

CHECKING NOTES - Overall

- Checklists issued in good faith, with no responsibility by QARC Systems.
- They are not independently assessed and you should use them cautiously.
- We figure something is better than nothing.
- They may be useful to less experienced staff.
- Please pass on thoughts to us, for later inclusions.
support@qarcsystems.com.au

NOTES General

- These notes are based on Latemore Design's experience, an allied practice to QARC Systems, and in combo with others from assoc & councils.
- Most relate to Class 1 housing, new & renovations.
- Check Views are numbered to match the ARChetype Premium sheets.
- 000 views are overall to the project.

HINTS

- These are created as Drafting Views, at 1:1 on A4, in Revit.
- They are printed to PDF for inclusion in the QARC4Revit plug-in.
- If you would like these as a Revit file, let us know and we'll work on including that in a later version of the plug-in.

BLUE NOTES ARE THE CHECKING NOTES

GREEN NOTES MEAN INSTRUCTIONS TO YOU

CHECKING NOTES – Project 000.01

AT SOME STAGE YOU NEED TO SET UP THE PROJECT!

Maybe check cover with this list.

Be aware - your office may do things differently.

PROJECT INFORMATION - Revit Standard

- Project Name
- Project Address
- Client details
- Project/Job Number
- Project Status - Sketch Design, Des Dev etc
- Issue Date

PROJECT INFORMATION - QARC extras

- Project Name Extra (if needed)
- Project Condition - eg "Not For Construction"
- Project Watermark - eg "Pay Now!"
- Wind Rating

ORIENTATION OF VIEWS + SHEETS

- Before commencing, consider how you will place the project on views and sheets:
 - Long side of building or site is ideally parallel to long side of sheet. IE for a 'long' building, use Horizontal Titleblocks.
 - For a squarer building, or site, consider if the Horizontal or Vertical Titleblock is best.
 - North does not have to be 'up the page'.

CHECKING NOTES - Proposed Site 1:200

102SP

- Show site boundaries - check against survey.
- Toposurface - ensure it is correct for new works. Create from Survey (3D points) in existing view. Use graded region tool in new construction view so topography is mouldable & reports cut/fill.
- Extensions & renos - show shaded: Councils require new work is distinguishable. Phase filter 'Show Previous + New' so existing goes grey. New works under building - shading in dotted.
- If walls below shown, use QARC walls overlay viewport, over roofed area; or over ride as dashed lines with Linework tool .
- Stormwater - lines shown as required (and ag drains). Enough?
- "Proposed Residence""Proposed Extension" etc - everything must be noted (bold 4mm Text), including existing items (in non bold).
- Show all new items including items beyond your scope - ie: new shed, pergola, drive, carport, pool, landscaping. Add "by others" or "by owner". Most jobs have something not in the major contract.
- Dimensions in place - ie: boundary clearances (OMPs), wall setbacks, set-out dimensions. OMPs required to new items - fascias (and to walls for small lots). Help builder with setout points on complicated sites from known points.
- Hydraulics - Water tanks, Septic Tanks or Drainage Trenches. Septic only necessary on sites without sewerage, Water tanks - include if required or requested.
- Earthworks - cut/fill lines shown with batters & building platform level or create new view if cut/fill extensive and/or complicated.
- Show contours on existing site and new site plan if major cut/fill occurs.
- Retaining walls - show location (indicate type & height in elevations/sections - keynotes etc)
- Driveway - location + gradient (Extremely important to check that a drive at correct grade is possible!!! Remember transitions.)

