

52 Tips

*for designing & building
your new home in NZ*

Residential &
Commercial
Architecture

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You're in the right place...

Building a new home is an exciting new challenge and there is a lot to think of to get it just right. That's why the Team at Arcline Architecture Ltd have put together this comprehensive yet simple list of key items and processes that are easily overlooked when designing and building your new home – and that we can help with....so it's hassle free!

We have years of extensive experience designing new homes and processing designs through local councils for our clients. Our strong network of preferred partners in the construction industry help to get your dream home fully approved and built. Many of our clients live in other countries so we guide them through the process and take care of all the finer details.

The best place to start is here. One of the Arcline Team can meet you on site and starting with a blank canvas design your home to suit your needs, your budget and your site. We also have standard plans available.

Enough talking, take a look at the 52 Tips:



1. Site Access

Careful design and planning of your driveway by your Architect can save thousands of dollars in earthworks, drainage, retaining walls and resource consents.

2. Prevailing Wind

House shape and Placement of decks and doors away from the prevailing wind gives you sheltered cosy areas to sit outside yet away from the wind. Arcline can advise your local weather patterns and design your house to give you the required protection from the weather.

3. Sun & Light

Positioning rooms to suit morning and evening sun is very important. Are you a morning person and like the sun streaming into your master bedroom in the morning? If so, position the master bedroom and kitchen on the East side of your home to catch the morning sun. Careful design of roof overhangs is also important to maximise sunlight into your home and Arcline use computer sun modelling tools to ensure your home is in the best position.



4. Views

A new home needs a great connection to your site and views. Do you want the view as a big surprise when you walk in the front door? Or have it unfolding as a surprise as you walk through the home? Windows need to be positioned exactly to take advantage of the views. By using Google Maps and your local councils GIS mapping systems you can get this right.

5. Service Connections

When buying a site, research the location of key services (power, water, phone, sewer, stormwater) and get estimates of costs to connect to them. Every local council has an online mapping system that is free to use and that show available public services nearby your property. If your property doesn't have available connections close by there are alternative options, just speak to a professional.



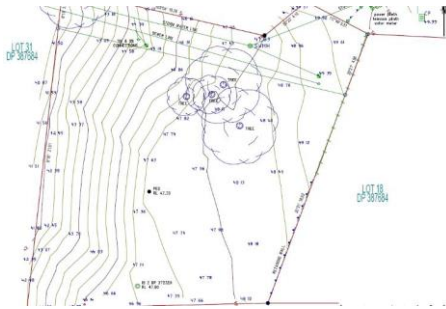
6. Public Services Aren't Available?

For water, rural sites that aren't nearby public connections need water tanks and often when less than 20m from bush, an additional firefighting water supply stored in tanks as well. For sewer, if an on-site sewer disposal is required you will need a sewer design, commonly called a TP58. Where there is no stormwater connection nearby your site or if exceeding the impermeable surface council rules for the zone a stormwater system designed by an engineer (a TP10) will be needed. It is good practice to install a good filtration system when on tank water.

7. House Orientation

This can make a big difference to the comfort of your new home, how the inside flows to the outside and how it collects the sun and shelters areas from the wind. Arline can advise the best position of your new home on your site.

8. Land Contour



Where your new home is located on the topography can make a huge difference to the cost of foundations. A surveyor needs to locate your site boundaries and do a 'topo' plan of the site. Arline can then 3D model the contours to get the exact cut & fill volume and area, as well as the floor levels for your new home.

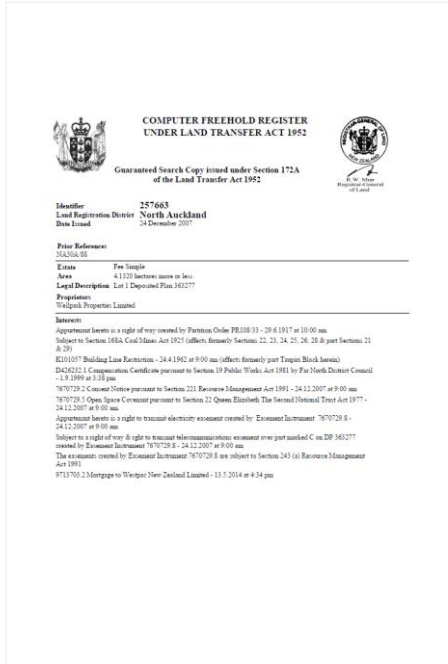
9. Excavation

This can be a big cost item and a careful house design can save thousands. An Earthworks consent may be needed when earthworks volumes exceed a certain amount, these amounts differing for each regions zoning rules. Your Council requires all cut and fill positions, volumes and silt controls to be shown on your plans when applying for an Earthworks Permit.



