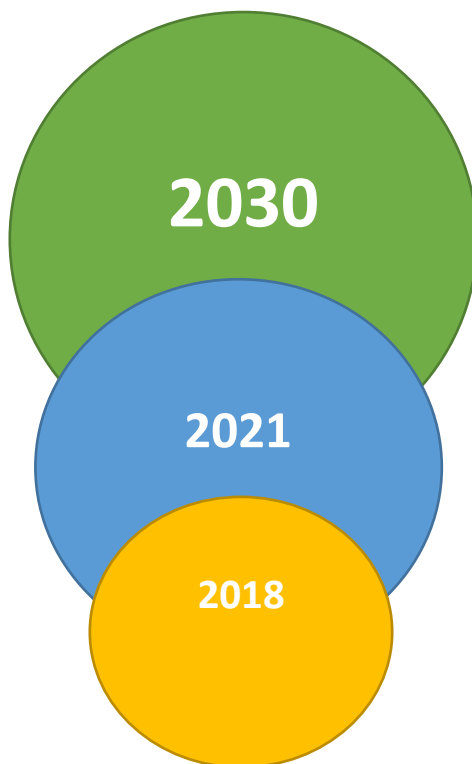


EDUCATION FOR SUSTAINABLE DEVELOPMENT

1. Education for Sustainable Development (ESD):

- To create and foster an ecological, social and economic awareness and stewardship through our curriculum and pedagogy.
- To educate this awareness and best practice in sustainability to the broader Bishops community, not just the boys (support staff, teachers, parents, ODs etc.).



1.1. Education for Sustainable Development at Bishops is achieved through a transdisciplinary approach of stewardship for the Sustainable Development Goals (SDGs).

1.2. There is an understanding within the Bishops community (academic, support staff, boys, parent body) of the actions required to maintain SDGs.

1.3. There is a transdisciplinary approach to the stewardship of the SDGs (e.g. project-based learning incorporating many departments and their actions within society).

Technological:

1.4. Improve communication around issues of sustainability (e.g. Principal's newsletter, Bishops website).

Behavioural:

1.5. Conduct workshops to generate awareness of the SDGs and sustainability to the following constituents:

- Head of Departments (HoDs)
- Whole school academic staff (during professional development)
- Whole school non-academic staff (e.g. kitchen, grounds, admin, sport support staff)

1.6. HoDs to plan how to implement stewardship of the SDGs within their curricula.

1.7. Societies such as Global Issues Network (GIN), NEXUS, Interact, Accelerated Art Programme, Science Café etc. to actively promote the awareness and stewardship around the SDGs.

1.8. To establish an ODU GIN club for the promotion of the SDGs.

What has been done in 2017?

Technological:

1.4. Sustainability website and email alias has been set up for streamlining communication.

Behavioural:

1.5. Awareness has been generated around issues of sustainability, with a particular focus on water.

Numerous

1.6. A meeting has been had with HoDs on implementation of SDGs into curricula, but this is ongoing.

1.7. Societies have actively been promoting sustainability. GIN boys have been involved in ISASA Youth Environment and Leadership Programme in conjunction with Cambridge University Institute for Sustainability Leadership. They will be attending a conference at Bishops on 22 and 23 July 2013.

The Global Issues Network group boys are involved in a range of sustainability projects both within the Bishops community and outside.

GIN boys took part in the interschool's sustainability project collaborating with learners from Christel House.

Boys from all houses did a visual electricity audit and will be meeting with Terra Firma to learn how to best use the software to initiate electricity reductions within the house.

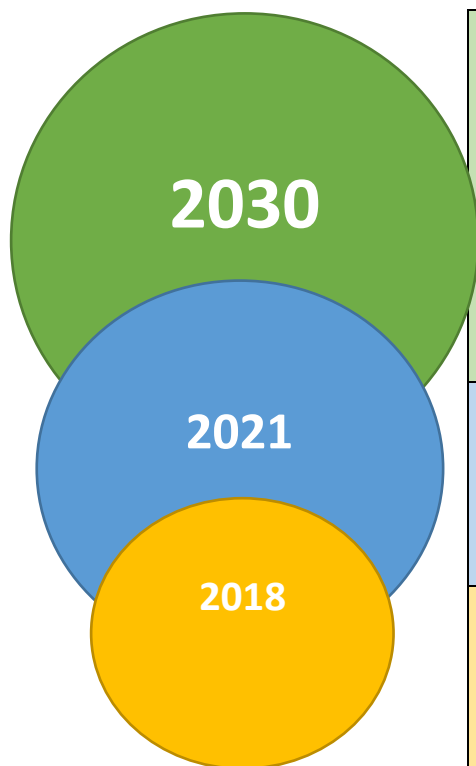
A group has drawn up a water leaks reporting sheet that can be filled in as an online survey with info sent through to maintenance and then checked to see if leaks have been fixed.

