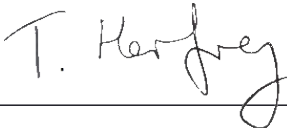




Design Assessment Form

Diploma Apprentice's Name	Mark D'Cruz
Date Apprentice started Diploma	July 4th 2023
Project Title	Animal Husbandry: Regenerative Ecosystem Design
Design Number	9 of 10
Date Design Started	2024
Date Design Completed	31st March 2025
Has the Design been implemented?	Beginning (four months into a 60-month implementation plan)
Online Link to Design (if available)	
Type of Design (delete all that don't apply)	Land Based
Design Category (delete all that don't apply, more than one could apply)	Land & Nature Stewardship
Name of Personal Tutor	Tom Henfrey
Ready for Presentation	Ready / Nearly Ready
Name & Signature of Assessing Tutor	Tom Henfrey 

Date of Assessment	<p>First Assessment: April 16th 2025</p> <p>Second Assessment: May 19th 2025</p> <p>CE Observation26-06-25</p>

If this design is included in the FPA2 sample assessed by a Senior Tutor:

Comments from Senior Tutor	
Name, Date & Signature of Senior Tutor	

Section 1: Demonstrating Design Skills

	What's gone well?	What could have been done differently?
<p>1a The design uses an appropriate design framework or intentional process accurately (e.g does the design visit every step of the process)</p>	<p>The design introduces a new custom design framework, GRAZER, specially designed for regenerative animal husbandry and rooted in the Regenerative Trinity, the apprentice's own unique synthesis of permaculture ethics, ayurvedic principles and bonsai practice. The GRAZER framework is fully described, and evidenced, in a 4-page appendix, and includes all the major steps required in a design framework.</p> <p>The logical flow of the design is now far easier to follow (also see comments on 2.1b)</p> <p>Great to see a new framework/process being</p>	<p>While all the steps are visited, much material that I would consider analysis only appears in the report in the Z section (see details under 2.1b below). The design itself thus appears before much of the analysis on which it is based, making the actual process hard to follow.</p> <p><i>Mark's reply: I have updated the Z-Zone Design section to distinguish between the Zone Design and Implementation phases clearly. This is now reflected in both the section titles and a revised visual colour scheme, making the progression</i></p>

		created and used, a sign of a higher level of competence	more intuitive and easier to follow.
1b	It utilises the permaculture ethics appropriately	The design shows clear influence of the permaculture ethics, all four of which (including both Fair Share and Future Care), are highlighted at various points throughout the report, especially in the preamble that describes the vision and context for the design. The GRAZER framework also specifies taking account of the three ethics (Earth Care, People Care, Fair Share) during goal-setting. Agree	
1c	The design uses permaculture principles & theory that are appropriate to the situation	The report highlights the influence of numerous permaculture principles (mainly from Holmgren and Mollison) at various points. It also draws upon the apprentice's own Ma-Ke Bonsai Way principles, developed in a previous design. Permaculture theory employed includes: zoning, soil regeneration, holistic grazing management, agroforestry, animal welfare, nutrient cycling, keystone design Agree	Don't lose sight of the value of the principles as design tools in their own right Yes this is a key point – what makes it “permaculture” is the application of ethics & principles using a design framework
1d	It uses a variety of tools to suit the needs of the situation / design brief	Appropriate tools are used throughout the design process, including: Vision Statement, SMART Goals, Baseline Surveys of overall site, biodiversity, soil and water, analysis of limiting factors, adaptive planning, zones, implementation plan, livestock rotation schedule, use of silviculture principles, various tools for ongoing evaluation and monitoring, a version of the 4 Questions for overall design evaluation. Agree	
1e	The design is intelligible, coherent and effective,	The design includes a clear implementation plan at two levels: year-by-year over the first	The implementation plan makes sense in outline, but omits much detail crucial for a complete

	meeting the client's needs	<p>five years, and a seasonally adjusted 12-week cycle of livestock rotation. It also includes detailed costings for initial set-up and ongoing annual expenditures, allowing assessment of its financial viability.</p> <p>The expanded Implementation Plan is very thorough and gives a clear year-by-year breakdown of key steps, supported by the more detailed monthly plan in the GANTT chart. As with most of the designs in the second half of your portfolio, their close inter-relationship introduces boundary issues - particularly in this case with the silviculture plan, which is very prominent in the later years, with little direct mention of livestock at this point.</p> <p>Agree</p>	<p>understanding. I can see how it works as an outline guide for implementation of your own design; to aid comprehensibility (and perhaps as a self-check of your own level of clarity), I suggest writing this part as if for a client who would be responsible for implementing it themselves.</p> <p><i>Mark's reply: The Implementation Plan has been significantly expanded. It now moves from a broad strategic overview to a more tactical, step-by-step presentation. To support this, I've also created a Monthly Gantt Chart, developed in Excel, to make the sequencing and planning of actions clearer and more accessible.</i></p> <p>Yes Gantt charts usually do the job!</p>
1f	The documentation is appropriate to present to the clients and others	<p>As usual, well-organised, clearly laid out and nicely presented, with effective use of layout, text formats, colours, photographs and diagrams.</p> <p>Typos and formatting inconsistencies are now addressed</p>	<ul style="list-style-type: none"> • Typo: Domistic (p. 17) • Some inconsistency in capitalisation in picture captions <p><i>Mark's response: Identified typos, including "Domistic," and inconsistencies in capitalisation have been corrected.</i></p> <p>Index/contents page and page numbers would help</p>