CHECKING NOTES - Proposed Plan L0, (Ground or Lower) 110FP

- Phase filter to: "Previous and New" so any existing is greyed out.
- Floors - at sketch stage, make elevated floors as 350mm - can always be reduced in size if necessary at later stage.
- for a reno, transfer room names and other relevant text from existing plan - add new room names and relevant text IE: ceiling heights, keynotes etc.
- new framed wall thicknesses 70 or 90mm. For projects involving steel posts within walls, only use 90. Helpful to add a wall thickness note explaining what the wall dimension includes so builder can setout.
- Use grid lines - good industry practice. Ensure grids relate to o/s wall structure, ie the core in Revit. Except for masonry, can be useful on the outer line. New grids will appear in any existing views, so hide these in those views.
- Place Walls as "Core Face: Exterior", better practice. if wall type changes, model will usually be correct.
- Floors - best placed using walls, suits revisions later.
- Posts/Beams - show beams over posts.
- Stairs - up direction only shown. Treads numbered . Enough risers? Sufficient head height over/under? Stair risers at around 170/175mm. Max 18 risers each flight?
- Ensure stepdown to decks, patios, garage - show that.
- Room Titles - New Room names at 3mm. New Utility names at 2.5mm. Room sizes (if given) at 1.75mm. Room sizes are good on proposed plans, especially at sketch stage. Use Room tags!
- Ceiling heights & Raking Ceiling heights - Shown?
- Bulkhead lines? Beams over? Consider linework, an underlay, or preferably overlaid RCP in wireframe.
- Roof lines for 1 storey - use overlaid view. Resist linework tool.
- For 2 or more storey - use view over for floor lines.
- Floor levels - stepdowns & falls shown? Spot levels to floors.

CHECKING NOTES - Proposed Roof Plan

131RP

- Roof is correct?- check all hips - gables - skillions are correctly represented. On existing buildings, compare with aerial views.
- Flashings - all ridge cappings, hip cappings, valley gutters, wall flashings shown? Must be in model.
- Roof penetrations - roof vents, skylights, dormers - must be in model.
- All roof pitches.
- Water Collection - gutters, downpipes, rainheads, spitters
- Enough downpipes? Rule of thumb, under 35sqm per dp, or 8m apart - check standards.
- Legend - keynote all items.
- Symbols - show roof pitches, gutter falls etc
- Shading - indicate new roofs if a reno.
- Areas - Area of roof, make sure schedule is in correct phase. Perimeter of roof is nice to give. Area figure to have note – “area is plan amount only and does not take into account roof pitch”. Helpful to give perimeter for gutter length.
- Show rainwater catchment for tanks - if specified (see roofwater drainage note and check QDC rules: at least one half of the total roof area or 100m², whichever is the lesser.)
- Old roof issues? - Old galv steel roof has a different profile to modern zincalume. So sometimes whole roof areas will need reroof.
- Bring walls under viewport onto sheet if not already there to show where walls occur under
- Show PV cells if they are included
- show overhang dimensions
- Set phase detail to previous and new to show where new roofing meets old
- Indicate box gutters and show detail if incorporated into design (box gutters not a good idea over internal areas)

CHECKING NOTES - Electrical Site Plan

141EP

- Place legend of electrical symbols on sheet
- Place simple floor plan on sheet (1:100) showing only walls, floors (patterns turned off), doors, windows, cabinetry, grids etc
- place electrical symbols on sheet in general positions to indicate location, type and position of electrical fixtures
- Use reflected ceiling plan to position lighting arrangements and other ceiling mounted fixtures (such as fans etc)
- Dimension symbols to indicate general position of lighting arrangement
- Indicate which appliances require dedicated circuits eg: cooktops, ovens, air conditioners, hws, pumps, washers
- consider tariff 33 for pools
- Always show a smoke alarm near bedrooms and state in notes that they are to be hard wired and linked (if more than one) according to Australian Standards
- Consider ducted air conditioning versus split system
- In notes: "confirm positions of fixtures with owner"
- On plan indicate if GPOs above bench height - state Switches at 1150mm and Outlets/sockets to be at 200 above FFL unless noted otherwise
- Consider sensor lights for external
- Indicate pool lights if included in scope
- Check Approved by/Designed By/Checked by/ Author info
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CHECKING NOTES - Electrical Plans 150EP (+others)