10. Geotec Report

Geotec is short for a Geotechnical Investigation & Report. This report tests the loadbearing capacity of the ground and it can have a large impact on the building cost. Arline advise clients to get a Geotec report before purchasing a property to build on. The report shows the condition, loadbearing capacity and moisture content of the soil beneath the site, so foundations can be designed to suit.



11. Certificate of Title

Land Titles are the legal ownership document for your site and have information about Covenants, Easements and Subdivision Consent Notices which are clauses put on the Title at subdivision stage by your local Council. There can be requirements for engineer designed foundations, landscape plans, pet restrictions if in kiwi zones and the colours and materials you are permitted to use. Arcline has access to these documents for your property and can work through them with you to help you understand them fully.

12. Covenants

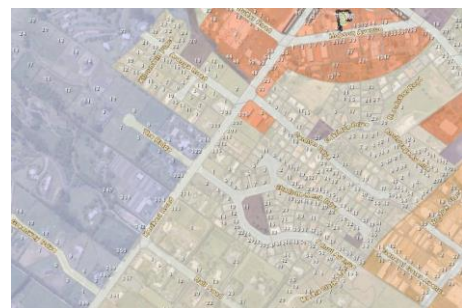
As discussed above these are noted on the Certificate of Title. They're rules put on the site by the developer and typically are in relation to house size and materials, height restrictions, fencing, the type of house you're allowed to build and what it can be used for. Sometimes restrictions are placed on using it for commercial use.

13. Easements

These are shown on the title and are used where a second party (sometimes your local council or a neighbor) needs access over your land for drainage, services or for access; for example, a Right of Way driveway.

14. Site Zone Rules

Each property within a Councils region has a zone, whether it be Residential or Rural or Coastal, for example. Zones have different rules that you must abide by, and if you break these rules this is when you require a Resource Consent. Specific things Arcline will look out for are Maximum Height, Boundary Setback and Height to Boundary Rules, areas that are prone to flooding and how much of the site you can cover with your new home.





15. Your Budget

Arcline Architecture can help you with your building budget at initial briefing and sketching stage. This is essential as we have seen too many other Architects plans thrown in the bin as they have designed a home that is outside their client's budget.

16. Capitalisation

It is a good idea to get a valuation or Land Agents appraisal of your concept plans to ensure you are not overcapitalising or undercapitalising. The worst situation you could be in would be to sell your home in the future and not return your land cost plus build cost.

17. Build A Design Brief

Collect a scrapbook of pictures and ideas. Pinterest, Houzz, Issuu & Archipro are all great sources of design inspiration, simply Google the name. Create a list of your needs for every room in the home, your maximum budget and any special furniture items you have or will be getting.

18. Concept Plans

Arcline prepare initial pencil concept plans which consider all the above 17 items. When these have been thoroughly discussed and edited with you they are taken to the next stage, turning them into a CAD drawing, which stands for Computer Aided Drafting. This process creates computerised 2D and 3D plans and renders of your dream home.

19. Virtual Reality

Concept drawings can be viewed as virtual reality models using VR headsets, allowing you to walk through your designed home. This helps greatly if you're struggling to imagine what the inside and outside of your home is like, how big the different rooms are and helping you fine tune the plan to suit your lifestyle.



20. Resource Consent

Every District Council in New Zealand has set rules for different zones of land, which are outlined in what is called the 'District Plan'. If any of these planning rules are breached the council will require a Resource Consent to prove that the rule breach will have no adverse effect on the land or any other party. It is good to get this submitted to Council early in the design process. Arcline can handle this and look after the hassle of the submission and Council communication.

21. Builder



It's a great idea to get a trusted builder on board during the design stage of your new home. They can have valuable input into various building methods and materials, especially if they are familiar with suppliers and commonly used methods in your region. Choose one that offers a Masterbuild or Certified-build Guarantee. Builders can be either full contract which gives you a fixed price for the build, as long as you don't change anything, or labour only, where you arrange the materials yourself. Our advice is use a builder on a full contract basis.

22. Engineer

Any items that cannot be designed using the usual New Zealand building codes will need to be designed by a structural engineer. Arcline can organise this for you and we use engineers like a calculator, guiding them to the most cost-effective and easy to build solutions for your new home, rather than your home being 'over-engineered' which is very costly.

23. Floor Types

Concrete floors are the preferred option of flooring in New Zealand, being a long lasting solid floor that is cost effective to build and provides passive energy storage from the sun.

Often concrete Ribraft floors are used, these having polystyrene laid in the floor and which give great passive energy storage and are very crack resistant - ideal for polished concrete floors. If your site has more than 1m of slope it is not cost effective to use a concrete floor and timber piles can be used, with a wooden floor. If your site is very steep the best design solution is to use poles.



24. Patios

Concrete patios are about a third the price of timber decks when used for an outdoor space. Where level entry into your home is required a channel grate can be formed and the bottom sill of the doors rebated down into the floor. Note that channel grates don't come cheap and can be up to \$500 per metre.