Section 2.1: Applying Permaculture Design (For Designs using processes such as SADIM, OBREDIM, CEAP)

	What's gone well?	What could have been done differently?
--	-------------------	--

2.1a	There is a clear explanation of how the design brief was investigated through surveying the situation and gathering the information.	<p>The design brief is inspired by the traditional Montado sylopastoral system, and articulated as a series of SMART Goals relating to Soil Improvement, Biodiversity Enhancement, Integration of Ayurvedic principles and Restoration of the Montado habitat.</p> <p>The Resources step combines various resource assessments, mostly summarised from previous designs, including flora/fauna (Design 8), water (Design 5) and soil (Design 3), adapted to the specific context of animal husbandry and integrated via an input-output analysis.</p>	
2.1b	There is a clear explanation of how the design decisions and solutions were developed.	<p>Key challenges concerning landscape management identified through analysis of limiting factors are translated into adaptive planning strategies in three key areas: rotational grazing, silvopasture systems and soil regeneration. These strategies are then integrated into the existing site zonation and zone-specific management regimes determined in previous designs.</p> <p>The additional material and tweaked order of content in the Resources and Analysis sections makes the reasons for key decisions much clearer, and the design as a whole easier to follow. As you say, it's not easy to capture a non-linear design process in this format, especially one this complex: the evaluation and reflection upon the GRAZER design process is important in this regard, and demonstrates the affinity between the cyclic natures of both the design process and the management plan itself.</p> <p>All good – now more detail on why and how design decisions were made, which is important.</p>	<p>The report would benefit from a fuller explanation of the analysis and decision-making processes through which you identified key challenges and translated them into adaptive strategies, with greater emphasis on the design tools employed.</p> <p>The decision-making process between the strategies and zone-specific designs are also obscure; as a consequence, key design decisions come out of nowhere a bit. It would be useful to start with a description of existing conditions and management plans in each zone earlier, in the Survey section, and clear descriptions of each step in the decision-making process from these baseline conditions to the final design decisions.</p> <p>Much key information that has informed design decisions is included in the pages on Animal Roles and Benefits (p. 19), Integrating Silviculture Principles (p. 20), the Ayurvedic Food Forest and Montado System (p.24, 28): these would be more logically placed earlier, in the analysis section, before the allocation of animals to zones described on page 16.</p>

			<p>Agree – integration is classically in the design stage, though at least the narrative is there! Personally, in the design stage I typically look for 1. integration, 2. placement, and 3. application of PC principles</p> <p><i>Mark's reply: My approach to design has shifted from a traditional linear model to one that is far more spiral and cyclical - a reflection of the dynamic nature of permaculture itself. The Resources, Analysis, and Design stages are deeply interconnected for me; I often move fluidly between them. Studying resources sparks design ideas, which in turn send me back into deeper analysis. This recursive process can feel messy, but it is generative. Inspiration often arises mid-analysis, prompting me to sketch out ideas on the fly before returning to refine the analysis. While this reflects an authentic permaculture workflow, I understand that it may appear disjointed to the reader. In response, I've reorganised the presentation, repositioning key content and making the use of design tools more visible throughout the Resources and Analysis sections. This should help clarify the decision-making pathway leading into the design phase. I also discuss this iterative process more fully in the new GRAZER Framework Evaluation section toward the end of the document.</i></p> <p>All good reflection</p>
2.1c	The solutions are	Different livestock species are closely integrated	Question on content rather than process: about

	<p>relevant and appropriate to the area and design brief.</p>	<p>into the overall site design, based on their agroecological properties and the functions they can perform within the management regimes for different zones determined in previous designs. Agree – as this is a design integrated into a site with multiple levels of other designs already, this has been clearer how the livestock aspect is addressed and designed <i>in particular</i>, reducing confusion about goals of different areas of the property that was present in designs 6 & 7 in particular, and #8 less so.</p>	<p>fencing – you have mentioned rotational grazing and lots of agro-silvicultural planting, that all requires fencing to protect new/existing trees or livestock exclusion areas (either keeping livestock in or out), but I can't find any reference to type of fencing. It's a technical point, but one important enough to deserve a mention imo – as this is a design about livestock! Without appropriate fencing, be it permanent (hedges are mentioned but even they need fencing to establish), temporary, movable, living or whatever, livestock will become the right element in the wrong place. OK I see you mention e-fencing p.28</p>
--	--	--	---

