

Nodey

Structural Engineering,
Reimagined.

From architectural plan to consent-ready report
- in one workspace.

What is Nodey?

Nodey turns architectural drawings into optimised structural designs - in one place, in real time.

Upload a plan. Mark up the structure. Calculate. Download a consent-ready report. That is the entire workflow - no spreadsheets, no separate software, no emailing files.

01

Automatic Loads

Loads assembled from the geometry you draw - no manual take-offs.

02

Audit-Ready

Every calculation references current NZ/AS standards - traceable and consent-ready.

03

Real-Time Co-Editing

Whole team works in the same file simultaneously - no version conflicts, no emailed files.

The Core Loop

Five steps from architectural plan to consent-ready report - the entire Nodey workflow.

01

Upload Drawing

Drag-and-drop a PDF or DWG. DWG auto-converts via Autodesk in under 60 seconds.



02

Mark Up Structure

Beams, rafters, walls, columns and piles - one keystroke per member type.



03

Auto-Assemble Loads

Tributary areas + G, Q, wind, snow built from your model.



04

Run Calculations

ULS / SLS checks executed in dependency order - top of structure to foundation.



05

Download Report

Branded, consent-ready PDF generated from the calculation results.

Who Is It For?

Nodey is built for engineering practices of every size - solo through to multi-disciplinary firms.

Structural & Design Engineers

Solo practitioners through to large practices designing residential structures.

Engineering Technicians & Drafting Teams

Exportable to Revit to automate modelling and ensure drawings match the design.

CPEng & Registered Professionals

Auditable, standard-referenced outputs for sign-off and consent submission.

Multi-Disciplinary Firms

Practices managing many concurrent projects across different teams and specialisations.

ANY BROWSER · ANY DEVICE

Nodey runs entirely in the browser. Nothing to install, nothing to license per machine.

Desktop

Chrome, Edge, Firefox & Safari - full editing experience

Mobile / Tablet

iOS & Android browsers - read-only PDF viewer

PWA Install

Install Nodey as a standalone app from your browser

Offline Mode

Changes queued locally - syncs automatically on reconnect

The Old Way vs Nodey

THE OLD WAY	WITH NODEY
Manual load take-offs in spreadsheets	Automatic load assembly from geometry
Separate viewer, calc sheets, Word report	One unified workspace - markup to report
Emailing files between engineers	Real-time co-editing - same file, all users
Filename versioning ("v3_FINAL_2_revised")	Built-in version history - one-click restore
Retyping member sizes into Word	Report from results - under a minute
Calculations locked to one computer	Cloud-hosted - any browser, any device
Starting from scratch on every job	Templates and one-click duplication

Nodey is not just a calculator. It is your entire structural design workflow.

Standards Built In

Every calculation Nodey produces references current NZ/AS structural standards - outputs are audit-ready by default.

