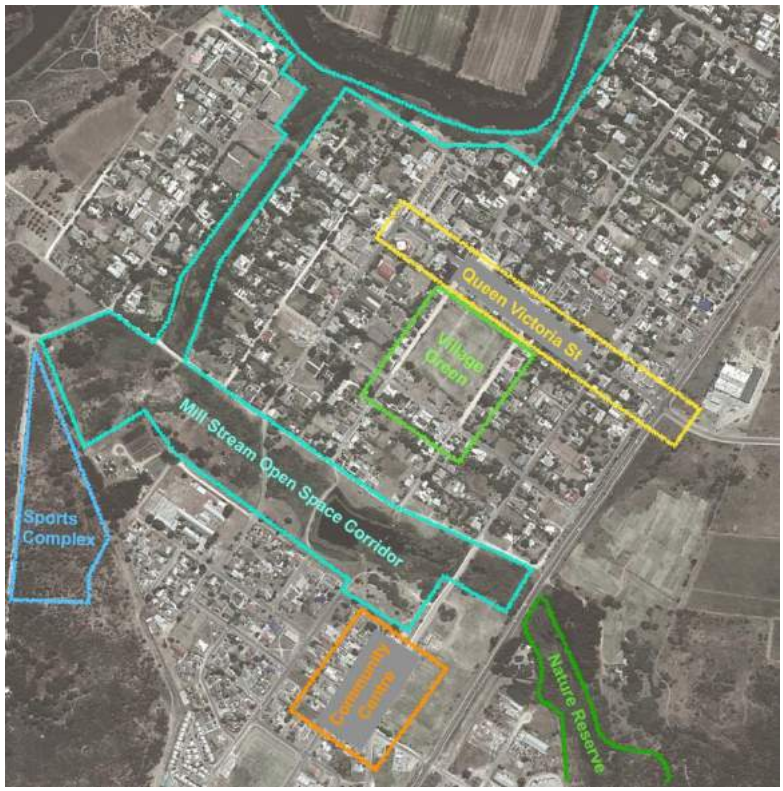

Figure 1. The Mill Stream improvement project in context of the existing renewal plan project areas

1.2 Project background

The Mill Stream improvement project was initiated after a citizen science frog monitoring project run by Whale Coast Conservation (WCC) in 2015 identified that no aquatic frogs permanently occupied the main body of the stream and impoundment but was found along the sides of the watercourse in temporary pools (Van Wyk, 2015). The number of the endangered Western Leopard Toad also seemed to be decreasing. An environmental study was done of the stream in 2016 as a collaboration effort between WCC, Stellenbosch University and the Overstrand Municipality as a Ward 11 project (Brits, 2016). One annual cycle of monitoring data was collected during the period August 2016 to June 2017 using mainly volunteer groups from Stanford and Hermanus to do bio-indicator monitoring of frogs, birds, plants and dragonflies (Van Wyk, 2017). This was supported by water quality tests done by Abotts Laboratory. A hydrology study was completed by Umvoto (Umvoto Africa, 2016). A Table Mountain Fund grant was used to complete volunteer training and the monitoring process, to support the environmental management and dragonfly bio-indicator study as well as the environmental education aspects, youth camps and to enable the ''Friends of The Mill Stream' activities. Additionally, reed cutting, and alien invasive trees were removed.

WCC subsequently engaged interested community members that offered to assist with the second round of community engagement specifically for the development of The Mill Stream village park and greenway concept document. A small team was created to manage this process and capture input/needs and expectations, the result being this concept document to be taken forward by the ward committee as an extension of the Stanford urban renewal plan which is already on the municipal IDP project list for Stanford.

The team consisted of Sheraine van Wyk (WCC Eco-Learning Manager), Karin Sfreddo, Paul and Loraine Bewsher (all from Ecotourism Afrika) and Bernard Oberholzer (BOLA - landscape architect and environmental planner), all providing their time and expertise *pro-bono*, in an attitude of community service. The team's expertise and experience include project management, facilitating public engagement to establish trans-frontier conservation areas, World Heritage Sites and other protected areas, river rehabilitation, landscape architecture, tourism, environmental science and education, social science and local contextual knowledge. In addition, Bernard Oberholzer created the original renewal plan and Sheraine van Wyk was involved in the scientific studies and monitoring. All members are concerned residents of Stanford/Overstrand and have a vested interest in ensuring the socio-ecological wellbeing of the community.

The 2018 community engagement process started in May and will continue up to the end of August 2018. Refer to Appendix 1 for a meeting schedule.

2 SITE CONTEXT

2.1 History of The Mill Stream and Willem Appel Dam

The Klein River Valley was first settled by farmers in the 1730s (Du Toit, 2000; Mouton, 2008). In 1838 Captain Robert Stanford retired from the British Army and settled in the valley, also buying up the surrounding farmland to farm. He supplied fresh meat and vegetables to the British government, transporting the supplies by ox-wagon to the coast at Stanford's Cove and then shipping it to Cape Town in his own cutter. To expand his operations, he commissioned the building of a large mill to grind wheat. He imported the machinery from Scotland and hired a Scottish miller to run the mill. The stream along which the mill was built became known as The Mill Stream (*ibid*.).

The Old Mill dates to before the town was established. It began operating in 1839 and played a vital role in the development of the area. The town itself was laid out and settled in 1857. The mill eventually closed in the 1940's and most of its pieces were carted away for scrap except for the main teak beam which was built into the fireplace of a local farmhouse. Figure 2 illustrates the extent of development of the village in 1938 as well as the relatively unimpacted stream (*ibid*.).

Figure 2. Aerial view 1938

At the time when the town was established, a system of open channels was built, originating from the source of The Mill Stream, called 'Die Oog' (The Eye)[1], which carried water to individual properties to irrigate the extensive vegetable gardens that residents kept. This system is a historic feature in the town today known as the Leiwater system (*ibid*.).

The feature which the townsfolk call The Willem Appel Dam, is really a borrow pit or impoundment, dug in the late 1980s. Mr Henry Gibson, a former town mayor recalls how a donation of R30,000 was made to the Universals Rugby Club by the late Dr Danie Craven of the South African Rugby board (H. Gibson, e-mail communication, March, 2018). The intention was to upgrade the rugby field, apply new top soil and build a vibracrete wall around it. The former Town Clerk, Mr Henry Pieters, was instructed to manage the R30,000. Without council approval, he appointed Naude Earth Removals, to get top soil for the field. The community found out about this when they unexpectedly saw the bulldozing in the riparian area of The Mill Stream. They recall how the beautiful valley with its many arum lilies, where children played endlessly, disappeared quickly (*ibid*.).

The Council and others were caught off guard by the creation of the borrow pit that was created in the centre of the two communities, and unhappy. The Town Council, the Mayor and the management committee questioned Mr Henry Pieters and they found that he acted on his own volition without consulting the Council and without their approval. Mr Henry Gibson, member of the Town Council at the time recalls, "so at the end of it all, we had a dam, with no use, but top soil for the rugby grounds. Money was spent where we had no say. For many years the dam was referred to as, The Dam. We also had two drownings in the dam. The community was not happy with the dam. But at the end of the day, people from the Council started calling the dam, The Willem Appel Dam, just to identify it" (*ibid*.).