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CHECKING NOTES - Proposed Elevations

201EL (+others)

- Set phase filter to "previous and new" so existing is greyed out
- All elevations required? - on a reno, only show the sides where work will be done
- Level lines shown? Existing floor level shown with dimension of any raise. Head lines?
- Dimensions - dimension between levels on the first elevation or section on each sheet.
- DA?? - levels are to be in AHD
- Keynotes - all new materials are to be keynoted.
- Handrails - must be 1000h!
- Windows/doors - do they match the schedule
- Stairs - check head heights (2000mm min)
- Garage doors - in place?
- Awnings - in place?
- Infill - Slats or valances added?
- Ground line - keynoted as existing ground line or proposed ground line or natural ground line. For build-ins, ensure ground lines do not compromise new walls.
- Shadows - turn on, ok to use Relative to View, except DA, must be accurate.

- External fittings - show HWS and meter box, switchboard etc, if visible
- Masonry control joints - Ensure there are CJ's at 6m. Put lines on elevations showing CJ's, preferably at door/window sides, behind downpipes.
- View titles - full name of elevation of side or section of house. "proposed north elevation"
- ALSO REFER SECTIONS NOTES

CHECKING NOTES - Proposed Sections

301ST (+others)

SECTIONS - additional to ELEVATIONS

- Scale - choose to suit job: Most jobs are ok with 1:100 sections, as long as standard 1:20 detail sections are in set. Otherwise, 1:50 can be adopted.
- Section names - better to describe where it cuts thru, not just SectionA.
- Room names - match room names on plan
- Roof pitch - Angle shown for each new section of roof. On renovations, important to note that roof pitch is to be site confirmed.
- Roof and framing: Roof thickness Batten thickness Rafters shown correct. Trusses shown correct. Roof beams. Show all main roof members, but not roof or ceiling battens, unless 1:50 or smaller. Extent of rafters and trusses is important as builder may use section to confirm other framing data. Show framing members that occur at the section line.
- Overhang - Correct extent. Correct soffit. Correct gutter - Watch that soffit matches all drawings, including details.
- Ceiling - All ceilings showing? Show bulkheads if on job, Show raking if on job. Ceiling to build-in: At correct level? Boxed beams OR hidden? - Ensure section shows ceiling at level chosen for job.
- Buildings may have boxed beams, with ceiling at u/s existing floor joists. Rest have ceiling on new ceiling joists hung from floor framing, so added beams are hidden. Better to model all this.

- Keynote items. Unless listed on plan, sections are best place to list out materials that don't appear on plans or elevations.
- Floor framing - Bearers Joists Posts. As per roof, show framing members that occur at the section line. Show (model) steel beams.
- Ground line - Natural ground line shown dotted. Finished line shown thick.
- Elevate interiors - correct? Ensure walls look correct.

CHECKING NOTES - Proposed Perspectives (Ext/Int)

431PD (+others)

- ensure perspective views fit on sheet - try 180mm wide (fits 2 across an A3).
- no scale bar or north point
- Exterior - turn on shadows, with accurate solar angles, add date/time to title
- Shadow studies - for DA's, use mid winter, 9am+3pm, at least. For owner studies, add mid summer 8am+4pm, equinox 10am+2pm.
- Interiors - have at least one of main living zone, looking to exterior.
- All perspectives, attempt to make them 180mm wide so 4 fit on a sheet, in landscape shapes.
- Hide vegetation if it explains the building better - note vegetation hidden for clarity
- If perspective does not cut through topo or shows under topo, add new drafting view and do a filled region over the section you wish to hide
- Model building exactly to show correct in perspective
- Ensure materials have bitmaps applied so rendering shows correct in "realistic" Graphic Display Option
- To orient building from same angle on every sheet, use the corner of the view cube for every view to place the building at the same angle every time
- If you wish to write notes over perspective views, Deactivate View and write note direct on sheet
- Join geometry to prevent unwanted join lines in model

