DairyNZ

Off paddock infrastructure investment checklist

Use this checklist as a guide for navigating the complex process of considering off-paddock infrastructure

	Planning	Additional comment
○	**Define the purpose, agree on your business investment strategy and values**	What is the build for (wintering, calving, feeding etc) and how does it fit your system and long-term goals?
○	**Set realistic timeframes to deliver the build**	Start planning 12-18 months in advance to manage consenting, weather and construction delays
○	**Identify and investigate potential infrastructure options**	Keep an open mind on options from the start
○	**Visit existing builds and speak to other farmers to support decision-making**	Visit a range of off-paddock infrastructure options when in use and ask lots of questions
○	**Identify and plan for site specific constraints**	Topography, drainage, access to gravel/fill and prevailing weather can all impact the cost and functionality
○	**Consider the integration with existing infrastructure**	Cow flow, feed access, laneway positions, power and water supply and effluent integration are all important
○	**Finalise design**	Ensure the design is fit-for-purpose and future-proofed
○	**Finalise budget**	Include capital and ongoing operating costs. Check eligibility for grants or funding schemes
○	**Develop a contingency plan**	Financial, operational and timing contingencies are required
	Design	Additional comment
○	**Consider location-specific effects of different roof types**	Roof selection will impact natural light, damage risk and ongoing maintenance
○	**Consider how bedding will be brought in and out?**	Roof height and access points are critical for efficient bedding and stock handling
○	**Is there sufficient ventilation and optimum airflow?**	Airflow is important for odour removal, air quality and bedding management
○	**Consider shade cloth on the sides for temperature management**	Provides flexibility for ventilation
○	**Position water troughs away from bedding material**	Keeping bedding dry will help extend its lifespan. Design for easy cleaning
○	**Situate the silage stack for easy access while still allowing for expansion options**	Location for ease during conservation and feeding out will improve efficiency of use

	Consenting	Additional comment
○	**Consider expert advice to support the consenting process**	Consenting is a big task that can be streamlined with expert support
○	**Finalise building design before consents are lodged**	Changes to the design during the consenting process can increase cost and extend timelines"
○	**Gain building consent approval**	Be aware of regional council requirements relating to visual impact and need for neighbour approval
○	**Gain discharge consent approval**	Consider using the Dairy effluent storage calculator (DESC) to support your consent
○	**Gain land use change consent approval**	Could be required if changes to cow numbers, farm operations etc
	People	Additional comment
○	**Select a reputable build team with a proven track record**	The build team is critical for success; values and expectations should align
○	**Identify the skills required for the new system; do the skills match the current team?**	Machinery maintenance is critical when cows rely solely on conserved feed; Animal husbandry skills differ for managing cows indoors
	Building	Additional comment
○	**Agree expectations, timelines, responsibilities and communication with the build team**	Ask the tough questions early and be clear about deadlines
○	**Agree on the contingency plan for staff or contractor changes**	Personnel changes can result in unexpected challenges and delays
○	**Ensure the instruction manual is available for imported kitset designs**	Clear instructions are required to avoid costly mistakes and delays
	Bedding	Additional comment
○	**Determine the right bedding for your system**	Composting barns, freestalls, and calving areas all have different bedding needs
○	**Have a plan for short- and long-term supply of bedding material**	Investigate a range of options to avoid reliance on the market or a single source
○	**Have a plan for storage and disposal of bedding**	Where will the bedding be stored, composted and spread, to minimise environmental risk?

	Effluent	Additional comment
○	**Complete Dairy Effluent Storage Calculator (DESC) calculations early**	Required for consenting; calculate for maximum likely use
○	**Consider integrating the effluent system with dairy shed effluent**	Allows mixing of effluent streams for ease of management and spreading
○	**Ensure all equipment is available for effluent and bedding management tasks**	Scrapers for cleaning feed lanes, rippers for bedding management, tanks for flood wash, spreaders for application
○	**Complete a nutrient budget and revisit the effluent area to minimise the risk of nutrient overload**	Maximise the consented effluent area and if possible, gain consent for application to areas where silage is cut
	Feed supply	Additional comment
○	**Have a plan for reliable short-and long-term supply of sufficient good quality conserved feed**	A higher Dry Matter (DM) diet will keep stalls cleaner and prolong the life of bedding in loose-housed facilities
○	**Identify feeding processes to ensure the diet meets cow requirements**	Test conserved feeds. Having scales on wagons will minimise under-and over-feeding
○	**Ensure suitable feed out equipment is available/budgeted**	Is the existing machinery fit-for-purpose or are upgrades required?
○	**Revisit your re-grassing plan if you previously used winter crop**	Growing more grass will reduce the need for purchased supplements

Go to **dairynz.co.nz/off-paddock** for more information