[1] Also referred to as 'Die Bron'

2.2 Biophysical setting

2.2.1 *Hydrology and physiographic features*

The Mill Stream snakes through the town of Stanford in an S-shape. At its source is a fountain called Die Oog where water is pumped to a reservoir for potable water, and what is left is channelled into the leiwater system. In fact, no water comes directly from Die Oog into The Mill Stream but seepage from the catchment area feeds the stream as it passes around Stanford's industrial area, crosses the R43 and enters the urban part of town (Brits, 2016). The urban and industrial parts of Stanford lie in the catchment area starting at its most elevated rim in the south to the mouth of the stream in the north at its confluence with the Klein River. With a combination of hard and soft surfaces, run off and ground water from the various suburbs find its way into the stormwater and leiwater systems and both have multiple release points guiding untreated water back into the stream.

The basic geology of The Mill Stream system and surroundings is shown in Figure 4, with geological symbols derived from the 3319 Worcester 1:250 000 geological map (Umvoto Africa, 2016).

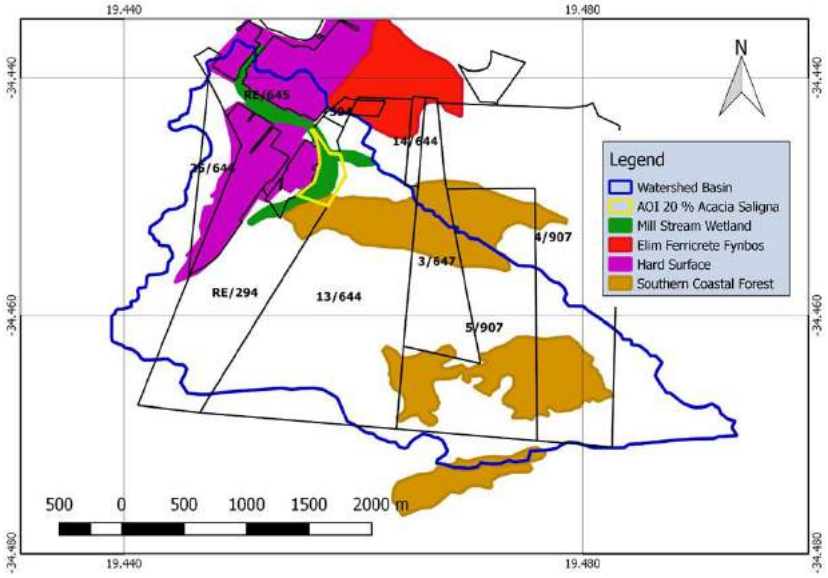

Figure 3. Catchment and other features
(Umvoto Africa, 2016)

The yellow area (Quaternary Waenhuiskrans Formation) and the green area (Quaternary fluvial gravel) are soils that generally have a Na-Ca-Alk (sodium-calcium-alkaline/carbonate) character due to groundwater interaction with the calcrete/limestone layers within the Waenhuiskrans Formation and carbonate-cemented gravels and coquina (shelly gravel) of the Klein Brak Formation (*ibid*.). This is an unusual substrate for a Cape wetland and affects the floral assemblage growing there making the wetland in the upper portion geologically and florally different to the more common Cape indigenous wetland flora growing on more acidic substrates (as found in the lower half of The Mill Stream). This therefore heightens the value of protecting this extensive wetland area from the source to the R43 crossing. However, because the natural wetland vegetation in the lower portion has been outcompeted by invasive reed growth and has all but disappeared, the difference between the two sections cannot easily be seen.

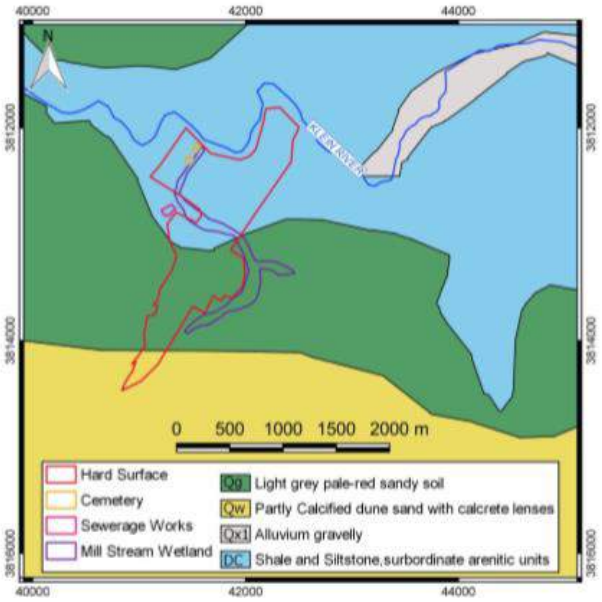

Figure 4. Soils of the area
(Umvoto Africa, 2016)

2.2.2 Current condition

The current degraded state of The Mill Stream is due to nutrient enrichment of the water in the stream. It is also due to the lack of flow through the system as the in-stream borrow pit captures and holds water.

The nutrient enrichment or pollution is caused by nitrogen and phosphorus-based chemicals entering the stream at various points. These include the stormwater and leiwater drainage points, seepage from the unreticulated sewage system in the Stanford industrial area and fertiliser run off from agricultural activity. In addition, the town's Waste Water Treatment Works (WWTW) is situated close to the stream and returns treated, enriched water back into The Mill Stream.

Nutrient enriched water results in excessive growth of reeds. The lower 75% of the Mill Stream is congested with reed growth. Biodiversity is low in these parts as the reeds outcompete other plants. The enriched water also stimulates excessive algal growth in the borrow pit causing eutrophic conditions resulting in dissolved oxygen levels dropping below what is needed to support aquatic life.

As in-stream cutting has not been done regularly flooding has occurred in key congested areas along The Mill Stream, for example at the De Bruyn / Vlei street intersection.

Along the industrial section of the stream is a heavy load of litter, illegally dumped rubble and human faeces. The Ou Krale area is also a litter hotspot notably for, broken glass, cigarette butts and bottle caps and pull tabs.

2.2.3 Importance and significance

The Mill Stream is a tributary to the Klein River of which the estuary is the fifth most important in South Africa mainly due to its importance as a sea fisheries nursery. The estuary has been given a level C ecological classification in a recent ecological water determination study due to an estimated increase in freshwater extraction of about 20% and increasing pollution in the Klein River. Reducing the pollution levels in The Mill Stream, allowing water to flow freely through the system with additional filtration through a rehabilitated wetland and will improve the ecological functioning of the Mill Stream and will contribute to a healthier estuary.

As explained before, the upper Mill Stream wetland is unusual and worthy of care (refer Figure 6 for the demarcation of critical biodiversity and biodiversity support areas).