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CHECKING NOTES - Slab Plan 520FT

- Engineer Involved? - only show outline, service penetrations and dimensional things.
- Slab view set up - turn off all unnecessary items such as furniture, walls (except retaining walls), floor coverings. Leave posts if connected to slab or footing
- Slab lines - on framed construction, slab edge is the exterior line of building. On brick veneer construction, slab edge is the line of the outer side of the timber wall frame. With footing line 160 further out.
- Slab edges in model - create new slab below proposed slab in design of slab edges and thickenings and join geometry so that slab looks correct when sectioned
- Post Footings - At each post. Match details
- Braced posts - notate: Important that engineer knows this so footing will be deeper.
- Retaining walls - Wall line Footing line (approx only)
- Legend - copy keynotes from store in drafting views and drop into working view. delete unnecessary keynotes from keynote store to remove from schedule
- Levels - Level of each slab section Stepdowns Falls to external slabs - Levels are to distinguish between slab or finished level. Ensure a stepdown at garages!
- Slab setdowns - Showers Tiled areas Some projects may have showers, where tiled floor is to be level with main area, so a setdown is req'd.
- Stormwater: Ensure external areas have: Dish drains Stormwater pits Ag drains behind ret walls
- Cut/fill - Batters Cut/fill line: Best to show this on slab drawing, so engineer is clear on fill zones.
- Areas calcs: helpful but not essential

CHECKING NOTES - Floor Framing 530FS (+others)

- Existing framing - extents of existing framing should be shown somehow ie: actually framed in existing stage or shown by lines or filled region
- Removed items - Show lightly dotted unless a demolition plan is utilised.
- House outlines - existing and new: shown dotted
- Lower walls - shown (if any): MUST be shown, in case some are load bearing. Ensure that the line thickness is reduced a little so the drawing remains clear.
- Load bearing walls - Lower walls shaded. Upper walls dotted. Ensure a legend item is made. Sometimes upper walls need to be shown when roof loads come down on joists, and not just onto lower walls or bearers/posts.
- New posts - shown and legended
- New steel beams - Sufficient for Build-in. Used for large spans. Ensure addition of steel beams in build-ins will be enough to hold up existing loads. If timber beam < 300 deep, consider a steel beam.
- New framing - New Bearers New Joists New lower Lintels. Use structure tools to actually place the members in the model. When choosing framing methods, go for more use of same size members, rather than lots of different ones.
- Voids - Stair voids Duct penetrations Trimming members: Voids are often forgotten! Put a diagonal line on a stair void, a cross on smaller ones. Remember to frame up the void with trimmers and trimming joists – look at the LVL manuals
- Lower Ceiling Framing - Required? If required, can framing be covered by notes. If lines need to be shown on drawing, best to create extra drawing.
- Legend - use keynotes and Legend to describe members
- Minimum width - No joists less than 45 - 50mm
- Timber species - Normally we use unseasoned hardwood (F14) or treated softwood for exposed bearers and joists. And for internal it is best to use seasoned or engineered timbers, so no shrinkage occurs.
- Stepdowns - check for impact on framing requirements, joists and bearer levels. No more than 25% can be notched from a joist.