Sustainable Agriculture Society is a new initiative as an offshoot of GIN and there are several Grade 11 boys working on issues around food security at Bishops, creating a permaculture designed vegetable garden which feeds primarily the support staff. They are working on a "Legacy Food Forest".

1.8. Still to be done.

2. Innovation for Sustainable Development:

- Provide spaces for the emergence of innovation surrounding sustainable development and its technologies for all within Bishops.



2.1. A dedicated makerspace laboratory is established where Bishops boys and staff are able to have a hands-on learning environment where modelling, prototyping, and validation resources for innovation on sustainable development coexist. This space will need equipment for a community of innovators that focus on designing and problem solving¹.

2.2. Opportunities for sponsorship and interaction within the makerspace laboratory are established for the broader Bishops community including the private and public sectors.

2.3. Sponsorship initiatives are set in place for the establishment of the makerspace laboratory.

2.4. Establishment of ad hoc makerspaces around the school that promote innovation on sustainable technologies (e.g. Technology as a subject takes on a design challenge for solving Bishops' water crisis).

Behavioural:

2.5. Societies should emphasise the SDGs and create innovation spaces for action on these.

2.6. ODU GIN society incorporate innovation opportunities (e.g. ODU GIN breakfast club).

2.7. Opportunities, incentives and acknowledgements provided to support staff for innovative ideas that can be acted on.

What has been done in 2017?

Behavioural:

2.5. Societies have started emphasising the SDGs. Cultural Head has implemented themes of sustainability into Eisteddfod.

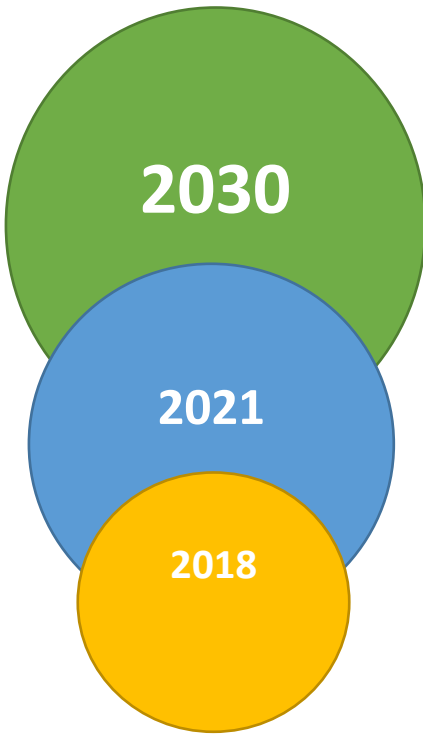
2.6. Continuously working on innovative initiatives within GIN and other societies. Sustainable Agriculture Society has been set up as an offshoot of GIN and are working around innovative ideas of permaculture designed food gardens and a "Legacy Food Forest"

2.7. Need to work on.

¹ Adapted from MIT Makerspace <http://makerworks.mit.edu>

3. **Energy:**

- Ensure affordable, reliable, sustainable and modern energy for Bishops at all times.