The lower wetlands are very degraded and should be restored as an ecological support area particularly as this is the rangeland for the endangered Western Leopard Toad. The borrow pit/Willem Appel Dam boasts the honour of being a breeding pond for the toad. However, the number of toads counted during the breeding seasons of the last two years have been in decline. During the 2016 breeding season approximately 50 calling males were heard at the dam while in 2017 the

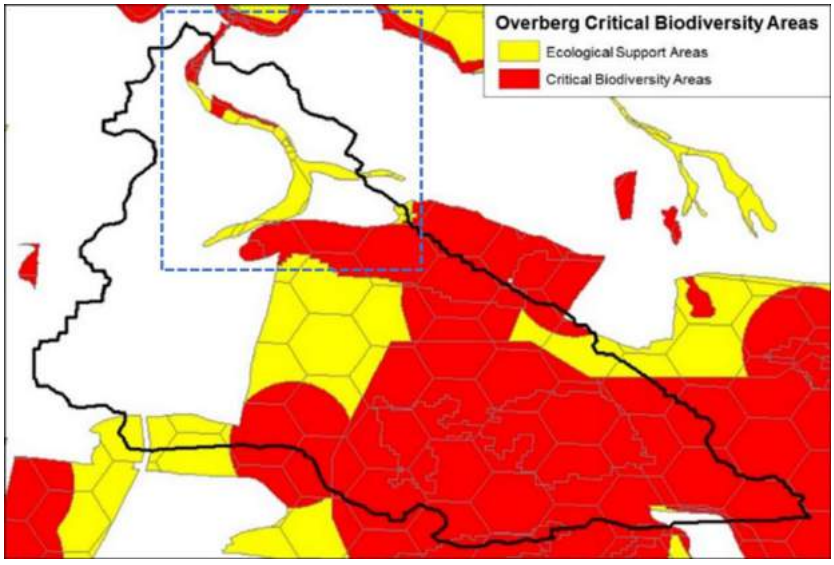

Figure 5. Overberg critical biodiversity areas
(Umvoto Africa, 2016)

number was 3. The restoration of the dam/stream area is important for the local survival of the toad. The Western Leopard Toad has been used successfully as a tourist attraction in suburbs like Noordhoek and is an unexplored and therefore unrealised tourism asset to Stanford. If the rehabilitation actions are implemented, toad numbers are expected to increase and can make a positive impact on the local economy as it has had elsewhere.

2.3 Urban setting

Historically, The Mill Stream formed the urban edge of Stanford, yet during the Apartheid era, the stream became a physical division between the white and non-white communities, separating the integrated nature of Stanford as a rural village (Du Toit, 2000). This history has been well documented, and the sentiments associated with the forced removals still linger within the psyche of the village. The geographical center of Stanford has shifted with the numerous new developments in the southern portion of the village and will continue to do this as the new extensions are implemented. The Mill Stream has similarly shifted from being the edge to becoming the center of the village and could thus serve much more as a cultural and recreational asset bridging rather than dividing the community of Stanford.

The entire area along the length of The Mill Stream is zoned as Open Space Zone 2 (see Figure 6 and Figure 7), primary use being public open space - consent uses could include environmental, recreational, and tourist facilities, urban agriculture, utility services, any other related use permitted by Council.

The following development rules apply to such zones:

a) A site development plan must be submitted to the satisfaction of Council
b) The Council may require an environmental study and/or environmental management plan
c) The Council must determine the development rules that apply when:
    i) The zoning of a land unit to this zone is approved
    ii) Any environmental impact report is considered
    iii) Any environmental management plan is considered
    iv) Any site development plan is approved
    v) Prior to the approval of any building plans or engineering services.
d) No structure shall be erected, or use practiced except such as is compatible with ‘public open space’ as defined
e) Structures/buildings may be erected with the written consent of Council, should Council deem it necessary, if Council may impose conditions relating to design, architecture and developments parameters.

All the public open space areas are under ownership of Overberg Municipality as is the Utility Zone to the north of Die Bron primary school, set aside for municipal utility services, in this case the WWTW.

One other zone applies, to the east of the R43 – Residential Zone 1 under single residential use, currently privately owned by Seriso 324 cc.

The upper portion of The Mill Stream is partly overgrown with reeds, some alien plant infestation, the site of illegal dumping, occupied by vagrants, used as an informal toilet and thus seldom used for anything else. Being the source of The Mill Stream, this area has wetlands and natural pools, and could have potential as a conservation area, both from a natural and cultural perspective, linked to its importance as the source of underground water that has sustained Stanford as an agricultural village for more than a century and a half.

The impoundment itself is not seen as an asset, given the drownings that have occurred, the water quality which is poor, it is seen as a division between the two sides of the village and does not feature on the village’s

tourist attractions and must-see sites. It's origin, being rooted in the Apartheid past of the country, is shrouded in a lack of consultation and powerlessness and the borrow pit remains a reminder of an unpleasant time of forced removals and unwanted relocation.

The Ou Krale Picnic Site and Willy Demper's Garden, with recreation and braai areas, is not seen as an attraction and generates a lot of complaints about noise, littering, and undesirable social activities. Despite having beautiful trees, some formal walkways, and a viewing deck (which is no longer in a good condition), the park infrastructure is bulky, uninviting and mismatched with the heritage character of the village.

The portion from the pedestrian crossing (dam wall) to Vlei Street is relatively unused and the section between De Bruyn Street to the Klein River has walkways, but no seating, and a difficult link at the confluence.

By-laws prohibiting swimming at the boat-launching site (bottom of du Toit Street) has further diminished a recreation opportunity long enjoyed by the community before the forced removals of the 1970s.

The intent of the proposed Mill Stream Village Park and Greenway Concept Master Plan is to address current shortcomings, described in the preceding sections, and use the excellent opportunities the stream and surrounding areas offer in creative ways to meet the expressed needs of the Stanford community.