25. Decks

Decks are great for providing easy level entry into your home and there are choices of Pine, hardwoods like Kwila, and plastic composite decking, for you to choose one that suits the style of your new home.

26. Covered Outdoor Areas

These are great for our changeable 'four seasons in one day' climate in New Zealand and can include seating, a BBQ, Fire, Pizza oven, sink and can have options for enclosing them like bi-fold doors or roll down blinds. The roofing can be solid, clear or have Louvres that can open and close depending on the weather. These are a more expensive item.

27. Cladding Types

The two main factors to consider with cladding are durability and on-going maintenance. We find most clients steer away from timber cladding due to its high maintenance, needing to be painted or stained every 7-10 years. There are plenty of other options: brick, stone, aluminium, fibre cement & others that offer low or no maintenance. All claddings do need regular washing. If your property is near the coast you are better to stay away from claddings that need painting as the harsh coastal air damages the outer layers of the cladding very quickly.

28. Roof Type

Roofing needs to be selected for its architectural style, cost and suitability for your site's exposure zone. Arline will guide you through the many options. Generally Mono pitch roofs do cost more than hips or gables.



29. Windows



In New Zealand aluminium windows are the most commonly used with a few homes using PVC and Timber, which in general cost more. Aluminium windows and doors come in three weights, two durability types and with various glass options which are best chosen with a designer or builder, depending on your region and site location.

30. Doors

Doors can be MDF fibreboard or timber and come in plain, grooved and panel styles. They can also come at many different heights to suit the architecture of your home and the feel you want to give it. Larger doors make spaces feel bigger and more open.

31. Door Hardware

Choose it carefully and don't skimp on the price. Cheap hardware cheapens the house, and you can tell cheap hardware as soon as you touch it, it feels flimsy and ready to break. Windsor Hardware sell excellent quality hardware at prices that won't break the bank, so visit their website and have a browse.

32. Ceilings and Heights

Options for the height of flat ceilings are 2.4m, 2.55m and 2.7m to suit gib board sizes. Ceilings in living areas can be raked (an interior pitch either the same as the roof pitch or less) which looks great but does add to the cost.

33. Insulation

Insulation is used in your walls, ceiling and floor to keep your home warm and dry. Batts are the most commonly used and can be fibreglass, polyester, or a wool/polyester blend.



34. Wall Linings/Internal Finishes

Usually walls are lined in Gib plasterboard which gives good bracing to your house and creates a good smooth surface for painting on. Other options are timber panelling or feature plywood for walls, and villaboard or fibre cement sheets for under tiles.

35. Shower Types



The two most common types of showers are either acrylic or tiled, the latter being more expensive but has a nicer end finish. Acrylic showers are generally always white, whereas with tiles you can choose your exact tile to suit the style of your home and the bathroom they are in. There is a large choice of slide rail and monsoon shower heads. Select water efficient shower mixers which use less than 9 litres per minute, which will help save water, especially if on tank water.

36. Kitchen

If you're not just looking to get a cheap kitset kitchen, ask around building professionals in your region to find and choose a great kitchen designer. Arcline often use Wooddesign.co.nz and get them on board early in the process so they can help design the layout of the kitchen to fit in with the walls and doors in that area of the house. There are multiple different layout styles of kitchens; galley, island or U shaped and the choices of finishes are endless, but your kitchen designer will be able to help steer you in the right direction.

37. Bathrooms

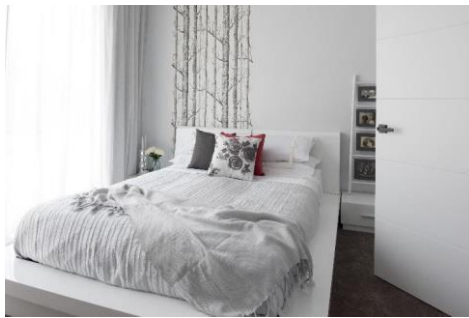
Again, the range of options is huge and please don't skimp on space in your bathrooms. Usually Arcline specify wall hung vanities, tiled floors with a skirting tiles or fully tiled walls. Outdoor showers are becoming more popular to rinse the sand off and these can be plumbed with hot water.



38. Furniture

Get together a list of your current furniture and furniture you'll be looking to purchase before you move into your new home - if you have a grand piano, a special bookcase or a painting you need to make sure it fits!

39. Bedrooms



Ensure bedroom sizes are designed to fit your furniture and remember that walls are best suited to match material sizes, i.e. the size of a Gib board, if that is your internal lining. This ensures minimal cutting and waste. Plan out the furniture in each bedroom and consider headboards, wardrobes, other storage, sun, ventilation and whether the bedroom will have an ensuite bathroom.