3.1. Bishops to have established the use of renewable sources to be 80–100% off grid.
3.2. All new builds, alterations or construction changes to have their plans inspected by a yet-to-be established panel or process prior to its commencement or continuation, so as to ratify its appropriateness in terms of the Bishops guidelines of sustainability, energy efficiency and use of renewable energy where possible/feasible.
3.3. All major renovations and retrofits need to reduce non-renewable energy and use renewable energy options where possible.
3.4. Bishops will be using ecological design to improve energy efficiency (e.g. plantings outside buildings and vertical gardens).
3.5. Reduce motor traffic on campus and improve the through-flow of traffic by implementing “no-car” zones, therefore reducing idling and carbon emissions.
<i>Technological:</i>
3.6. Install energy monitoring system to establish current energy usage.
3.7. Retrofitting energy saving devices in all buildings on Bishops (e.g. energy saving lights, AAA refrigeration, double glazing in windows, solar geysers, habitation sensors, timers on geysers).
3.8. Insulating buildings to reduce the need for heating and cooling.
<i>Behavioural:</i>
3.9. Conduct visual surveys on all energy usage on campus (e.g. energy appliances to be surveyed in in each house).
3.10. At Bishops, immediate strategies are implemented across the school to reduce the number of electrical appliances and their more efficient usage by boys and staff (e.g. reduce number of fridges in boarding houses, and filling up freezers in the kitchen with bottles of water).
3.11. Introduce immediate strategies to reduce energy consumption in all parts of the school (e.g. in each house, based on the

surveys, develop context-specific strategies to reduce energy consumption).

3.12. Review method of reporting energy wastage and if necessary implement improved method for all boys and staff on campuses.

What has been done in 2017?

Technological:

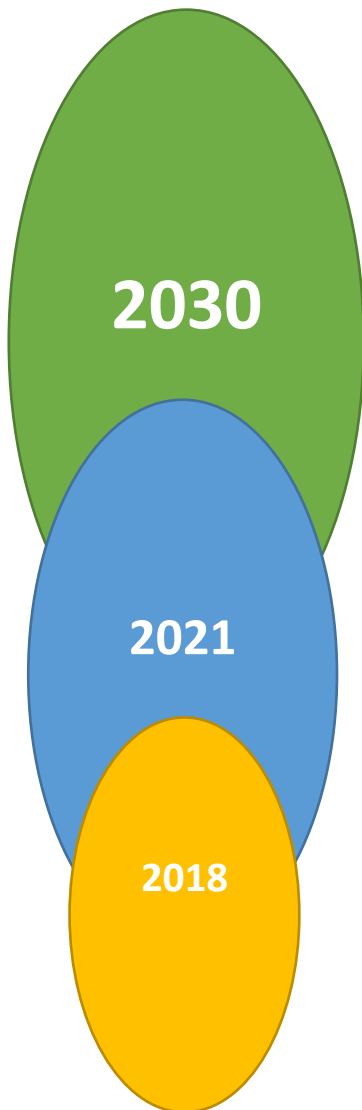
- 3.6. Installed detailed energy monitoring system through outsourced company Terra Firma around entire Bishops campus.
- 3.7. Retrofitting at Bishops is very conscientious and mindful towards energy saving technologies.
- 3.8. Still to be done.

Behavioural:

- 3.9. Visual surveys have been conducted through GIN in all houses.
- 3.10. Boys and staff still need to have engagement and learning programme with Terra Firma and take ownership of data and identifying energy wastage in school before immediate action can take place.
- 3.11. See 3.10
- 3.12. See 3.10

4. Water:

- Ensure availability and sustainable use of water and sanitation for Bishops.



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| <ul style="list-style-type: none"> 4.1. Bishops will be entirely self-reliant on all its water sources through borehole (underground) water, rainwater or any externally collected storm water runoff that comes onto campus. 4.2. Bishops will reduce water consumption through ecological design (using water-wise plants) and through other innovative green technologies. 4.3. Bishops will recycle and reuse all other forms of waste water – storm and grey - on campus through ecological design (e.g. reed bed filtration systems), increasing reservoir capacity, improving recycled water quality for drinking and using other innovative green technologies to reduce water consumption and reuse water. 4.4. All toilet systems on Bishops campus will be waterless thereby establishing a complete reduction in any previously produced black water. |
| <ul style="list-style-type: none"> 4.5. Bishops to become self-reliant for its non-potable water needs. 4.6. Introduce waterless urinals in all areas of the school. 4.7. All major renovations and retrofits need to have low water usage. 4.8. Must use ecological design and/or other technologies to improve water efficiency (e.g. high-efficiency faucet aerators, high-efficiency pre-rinse spray valves, energy star qualified dishwashers, FOG tanks). 4.9. All watering of sports fields must be computerised to improve efficiency. 4.10. Grounds on campus that don't need water must be identified and further water must be stopped completely or seasonally. 4.11. Where possible grassed areas to be replaced with water-wise plantings or Astro Turf. 4.12. Installing a second reservoir for recycling and reuse purposes. 4.13. Rainwater harvesting to be implemented and used within houses. 4.14. Timer systems to be installed in all house showers, appropriately limiting shower length and access to hot water. |
| <p><i>Technological:</i></p> <ul style="list-style-type: none"> 4.15. Install water-monitoring system to establish water usage. 4.16. Retrofitting water-saving devices in all buildings on Bishops (e.g. low flow showerheads). 4.17. Install pool covers for both pools. 4.18. Fix all leaking faucets. 4.19. Using biodegradable cleaning materials. 4.20. Install waterless hand sanitiser in all bathrooms. |