Figure 6. New housing development layout

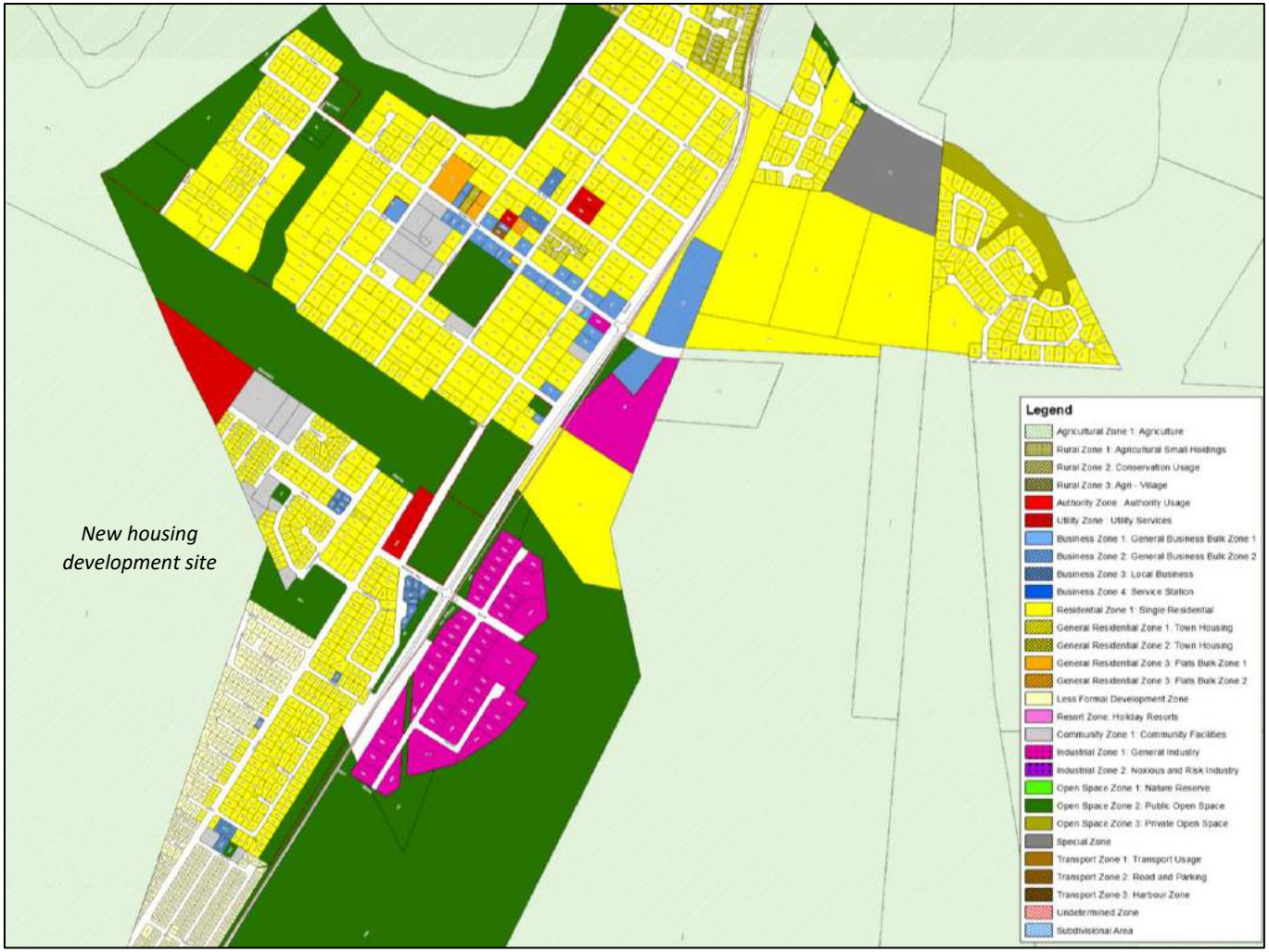

Figure 7. Stanford Zoning
(Overstrand Municipality GIS Portal)

3 CONCEPT

3.1 Aim and future desired state

The project aims to address two key aspects in an integrated, coordinated and aligned manner:

- The first to remediate The Mill Stream and improve its ecological functioning, locally, as well as, regionally in the context of the Klein River's catchment
- The second to establish The Mill Stream watercourse as a village park and greenway, creating inclusive, multi-purpose community areas.

By implementing this project Stanford will have cleaner water, richer biodiversity and contribute to the improvement of the Klein River's ecological category, a future desired state that will benefit the people of Stanford. By optimising the uses of public open space in a way that is valued by the community, support for the stream remediation and conservation will be gained.

Figure 8. Stream planning reaches

3.2 Concept master plan

The proposed interventions in respect of The Mill Stream improvement project will be described according to three sections or stream reaches – from source to confluence with the Klein River (refer Figure 8).

1. 'Die Oog' down to the R43 – 'Stanford Nature Reserve'
2. From the R43 to where the stream turns along Vlei Street - the 'The Mill Stream Village Park'
3. From De Bruyn Street to the confluence with the Klein River – the 'The Mill Stream Greenway'.

3.2.1 Stream remediation

Stanford Nature Reserve

In the Nature Reserve reach, the following interventions are proposed:

- Reed cutting in the section from the shooting range to the R43 to open pool for water birds and frogs in a two-year cycle
- Botanical survey of entire wetland area
- Insect survey needed
- Regular clean-ups needed – The 'Friends of The Mill Stream' can for example be strengthened to assist with this
- Confirm and address sources of pollution particularly nutrient enrichment
- Address high human faeces load in catchment

The Mill Stream Village Park

The creation of the in-stream borrow pit fundamentally altered the topography, shape, ecology and functioning of Mill Stream. By today's standards and environmental laws, this activity would be condemned but because the excavation predated the passing of current law there is no legal obligation for restitution. However, where possible, there is a moral obligation to improve the ecology of the watercourse. Unfortunately, the soil taken from the area when the borrow pit was created, is very difficult to replace. It

would require infilling using the same type of soil which, if it is found, would most likely be in another water course from which it would be unlawful or unethical to take. The best course to follow is to use what material is available on site and reshape the borrow pit from its current bath-like form with steep sides and deep bottom (see Figure 9) to more gradually sloped sides with multiple pools with depths that are needed by the waterfowl currently occupying the borrow pit. The historic aerial photographs can be used as a guide in the planning of the remediation, but the outcome will not be a return to the pristine conditions that were before but rather a remediated, best case form (see Figure 10).

Figure 9. Impoundment depths (Brits, 2016)
(Interpolated model – the original depth measurements taken are indicated by blue dots – the yellow circles indicate where more sampling points are needed)

In the central reach, the following interventions should be undertaken:

- Reed cutting to open pool to the west of the R43 – specifically purposed for water birds and frogs
- Lowering of dam wall and reshaping of borrow pit to allow for the free flow of water through the stream while maintaining pools of 1,5 – 2,5m depth for water fowl
- Where soil is exposed, a wide and thick replanting of indigenous wetland plants is needed - this is where a vast arum lily field can be encouraged to re-establish (this is the only place where arum lily frogs were found during frog monitoring)
- The area below the dam wall needs to be reshaped to allow for free flow of water
- All alien plants must be removed
- Sources of pollution must be addressed i.e. litter, illegal dumping and untreated stormwater

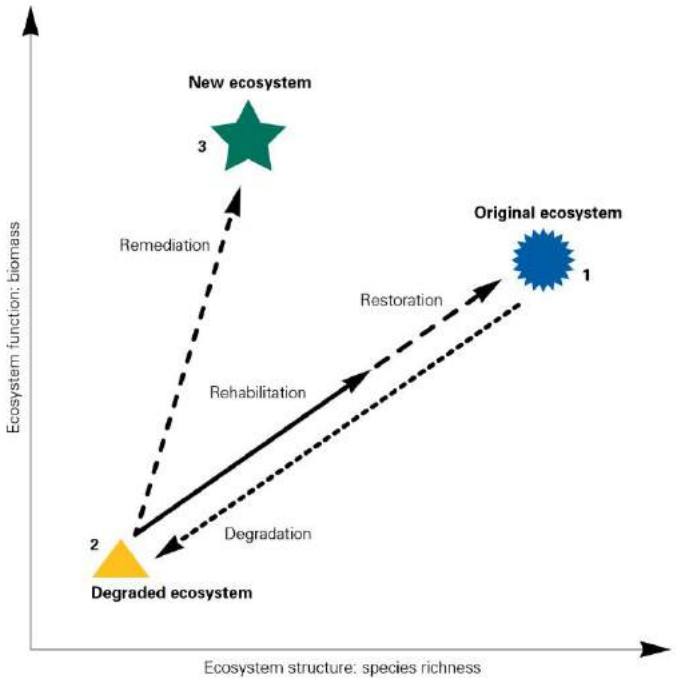

Figure 10. Diagram illustrating stream remediation approach
(Lovett and Edgar, 2002)

Extensive earth works will be required in this section, linked to the stream rehabilitation effort – a detailed earth works plan will need to be

prepared to ensure that both ecological and recreational objectives can be achieved, including pedestrian circulation, to accommodate stream crossings in key spots – e.g. current crossing across the dam wall.