40. Storage

Often Arcline include attic trusses over garage to allow for attic space, which you can have dropdown stairs to climb up into. Look at your current storage needs and see what m2 of storage you need. Try to include at least one large walk in storage cupboard centrally located in the house as well as smaller cupboards around the house. They don't take long to fill up.

41. Parking/Garage

Allow plenty of space for car parking and turning cars into the garage. Ensure you can turn cars around near the house, especially if you have a long driveway, you don't want to be reversing down it. Internal garage lining on the walls can be Triboard or Plywood so you can screw shelving easily to the walls. We often include attic trusses and dropdown stairs in garages for extra storage.

42. Lighting & Electrical

If possible and if within your budget get a lighting designer involved in your lighting layout as they really can provide a wow factor with the use of light. When the house is at framing stage have a walkthrough with the electrician and mark all your power outlets and switches on the wall framing where they will be the most practical for you to use. Don't forget these items: Alarm system, bathroom ventilation, plenty of power outlets in the kitchen, underfloor heating, heat pumps, water pump, garden lighting, motion sensors, security sensor lights and good stair and access lighting. LED lighting is almost the standard now and can be used in many ways to give your home a special feel.



43. Plumbing

With full working drawings Arcline creates a plumbing plan to suit the most cost-effective layout for water, sewer and stormwater piping. By having bathrooms and ensuites nearby each other in the house helps to reduce the amount of piping needed.

44. Hot Water Heating

Gas Califonts are very common now and are very economical as you are only heating the water you need, as you use it. Their installation cost is higher than a Hotwater cylinder though, and you have to ensure your gas bottles are kept full, either by yourself or with a gas delivery company in your area. More hot water Heatpumps are being used now with solar electric panels to power them. Wet back fires and Solar hot water systems are also being used but are less common.



45. Fires

Fires can be freestanding or built-in and can be gas or wood burning. Arcline will advise on what type you can have on your site as they have to comply with the NZ Clean Air Act. Chimneys look great on the outside of a home and give it great character, but a built-in fire and chimney can add around \$15,000 to \$20,000 to your build cost.



46. Solar Systems

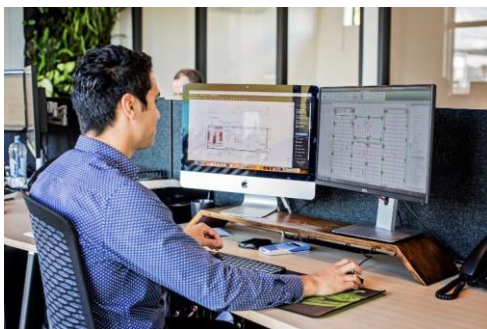
Photovoltaic PV systems are becoming more popular and can be stand alone or grid feedback connected. Pricing can range from \$20,000-\$80,000. Ensure you have a good look at the Payback calculations as it can be 10-15 years. It is essential to have a backup generator. NIWA.co.nz has a free solar calculator tool that gives Kw/yr/m² for your site and helps with the orientation of solar panels on your home.

47. Acoustic Systems

Walls and floors between bedrooms and noisy rooms can be sound insulated. One of the best solutions is a double framed wall with silencer batts and double Gib board lining.

48. Ecohomes

Not all architectural designers have the experience and ability to design eco-friendly homes. At Arcline we've completed many of them over the years throughout Northland and around New Zealand. Being Homestar Assessors and can energy model and rate your new home before it is built to ensure its up to your standard of eco-friendliness.



49. Full Plans

Ensure you get to sign off your concept plans with your Architect or Builder before they go ahead with the full working drawings. To change the plans after the full plans are done it is more difficult as all details and specifications have to be updated to suit the change. After you sign off your concept plans with Arcline we proceed with full consent plans and specifications. Where engineering and truss designs are needed we arrange and communicate with the relevant professionals to ensure your home is safe and sound.



50. Council

Managing your own consents through your local council is difficult, and it's easier to get your designer or builder to do this for you. They know the terminology and what's required at what time and it takes the stress away from it. Realise that all consents will take longer than you think, and Council has the right to ask for further detail on any part of your project, which could require more engineering or a change of the plans. Arcline can manage all your consents through council. These may include earthworks permits, road crossing consents, building consents and resource consents.

51. Contracts

Ensure you have a clear contract with your builder that covers timing and wording that states that any variations are to be pre-agreed by both parties in writing before doing them. Sign every page of the plans and specifications. When paying progress payments, don't pay out more than the value of the materials that are fixed into the house.

52. Warranties

Ask your builder for a Masterbuild or Certified Builder 10-year warranty.



You're now well on the way...

If you can check off the above 52 items to confirm you've thought about and sorted them, you're well on the way to your new home being built.

And lastly, we wish you a happy journey to building your new home, and the team at Arcline Architecture will always be here to answer any questions or concerns you may have along the way.

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