Behavioural:

- 4.21. Conduct visual surveys on all water usage on campus (e.g. leaking tap audit).
- 4.22. Review method of reporting water leaks and wastage and, if necessary, implement improved method for all boys and staff on campuses.
- 4.23. Immediate strategies to reduce water consumption in all parts of the school (e.g. timed showers on campus, water flower beds only in morning and evening).
- 4.24. Only the playing fields and common school grounds are allowed to apply for special exemption from normal residential restrictions applicable at the time.
- 4.25. Increased use of on-site reservoir by purifying water for reuse.

What has been done in 2017?

Technological:

- 4.15. In discussion with Terra Firma on this matter. Borehole measuring, monitoring and management is being discussed and set up.
- 4.16. Retrofitting is being carried out as best as possible
- 4.17. To be confirmed.
- 4.18. Ongoing issue, re-looking into reporting of water issues system, in an attempt to set up something more immediate and appropriate.
- 4.19. Using biodegradable cleaning materials is now standard practice.
- 4.20. waterless hand sanitiser has been established in all bathrooms.

Behavioural:

- 4.21. A visual survey has been done on water and tap leakages. Discussion is being had around the reporting of this to Maintenance.
- 4.22. See 4.21.
- 4.23. With the introduction of Level 4 water restrictions, Bishops is making every attempt to move off municipal water supply and put in strategies around water saving.
A huge step that Bishops made was to introduce a different uniform policy during the drought which meant that boys could wear sports clothing to lessons, instead of changing clothes and thereby creating more washing.
Discussions are being had around how Bishops can move off municipal water completely and sustainably use and manage its ground water resources.
Permeable paving and underground storage tanks have already been set in place (under hockey astro parking lot), looking to recycle storm water where possible but this is ongoing process that needs to be integrated into the future planning and spatial understanding of the Bishops campus.
New main pipes are going to replace the asbestos pipes, which will reduce the water wasted at Bishops through leaking.
Ground water sterilisation through chlorination is being set in place to ensure the safety of our drinking water.

4.24. Only non-potable water is being used to water grounds and playing fields. These are also being watered at times when evaporation rates are low. Water wise irrigation methods are being implemented and being used for watering.

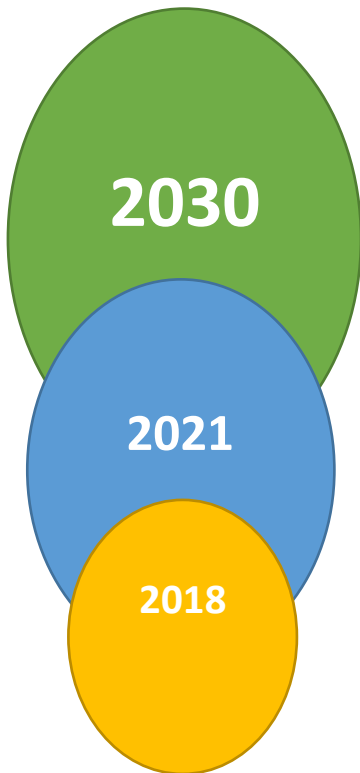
4.25. A larger project is being investigated on the storage, sterilisation and utilisation of groundwater on campus. A holistic, integrated watering system is being considered in an attempt to reduce water consumption as well as implement new technologies and equipment to ensure Bishops' water future.

Other:

- There has been huge awareness at Bishops at all levels regarding water during this 2017 drought season and this is something that will be ongoing.

5. **Food Security:**

- Achieve overall food security at Bishops through providing safe and nutritional food that promotes sustainable agriculture and sustainable food systems.