The Mill Stream Greenway

In the Greenway reach, in stream reed cutting along Vlei Street to open the water way and allow water to flow will be required. Address sources of pollution (untreated stormwater and animal sewage) in this portion of the stream.

General

The value of the voluntary actions of the Stanford community to the general upkeep of The Mill Stream cannot be underestimated. This includes the tireless actions of the Stanford Conservation Trust over more than 25 years, the Wandelpad team and various other groups. These actions include the removal of alien invasive plants, reed cutting, general maintenance of the Wandelpad and litter clean ups. The 'Friends of The Mill Stream' was created in 2017 to do monthly clean ups of the watercourse by the Thembelihle youth. These interventions apply to the entire length of the stream and need to be maintained. The work and support of the Overstrand Municipality in this regard must also be acknowledged. Not only is it important for these activities to continue but there is a need to increase community responsibility, co-operation and presence along the stream in this way.

3.2.2 Urban renewal

General

The urban renewal component of The Mill Stream remediation programme applies over the three broad areas, namely the nature reserve, village park, and greenway.

General interventions include:

- Trails, as an extension of current cultural and nature trails, which could include multi-use trails for walking, cycling, and trail running, phased to enable upgrading over time
- Improved lighting and street/park furniture (refer Figure 11), such as seating, dustbins, interpretation areas and outdoor classrooms
- Pedestrian friendly street crossings
- Signage to describe natural and cultural heritage, including stories, myths and legends of Stanford – supplementing and replacing current signage where appropriate
- Stormwater and leiwater inlets to The Mill Stream to be engineered with silt and litter traps, detention ponds, as well as, planting and hardening where and as necessary.

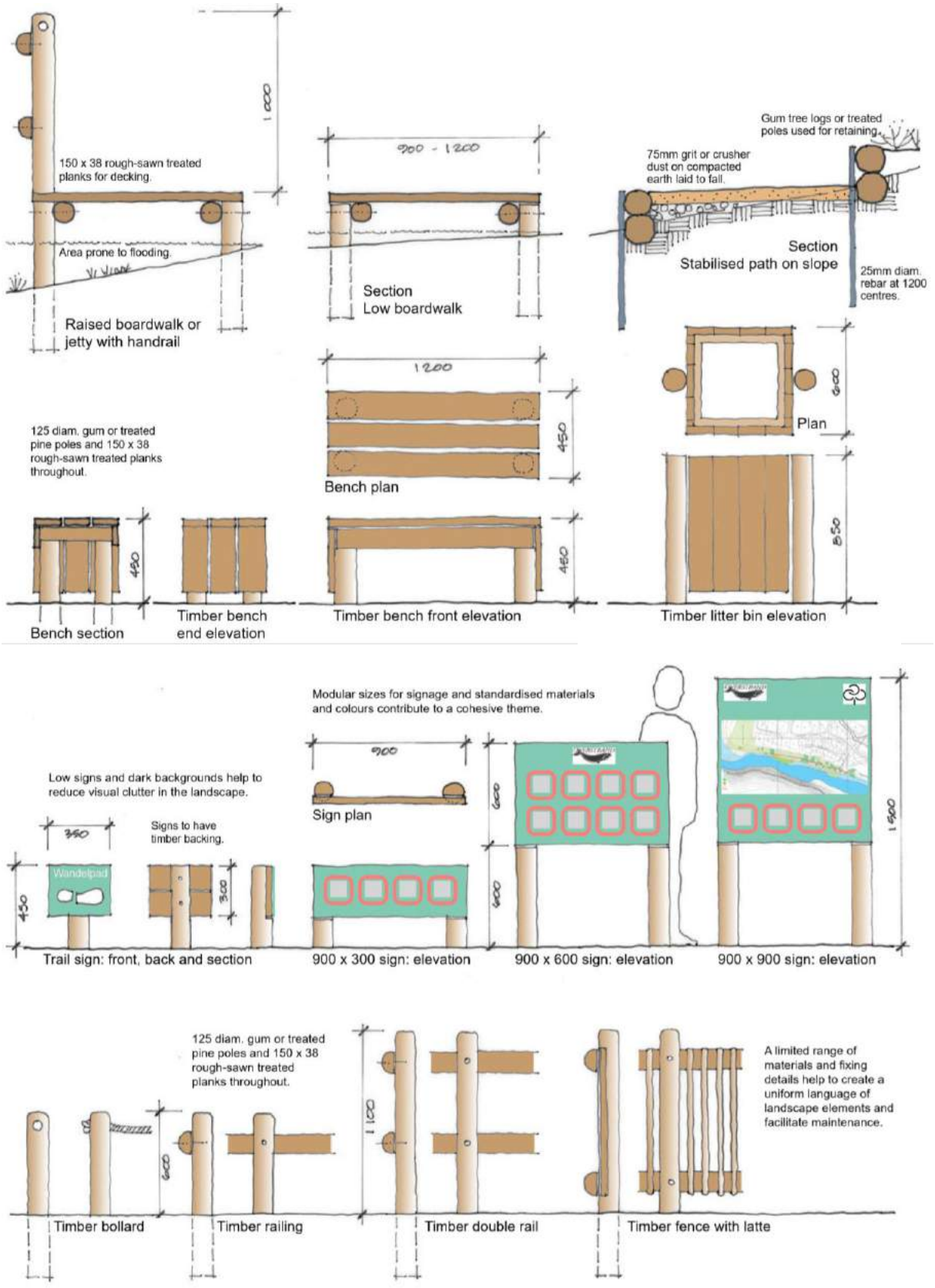

Figure 11. Paths, boardwalks and landscape furniture

Stanford Nature Reserve

Figure 12. Multi-use trail

The first urban renewal aspect is to establish a nature reserve in the area east of the R43 (see Figure 18), which could include the following interventions:

- Rezoning the area as a nature reserve, providing the area with formal protected area status, which could include discussions with the owner of erf 438 and 644/13 to include critical sections of these properties, such as the wetland to the east, into the nature reserve, under some form of conservation easement, or custodianship agreement
- Establishing a parking area at the end of Kleine Valley Street, with a security check point and possibly a security patrol on mountain bikes
- Building a multi-use trail on the western bank of stream, wide enough for walking, running and mountain biking and providing street furniture including less formal benches and informative signage regarding the heritage sites, such as 'Die Oog', the leiwater pipe, as well as the vegetation, frogs, and birds associated with this section of The Mill Stream (see illustrative photos below)
- Establishing a boardwalk to 'Die Oog' and the surrounding wetland as well as crossings along pedestrian pathways from the eastern bank
- Initially no lighting would need to be provided, thus access will only be allowed during day light hours
- If possible, build a new bird hide and viewing deck to the natural pool, with no swimming allowed in this section of The Mill Stream.