CHECKING NOTES - Roof Framing 541RS

- Existing framing - see green notes for extents of existing framing that should be shown
- Removed items - Show lightly dotted unless a demolition plan is utilised.
- House outlines - existing and new: shown dotted
- Lower walls - shown (if any): MUST be shown, in case some are load bearing. Ensure that the line thickness is reduced a little so the drawing remains clear.
- Load bearing walls - Lower walls shaded. Upper walls dotted. Ensure a legend item is made. Sometimes upper walls need to be shown when roof loads come down on joists, and not just onto lower walls or bearers/posts.
- New posts - shown and legended
- New steel beams - notate crank beams and portal frames if they occur
- New framing - New Bearers New Joists New lower Lintels. Use structure tools to actually place the members in the model. When choosing framing methods, go for more use of same size members, rather than lots of different ones.
- Trusses - use truss family to put appropriate trusses in model so that they show up in sections. Consider where a girder truss may be located as this can affect the design.
- Ceiling loads - ensure rafters with raking ceilings are large enough
- Legend - use keynotes and Legend to describe members
- Voids - skylights and dormers are indicated
- Ceiling battens note: Need general note: "32x45 F5 ceiling battens at 450 crs to all new ceilings".
- Min width - no rafters less than 45 - 50mm
- Timber species - Right for external/internal: Normally we use unseasoned hardwood (F14) for rafters with exposed ends. Otherwise seasoned or engineered timbers can be used if they are to be painted or covered.
- Roof Battens - see note on "framing and additional notes"
- LVL notes - See "framing and additional notes" sheet.

CHECKING NOTES - Details Stairs 601DG

- External stairs require detailing. Generally indoor stairs do not.
- Refer NCC on Stair construction when creating detail.
- Each flight must have not more than 18 nor less than 2 risers.
- The riser opening must not allow a 125 mm sphere to pass through between the treads.
- Detail Balustrading if required
- Show connection method of stairs to floors
- Show materials used in construction - ensure they comply with NCC
- In model - ensure stair has 2m or greater clearance above nosing line overhead
- Include general stair notes
- No north point

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CHECKING NOTES - Window Schedule 701SC

- Needed? - If project is large enough. Most projects need it. 10 or more windows.
- Reference numbers - match plan? Correct suffix? in schedule all existing joinery should have a suffix of e. and this can be used to filter all these out of the schedule.
- Sizes - use standard sizes unless requested otherwise. Use window sizes that are standard, ie 450/600 min and upwards in multiples of 300.
- Legend components - ensure a pictorial representation of each window and door is shown, positioned between floor and head height lines
- Amend schedule to state materials, etc (see green notes)
- Note all joinery to have individual marks (tags) - quantity table should only ever read 1 of any unit.
- Scale correct?
- Scale bar shown
- Any special details or non-standard construction shown
- Any special notes included
- Key Plan included to show locations of windows?

- DO NOT CROWD - add extra sheets if needed. (702, 703 etc).
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CHECKING NOTES - Existing Site 1:200 802SP

- North point correctly rotated - Select all in project and change
- Drawn by/checked by - adjust in dwg list all or select all for project
- Issue - ensure version is correct
- Settings/project info correct?
- Orientation on sheet - building long side parallel to sheet long side
- Project North/True North correct? Refer ARC4Revit blogspot for directions on how to achieve this.
- Drawing numbers are correct in sequence and with prefix
- Scales are correct?
- Issue date correct?
- Drawing arrangements - clear/easy to follow/space around images/items in same place on different sheets
- Others drawings ie: survey/engineer's drawings or certificate included in set
- Import survey in autocad, resize, remove unneeded items and rotate as to true north - import into revit viewport as true north
- Scale: 1:200 or 1:500 if a large site (use 801).
- Site boundaries as property lines - show intersecting boundaries
- Boundary dimensions & bearings in place (or use revit tags if survey brought in as true north)
- Cadastral data for neighbours (street no, RPD, area, etc)
- Sheet orientation and north point: ALWAYS preferable to produce drawings with house shown parallel to drawing sheet. Site boundaries may be skewed in this case.
- If this is impossible due to fit problems, then put a prominent note on drawing, that following sheets have different orientation. You will have to individually place north point. Do this carefully.
- Walls under shown as dashed (linework tool or ShowHiddenLines)
- Plans not squeezed onto sheet