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| <ul style="list-style-type: none"> 5.1. Well-established working food garden on campus, the products of which are utilised ethically by Bishops community members. 5.2. All suppliers of food are required to provide evidence of their sustainable practises. 5.3. All food consumed on campus should be locally produced, seasonal and have followed sustainable practises. 5.4. All food waste needs to be composted and where possible re-used at Bishops. 5.5. Align Bishops food systems with latest research on sustainable food systems |
| <ul style="list-style-type: none"> 5.6. Well-established working food garden on campus, the products of which are utilised ethically by Bishops community members. 5.7. All suppliers of food are required to provide evidence on their contract and to report on their sustainable practises surrounding their food systems. 5.8. All food consumed on campus should be locally produced, seasonal and have followed sustainable practises. 5.9. All food waste needs to be composted and where possible re-used at Bishops. 5.10. Hot nutritional lunches provided to all Bishops staff. 5.11. Align Bishops food systems with latest research on sustainable food systems |
| <p><i>Behavioural:</i></p> <ul style="list-style-type: none"> 5.12. Financial models (e.g. cross-subsidisation due to savings on waste) need to be investigated that enables sustainable food systems to be implemented at Bishops. 5.13. No individual plastic water bottles and juice to be provided at any Bishops function. 5.14. Discussions between Bishops stakeholders and Origin must take place on existing food systems and potential solutions need to be created that facilitate Origin to move towards a sustainable food system. 5.15. Hot nutritional lunches provided to majority of all Bishops staff. |

5.16. Low to no sugar food alternatives are introduced.

What has been done in 2017?

Behavioural:

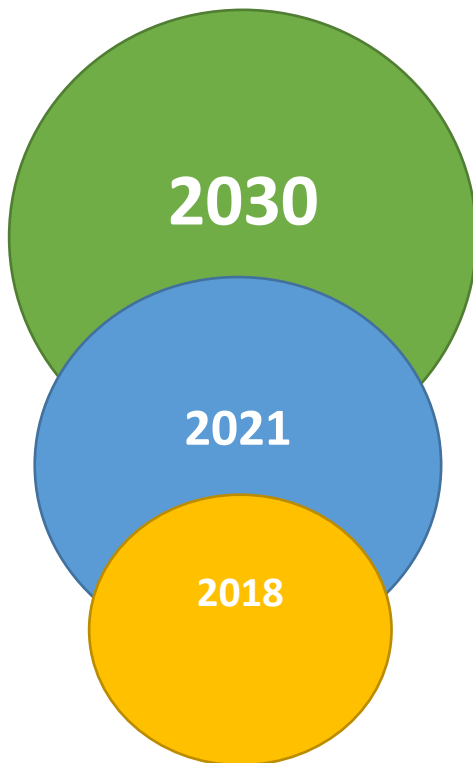
- 5.12. Not done yet, still waiting for some returns on other policy areas before cross-subsidisation can happen.
- 5.13. Meetings have been had with Marketing Department and for all events at Bishops, certain measures and guidelines will be in place to eliminate waste from food packaging. No direct meetings have been had with Origin at this point.
- 5.14. No constructive discussions have been had with Origin at this this point in time.
- 5.15. This has been happening and is valued at Bishops by all staff.

Other:

- Sustainable Agriculture Society has been established as an offshoot of GIN. There is a keen interest amongst boys to grow food in a sustainable manner (using permaculture and agro-ecological principles). This society has been on a weekly basis during school term, managing a vegetable farm on school campus and distributing any food picked to support staff.
- GroPros have been set up throughout the school, which grow food and educate boys and staff about food systems and ecology.

6. **Solid Waste Disposal:**

- Bishops and their partners need to reduce waste at its source, reuse waste where possible and recycle all waste produced.