The Mill Stream Village Park

The second component of the broader urban renewal of The Mill Stream (refer Figure 19) includes two main sections, with the first being on the northern bank and the second, the southern bank.

One of the major interventions is a slight re-alignment and tarring of De Bruyn Street (refer Figure 18), inclusive of:

- A possible slip lane onto the R43 for heavy vehicles travelling along the Wortelgat Road
- An improved intersection with Moore Street helping to divert heavy trucks along De Bruyn Street
- Moving the De Bruyn Street carriageway about 2m further away from the adjacent homes to create a landscaped buffer
- Planting Milkwood trees on both sides of the street to create an avenue for visual screening and as a sound buffer
- Providing an off-set pedestrian walkway with its own alignment.

Figure 13. Park landscape along stream

On the northern bank of The Mill Stream, establishing an informal park landscape, adjacent to the avenue of trees along the realigned De Bruyn Street, with park benches in key areas; the bird hide overlooking the two deep pools immediately downstream of Bezuidenhout Street, and a restriction on swimming in this wetland conservation area.

On the southern bank, the proposed interventions include the creation of a family recreational area on either side of Church Street with small parking nodes – with picnic sites, allowing swimming in clearly identified areas in instream pools (refer illustrative photos below).

Figure 14. Family recreational areas

Figure 15. Instream pools suitable for swimming

Concerning the "Die Ou Krale Picnic Site", overlay this with an events arena linked to the Community Hall by removing the current cement structures and re-landscaping, thus softening the area, and establishing a formal parking area off Bezuidenhout Street distinct and separate from picnic and pedestrian areas, with lighting in key areas to accommodate events, such as the Sunset Markets, open air theatre and movie nights, even park runs (refer Figure 16 and Figure 20).

Establish a Skills Training and Enterprise Development Centre on the grounds of the existing community hall catering for the unemployed, disabled and youth. This centre can then access the existing facilities at the community hall. The centre, like the Montebello Design Centre in Cape Town, could include craft outlets or a market space.

To provide for the needs of the community regarding sport development, it is proposed that a Community Sports Centre be established at the lower part of the new housing development area and to the west of the sewage water treatment wetland, which should have multi-purpose indoor and outdoor facilities (including a swimming pool) and sport fields, where treated water can be used to water the fields. It is believed that by creating access to sports facilities in a safe, structured space, opportunities for sport coaching, training, leadership development, education and capacity building, for adults, as well as young people, can be encouraged, and this could become a fitness centre of excellence in the region.

The 'Boomkampie' area is a wedge-shaped piece of land between the Die Bron school and the WWTW, which the community used before. It is proposed that the berm be reshaped, and simple log outdoor furniture (benches and tables) provided for the community to use for board games and as a quiet meet and chat area.

It is proposed that an Outdoor Classroom area be established along the stream, particularly in the area adjacent Die Bron Primary School, along the stream and under the trees (refer Figure 17 and Figure 20). The dirt road in front of the Die Bron school is due to be upgraded as part of the housing development. It is requested that underground sleeve pipes be included here to provide for services to the area below.

Figure 16. Park Run events

Figure 17. Outdoor classroom

With refurbishment funding, it should be considered that the sewage treatment works be contained in buildings, use improved technology for tertiary treatment. It is suggested that tree planting can be considered along this road on the school side for screening and as a noise muffler.

The quarry area along this section of The Mill Stream can be converted into a useable art park and adventure play area, possibly with facilities such as skateboard ramps, climbing frames, BMX and pump track.

An indigenous plant and tree nursery, along with composting and wood chipping facilities, could also be included at the Wortelgat Road turn, using treated waste water for irrigation to be initiated at the start of the rehabilitation project providing crucial employment.

Regarding pedestrian movement in this section of The Mill Stream, it is proposed that a multi-use trail along the entire length of this section of the stream be established with adequate lighting in key areas, specifically walkways used to move between Central Stanford and Stanford South, inclusive of benches, dustbins, and signage.

For the pedestrian crossings in this section, it is proposed that these are established at Matilda May Street; Bezuidenhout Street; Fabriek / Kortmark Street – current position of impoundment wall; Church Street; and near the quarry to link up with Greenway trails, described in the next section.

The historic pipe across the stream (now covered by the impoundment) is a traditional landmark. In earlier years teenagers walked across the pipe as a rite of passage. Several people recall with remorse that they were unable to walk the pipe and requested that the pipe be exposed and accessible to enable this practice to occur again.