Section 3: Learning from and Developing your Permaculture Practice

		What's gone well?	What could have been done differently?
3a	<p>The design report includes an evaluation of the design's effectiveness.</p>	<p>A comprehensive in-design evaluation regime covers soil health, animal health, community monitoring and use of ayurvedic knowledge, in each case presenting a justification, set of key actions and list of tools and approaches employed. This supports an ongoing process of 'Refinement and Regenerative Tweaking', ensuring that the design will continually evolve during its lifetime. Agree</p> <p>The overall design evaluation considers what's working well, areas for improvement, current limiting factors and next steps - leading to the significant decision to begin with a small pilot and scale up from there, drawing more</p>	<p>The in-design monitoring and evaluation protocol is ambitious, and perhaps difficult to achieve within the 5 hours per month allocated to evaluation efforts.</p> <p><i>Mark's reply: As someone who's been around a few growing seasons, I feel the urgency of time - and with it, an inclination toward ambitious designs! That said, monitoring is not treated as an isolated task in my system. Instead, it's woven into daily practice. With mobile devices and simple record-keeping habits, these observations and notes happen in real-time, often on the move. Allocating a full hour each week might be ideal,</i></p>

		extensively on the support and knowledge of technical professionals. Agree	but in reality, even quick field notes and photographic tracking are highly effective when done consistently.
3b	There is a critical reflection on what you have learnt about the design processes, tools, ethics, principles and theory that you have used.	A list of key learnings, each expressed in both prosaic language and more poetic terms. The 'GRAZER Framework Evaluation' lists numerous benefits of the novel design approached developed for this design, highlighting its affinity with permaculture, Vrikshayurveda and the traditional montado silvopasture system.	No direct reflection on the elements of the design toolkit employed: I see this as particularly important in a design as ground-breaking as this one, introducing an entirely new design framework and further advancing the apprentice's novel conceptual synthesis of permaculture and ayurveda. <i>Mark's response: I have added a dedicated GRAZER Framework Evaluation section to reflect on the tools and principles behind this framework explicitly, how it evolved through this design, and how it serves as a synthesis of permaculture and Ayurvedic thinking.</i> Great I would also have suggested self-assessment using the IDA form that is an effective way of reflecting.
3c	The design shows how design skills and competence have progressed and some next steps for design practice.	Your design practice is reaching new levels of confidence and maturity, both consolidating your previous achievements and further pushing the edges through use of custom design frameworks and the increasingly fluent interweaving of knowledge systems through which you express your unique design philosophy. Agree - definitely	

Section 4: The Next Steps

What are the apprentice's next steps with this design , towards its accreditation.	<ul style="list-style-type: none"> • 1e: Add more explanatory detail to the implementation plan • 2.1b: Reorganise and, where necessary, extend the descriptions of the observations and analyses on which your main design decisions are based • Include some additional reflection on the use of the GRAZER framework and other key innovations in this design (e.g. integration of ayurvedic principles, montado habitat, adaptive management) <p>My previous feedback has been adequately addressed, and the design is in my view ready for accreditation.</p> <p>Agree – all good to go, well done on another great design</p>
What other general or specific issues might help with the apprentice's next steps, eg. to take into future designs.	<p>Given the increasing complexity and interconnectedness of your designs, the introductory summary becomes increasingly important. It would be useful if this could include a clear statement of the aims of the design, its start and end dates and the implementation schedule, and highlight cross-connections with other designs in your portfolio.</p> <p>Agree</p> <p>Though you're at the end of the portfolio I'd encourage you to try doing short designs that are more simple – all your designs, while of great content and process, are also long and often complex. It would be great to see your obvious skills and passion for permaculture adapted to short, simple design work too – the permaculture community needs this as it helps to grow momentum and protect against overwhelm and distraction!</p>
Any other comments about the format of the project presentation,	<p>Clear, well-illustrated, and easy to follow</p>
The highlight of this design for me is...	<p>The multi-dimensional integration of livestock as a set of keystone processes that touch upon all features of your overall site design.</p> <p>Really liked the boxes where the design was contextualised specifically for animal husbandry (pp.11-15)</p>

Space for any other notes and comments to the apprentice

Boundary issues that have been evident throughout the second half of your diploma (and noted in Chris Evans' observations on designs 6, 7 and 8) are in play here, with strong overlap with the silviculture design in particular, and to a lesser extent with the water, soil and food production strategies, especially in the Implementation section. This is probably inevitable given the close and increasing integration of the overall farm system and the emergent nature of the overall design process, and especially so given the integrating nature of this design

and the fact it was not anticipated at the start.

Yes and also see comment in 2.1c above – this design has been clearer about the areas of the property specifically addressing livestock elements

In order to clarify this, I suggest including a full systemic overview of the Vila Pinheiro land design in your final portfolio, highlighting the functional interconnections among the different systems described in individual designs. This could either be part of your Action Learning Pathway, or included in the addendum previously requested (some longitudinal evaluation of the overall site design).

Good idea !