6.1. All packaging coming onto Bishops must be compostable or can be 100% recycled.
6.2. Establish an integrated waste management system.
6.3. Majority of packaging coming onto Bishops must be compostable or can be 100% recycled.
6.4. Establish a formal waste separation and recycling facility for all waste generated at Bishops.
6.5. All new subcontractors are required to provide evidence on their waste generation implications of projects and procurement decisions at an early stage and fully integrate resource life cycle information into purchasing decisions and project management.
<i>Behavioural:</i>
6.6. Recycling initiatives at Bishops to continue and be improved.
6.7. Discussions between Bishops stakeholders, Origin and existing subcontractors on ways to reduce solid waste coming onto campus and recycle solid waste produced.
6.8. All events held at Bishops must align with the principles of reduce, reuse and recycle.
6.9. All external events and hiring of Bishops facilities must remove waste produced or pay a cost for waste removal.
6.10. Where waste cannot be recovered or re-used it must be treated or disposed of in an environmentally sound manner.

What has been done in 2017?

<i>Behavioural:</i>
6.6. Major work is being done in this area. Currently, recycling at Bishops cannot keep up with the waste it produces and so is done in a relatively haphazard fashion, however it has been successful in improving the livelihoods of extended community members. Investigations have been put in place to move Bishops towards a two-bin system, outsourcing recycling to a successful small business. We have continued to recycle
6.7. A large area of waste management that hasn't been addressed adequately.

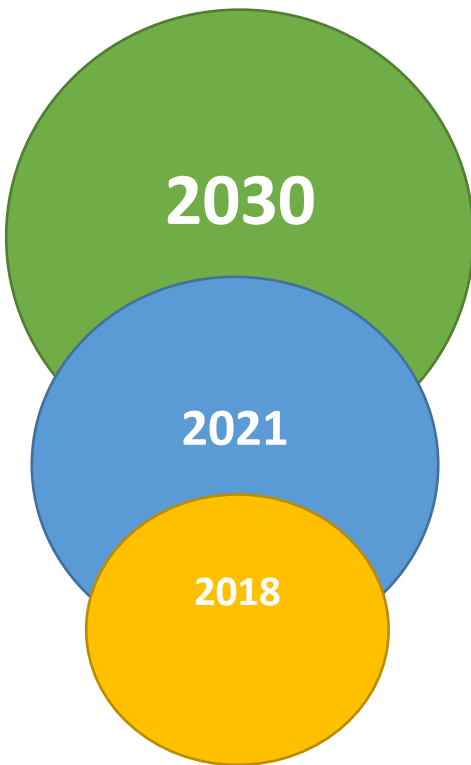
- 6.8. Discussions have been had at Marketing and Events level on this and support has been given.
- 6.9. This needs to be discussed in more detail.
- 6.10. This is done to a certain level of success but further work is needed.

Other:

- Wet waste produced by the kitchens is being taken care of successfully. It is sent to pig farmers who use it to feed their livestock.

7. **Biodiversity:**

- Bishops and their partners must protect, restore and promote the rich biodiversity on campus, reversing land degradation and biodiversity loss.



7.1. The Bishops campus becomes a flagship organisation for local biodiversity, soil enrichment and water-wise usage.
7.2. Establish the Bishops botanical biodiversity index.
7.3. All new ground subcontractors are required to provide evidence on their contracts and to be able to report on their sustainable practises.
7.4. Majority of fertilisers, pesticides and insecticides used are environmentally supporting and enhancing.
<i>Technological:</i>
7.5. Begin movement towards fertilisers, pesticides, insecticides and other technologies that are environmentally supporting and enhancing.
<i>Behavioural:</i>
7.6. When removing invasive aliens, replace with water-wise, long-lasting or indigenous vegetation.
7.7. Preference given to appropriate non-chemical pest treatment.

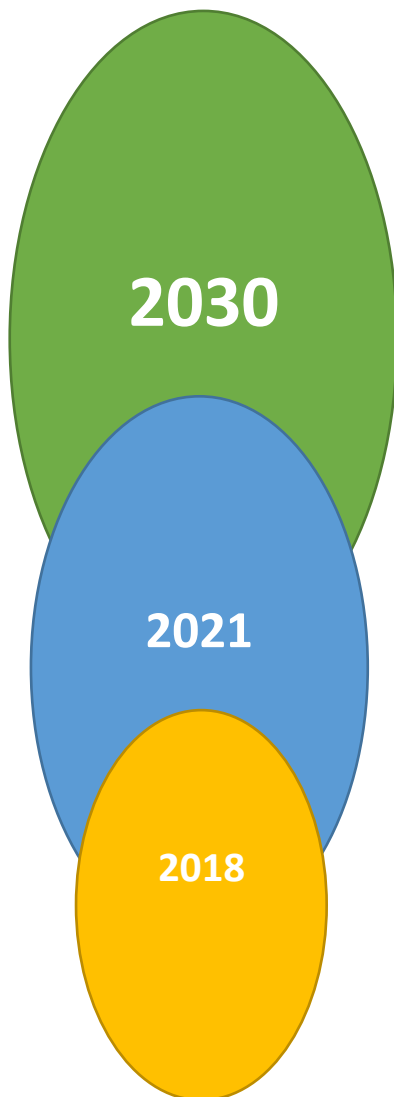
What has been done in 2017?