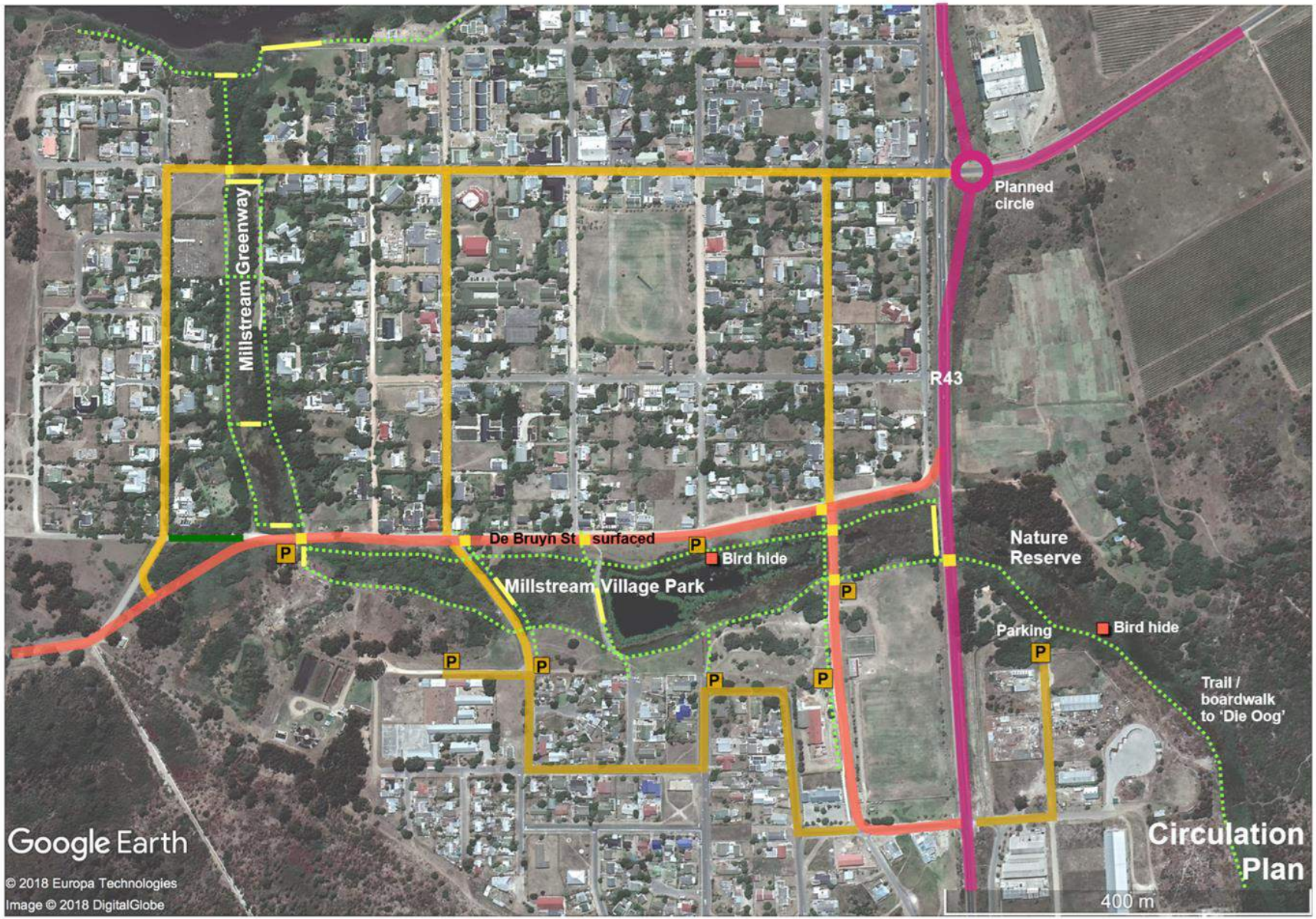

Figure 18. Proposed circulation plan

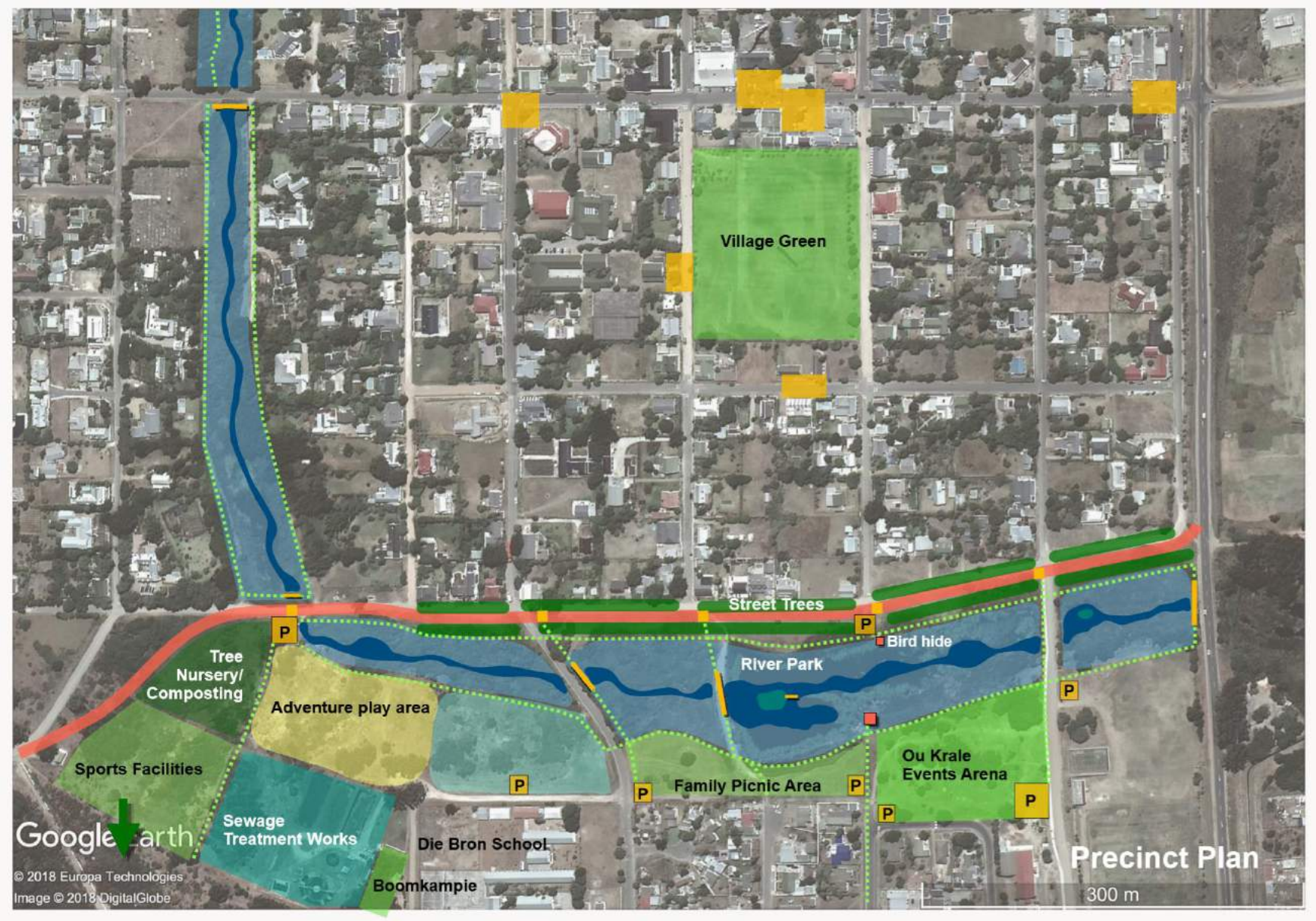

Figure 19. The Mill Stream Village Park reach

Figure 20. Ou Krale events arena and family recreational area

The Mill Stream Greenway

In the final section of The Mill Stream – between De Bruyn Street and the confluence with the Klein River (refer Figure 9), it is proposed that the existing walking paths be upgraded on either side of the stream with strategically placed benches and small bridge crossings linking the two sides, as well as boardwalks in wetter areas, enabling viewing of the stream from different perspectives. Interpretative signage can be placed at gateways as appropriate (e.g. at the entrance at De Bruyn Street) but with no lighting (see photo examples below). A timber bridge crossing is proposed adjacent to Queen Victoria Street, to cater for the lack of a sidewalk at the road crossing.

It is further proposed that a boardwalk be built at the confluence, seamlessly connecting with the current trail, and thus offering a wider selection of movement options for people to choose from.

Figure 21. Bridges and boardwalks

Figure 22. Illustrative signage at gateways

3.2.3 Programmes and events

Various programmes could be developed alongside the stream remediation and urban renewal interventions including youth development and education e.g. a Schools Education Initiative on The Mill Stream and wetlands which may include holiday camps and eco-club activities; sport events to be hosted at the Community Sport Centre with organisations like WCC, The Grootbos Foundation, Stanford Tourism, the two schools and SCORE collaborating to provide these.