CHECKING NOTES - Existing L0 Plan (Ground or Lower) 810FP

- Scales are correct? - 1:100 or 1:50, rarely 1:200 - adjust scale bar if changed from master
- Grids - use them. if new grids added for proposed, hide them.
- Boundary - show if fits on drawing
- Orientation to sheet - matches site
- Floors - ensure the floor size chosen is exactly the size of the existing floor
- Wall layout - walls and decks shown. also show door and window posts on queenslanders
- Posts - show all deck and verandah posts (including railings)
- Stairs - show all stairs
- Room titles - room names at 3mm, utility names at 2.25mm, room sizes at 1.75mm (not essential on e. plans)
- Consider using room tags - useful for scheduling and room sizes
- Ceiling heights - show for main areas (in symbol provided) also show raking ceiling heights.
- Floor levels - add a spot dimension in revit for main floor (unless you consider others required)
- Dimensions - only add if required to explain situation
- Add a spot level or step down symbols to floors to make it clear where changes in level occur
- Fittings/plumbing - best to show location of these
- Roof layout - gables hips valleys overhangs - show these in overhead lines using linework tool or add a rooflines only viewport. For lower floor dont show roof lines if double storey bldg but do show overhead lines for overhanging elements
- Outbuildings - show on plan if there is room
- Downpipes - keynote with edp or dp

CHECKING NOTES - Existing Roof Plan

815RP

- Roof is correct - check all hips - gables - skillions are correctly represented.
On existing buildings, compare with aerial views.
- Flashings - all ridge cappings, hip cappings, valley gutters, wall flashings shown? Must be in model and then they will show up in elevations/sections
- Roof penetrations - roof vents, skylights, dormers - must be in model and then they will show up in elevations/sections.
- Water Collection - gutters, downpipes, rainheads, spitters
- Legend - keynote all items.
- Symbols - show roof pitches, gutter falls etc
- Old roof issues? - Old galv steel roof has a different profile to modern zincalume.
- Bring walls under viewport onto sheet if not already there to show where walls occur under
- Show PV cells if they exist
- Keynote items as required
- show overhang dimensions
- Indicate box gutters and show detail if they exist

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CHECKING NOTES - Existing Elevations 821 (+others)

- Are e. elevations required? some minor renos might not require all elevs.
- Grids in place? Grid markers aligned?
- Levels correct - check levels are correct with survey or onsite measurements.
Ceiling levels in place?
- Level dimensions - NEW RULE!!! - dimension between levels on all shown elevations and sections
- Roof height - cross check with survey
- Roof elevated correctly? - make sure roof edge detail is correct and that corresponding gables are in place
- Roof flashings shown - ensure the model has ridge and hip cappings, fascias, barges and barge rolls in place. make sure they look correct in elevations and sections
- Gutters & downpipes are shown in elevs and sects
- Roof penetrations shown - ie large items such as chimneys
- Wall extensions - bottom of wall cladding is usually at u/s bearer
- Handrails shown?
- Windows and doors shown?
- Awnings in place?
- Lower supports - stumps with antcaps, brickwork/blockwork
- Infill in places - skirts/valances
- Legending - keynotes shown for all relevant elements
- Shadows, turn on, OK to use Relative to View
- Sections show structure - floor bearers, roof bearers, trusses, rafters etc.
- Roof & structure shown is the correct size
- Room names shown in sections
- Small lot code 7.5m & 8.5m and building envelope lines shown for DA
- Title is in place ie: "existing north elevation" in 4-5mm

CHECKING NOTES - Demolition Plans 861FP (+others)

- Hide unnecessary elements
- Ensure view phasing is correct "show previous + demo" in phase filter in New Construction phase
- Demolish buildings and or items that are to be demolished
- All removed items shown in thick dashed lines?
- Demolished roof? if any or all roof demolished, show it.
- Show demolition notes schedule
- Renovation symbols/demolition notes - all sequential and corresponding to notes
- Any items to be reused are to be noted as such
- Standard notes - ensure they are all correct and make sense

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