<i>Technological:</i>
7.5. New grounds contactors Turfworks are strict on using environmentally supporting and enhancing fertilisers, pesticides and insecticides. All compostable waste on campus is composted by Turfworks up at their UCT facility and then brought back to Bishops campus to be used in flowerbeds and on grounds. Certified organic chemicals are used sparingly.
<i>Behavioural:</i>
7.6. Plantings now done on campus are all indigenous and water-wise. Turfworks have a thorough knowledge on local indigenous planting palettes.

7.7. Where possible pesticide control is non-chemical and so other strategies are used such as complementary planting and biological control methods.

8. Leadership for Sustainability:

- Bishops must continue to develop future leaders, innovators and creative thinkers in the space of ecological, economic and social sustainability; paying particular attention to the needs of disadvantaged and marginalised communities within and around Bishops.



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| <p>8.1. To be a leading institution around implementation of the 17 SDGs.</p> <p>8.2. Boys to be leaders on the SDGs within Bishops and the broader community.</p> <p>8.3. Whole school to have societies that promote the guidance and implementation of the SDGs.</p> <p>8.4. To have a full-time, dedicated sustainability/SDGs coordinator(s) employed at the school who oversees the guidance and implementation of the SDGs as per the School's mission statement.</p> |
| <p>8.5. To have a full-time, dedicated sustainability/SDGs coordinator(s) employed at the school who oversees the guidance and implementation of the SDGs as per the School's mission statement.</p> <p>8.6. Council and Executive to commit to the SDGs as guiding principles for all school operations and within the curriculum.</p> <p>8.7. Annual reporting on sustainability to be presented to Council so that it can provide leadership for moving forward.</p> <p>8.8. To be able to provide evidence of how SDGs are incorporated within school operations and the curriculum, from Pre-prep through to College.</p> <p>8.9. Whole school to have societies that promote the guidance and implementation of the SDGs.</p> <p>8.10. A Grade 12 leadership portfolio is established that is dedicated to increasing awareness and implementation of SDGs.</p> |
| <p><i>Behavioural:</i></p> <p>8.11. To continue to develop the role of GIN within the College and ensure its sustainability.</p> <p>8.12. Establish societies aligned with the SDGs within Prep, parent body and ODs.</p> <p>8.13. Prep and Pre-prep sustainability committee members to grow the understanding of SDGs within their respective schools.</p> <p>8.14. Improve communication around issues of sustainability (e.g. Principal's newsletter, Bishops website).</p> <p>8.15. Bishops boys to participate in the ISASA Youth Sustainability initiatives.</p> |

- 8.16. Bishops to host the youth and staff ISASA Sustainability Conference.
- 8.17. Leadership for sustainability is implemented into the Grade 11 leadership camp and Grade 11 Heads of Houses' seminar.
- 8.18. Maintain and promote the current Grade 12 green portfolio.

What has been done in 2017?

Behavioural:

- 8.11. Continuously done.
- 8.12. Still working on Prep and OD involvement but an ongoing process.
- 8.13. Still looking for Prep champions. Decision has been made for Sustainability Coordinators to go down to the Prep and do work there, instead of waiting for them to show interest.
- 8.14. Principal's newsletter has focused on certain issues around sustainability such as water, however we would like to see this becoming a more permanent item in his communication. Webpage has been established and is up and running.
- 8.15. Boys and staff are participating in the ISASA Environment and Sustainability Leadership Programme.
- 8.16. Bishops is hosting the ISASA Adult and Youth Environment and Sustainability Leadership Programme.
- 8.17. Leadership for Sustainability to be addressed at Grade 11 Leadership camp.
- 8.18. Green portfolio to be rebranded as sustainability portfolio for 2018.