Stanford as a village could benefit hugely from the development of tourism products and events such as Park Runs, hosting of the Cape Epic and the Race to Stanford by incorporating the trail network within the village

to such events. Arranging events such as Sunset Markets, and Land Art, or Big Birding events in some of the alternative park spaces are also possible.

The Stanford Story booklet can be revised to extend the historical walk within the core of the Village, with the Wandelpad, making the Stanford Storybook a collective of the ecological, natural and cultural assets of the Village, and producing maps of the various trails and tracks in and around Stanford.

4 IMPLEMENTATION

4.1 Project stages

The broad process for this project entails the following stages (see Figure 23):

1. Preparation of a concept proposal through a participatory process resulting in ratification by the ward committee and presentation for approval to the Municipality and if supported, incorporation into the IDP
2. Detail design and implementation planning and submission for final approval by stakeholders and Municipality. Aspects to be addressed include *inter alia*:
    - Detail landscape design of recreational spaces, infrastructure and furniture
    - Earth works and engineering designs and drawings
    - Planting designs and plans
    - Costing of interventions
    - Identifying possible sources of funding and preparing a funding strategy linked to a phased project implementation plan
3. Obtaining all relevant environmental and other statutory permissions including environmental and water use authorisations
4. Phased project implementation including monitoring and evaluation
5. Management and maintenance of areas.

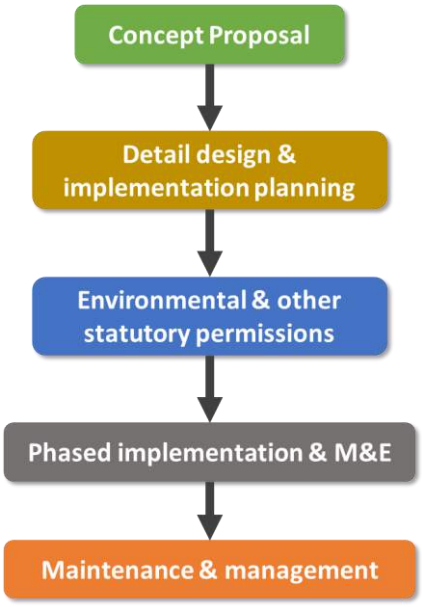

Figure 23. Project stages

This document constitutes the preliminary concept design / proposal stage (no. 1 above). Should this proposal be met with approval, the next step will be detail design and implementation planning of the project for both the stream remediation as well as urban renewal components of the project.

4.2 Institutional arrangements

The concept proposal has been prepared *pro bono* by private individuals and organisations – however, for the successful further implementation of the project it needs to be facilitated in a more formalised manner. As such, it is proposed that this be spear-headed by a representative structure of Stanford, being the ward committee, as institutionalised channel of communication and interaction between the community and the municipality and as a key and important mobilising agent for community action and partnerships for the development of local projects.

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APPENDIX

Appendix 1. Stakeholder engagement meeting schedule

Key:
SvW – Sheraine van Wyk; PB – Paul Bewsher; LB – Loraine Bewsher; KS – Karin Sfreddo; BO – Bernard Oberholzer

DATE	PLACE	PRESENT	MAIN DISCUSSION POINTS	NOTES
02-May	Mayor's Office	D Coetzee, PB, LB, SvW	Present motivation for MSIP and community engagement process, Mayor advised on strategy to use	Gave list of key stakeholders to meet with essentially the ward committee members. Use the Urban Renewal Plan and submit a revised plan by Sept 2018.
14-May	Coffee Corner	Stanford Conservation Trust [SCT] (L Hochvelden, D Hagen, B Whittiker) & project group (SvW, PB, LB, KS, BO)	Discussed need for ecological improvement of Mill Stream and to incorporate social needs in the improvement plan as a revision of the existing urban renewal plan. Process to be followed, stakeholder group, formulation of a concept document and plan.	Plan and ideas discussed at length. Process and motivations also discussed. Bird Club chair will be informed by SCT Chair.
14-May	Senior's Hall	J Oktober, S Volkwyn, M Erasmus, Wybrow Fourie, D Fourie, SvW, LB, PB, KS	Same as above	This group has felt excluded from planning phase of interventions before. Problems with lack of facilities for youth and opportunities for youth development. Also, difficulties with swimming in the river. Want a swimming pool and a family recreation area with benches. Some people complain about the activities occurring at the Ou Krale.
14-May	Senior's Hall	Z Zawula, PB, LB, KS, SvW	Same as above	Housing is a big problem as is the need for peace of mind that one is 'on the housing list'. Poverty. Lack of opportunities in town for jobs and money for transport to look for jobs and spend money.
15-May	Coffee Corner	Lyn Pullen, SvW, PB, LB, KS	Same as above	Institutional arrangements, Stanford Ratepayers Association (SRA) functions, ward committee processes.
15-May	Senior's Hall	Seniors, LB, PB, KS, SvW	Same as above	Historical recollections, desired outcomes

DATE	PLACE	PRESENT	MAIN DISCUSSION POINTS	NOTES
07-Jun	Senior's Hall	J Oktober, D Sabat, H Gibson, W Damon, SvW, LB, PB, KS	Same as above Photos etc	Community needs, historic experiences and recollections.
08-Jun	Gansbaai Muni	K Myburgh, project group (S vW, PB, LB)	Same as above	Get concept document done. Kat needs the community to speak with one voice.
08-Jun	Coffee Corner	Rotary (M Burry, L Coates), SvW, LB, PB, KS	Same as above	Rotary not involved with development issues, rather social support like feeding
14-Jun	Hermanus Muni	Town Planning (RK, SvdM), PB & LB	Same as above	Must look at zonation scheme and include this in the concept planning. Will assist in advertising or including the public open meeting in the public notices.
15-Jun	Coffee Corner	Chair of Chairs - H Poortman, LB, PB, SvW	Same as above; Kat's request for a 'one voice committee for Stanford'	Yes agreed, this is a need. Will consider putting this to the Chairmen's group, but the group will need to formalise their status and get funding to make it possible to perform this function.
15-Jun	Senior's Hall	T Volkwyn, CPF S Volkwyn & Hettie, Tourism (P Murray), L Rainbird (OM Parks), SvW, LB, PB	Same as above	Input from parks, tourism, CPF and youth/school needs. CPF suggested interacting personally with each of the nearest neighbours.
30-Jul	Bewsher Home	SvW, LB, L Hochvelden, D Hagen, C Wolf, B Whittiker	Preview of concept document	Guidance and advice given. Clarifications of plan.
01-Aug	Senior's Hall	SvW, LB, KS, L Hochvelden, J Oktober, Z Zawula, D Hagen, L Pullen, B Whittiker, P Murray, L De Villiers	Presentation of Mill Stream Greenways and Village Park	The concept document received a positive response from the group. Several amendments were suggested. It was agreed that these would be made, and the document would be circulated digitally after. Further feedback will be made after reading the amended draft. It was agreed that SRA would request that a presentation of the concept document be made at the next ward committee meeting.