AS/NZS 1720.1:2022

Timber capacity - k1-k12, sections, bearing, N-M

NZS 3404:1997

Steel – M&V, combined N+M, Grade 300 sections

AS/NZS 1170.0

Load combinations - ULS and SLS factors

AS/NZS 1170.1

Permanent (G) and imposed (Q) loads

AS/NZS 1170.2:2011

Wind actions - zones, Cpe/Cpi, tributary area

AS/NZS 1170.3:2003

Snow - kp, balanced & drift, by zone & island

AS/NZS 1170.5:2004

Earthquake - Z, importance level, ductility

NZS 3604:2011

Span tables, bracing BU values, pile capacities

Lumberlok

Lintel uplift fixings - Types E to H

SECTION

02

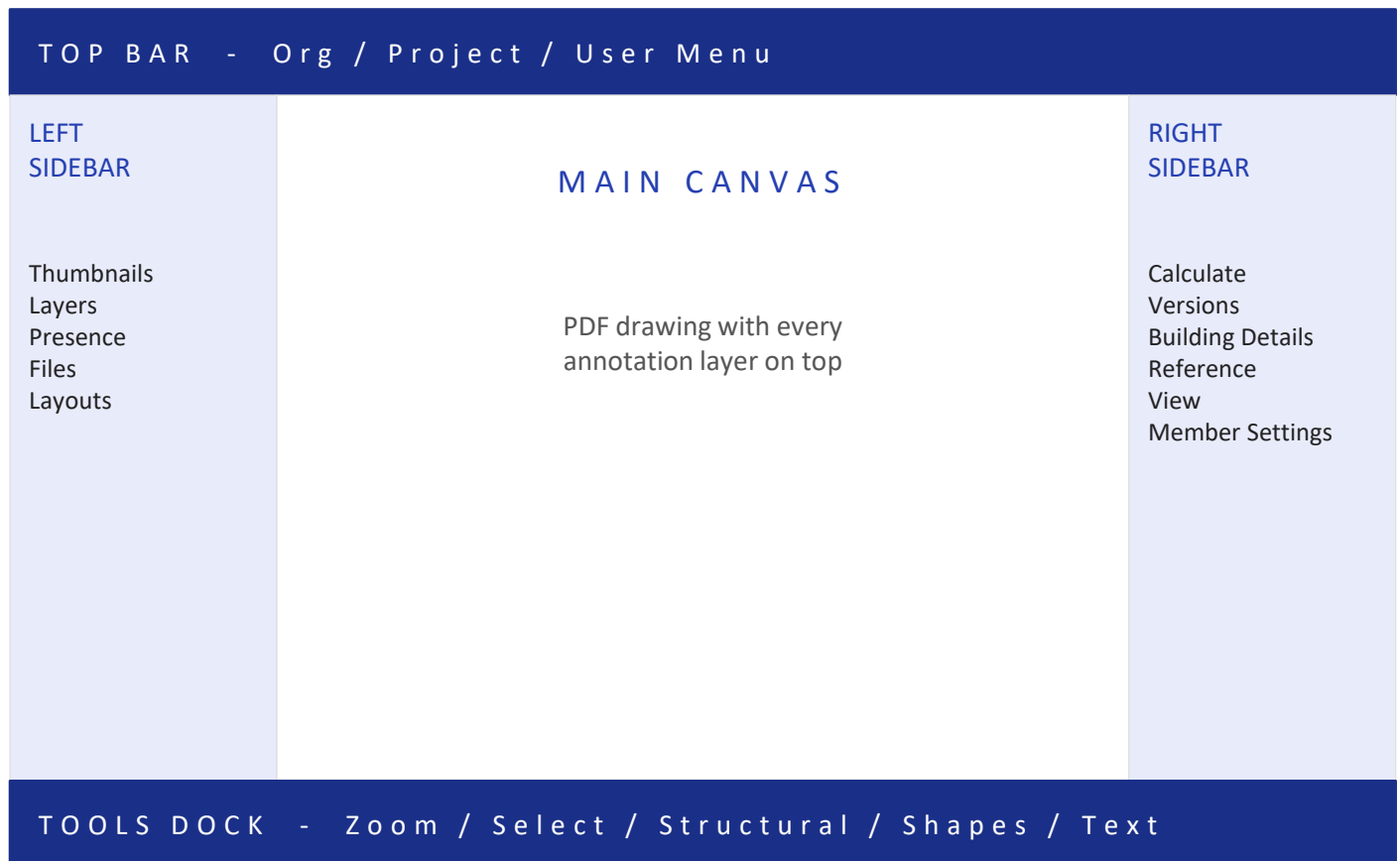
Core Features

The Nodey workspace and tools

Workspace, project setup, structural members, loading, and report output.

The Workspace - Four Zones

Nodey has four zones that work together - learn the layout once and every project flows from there.



Left

Project control, file switcher, online presence, page thumbnails, layers.

Main

PDF drawing with all annotation layers stacked on top.

Right

Calculate, versioning, export, building details, reference, view, member settings.

Dock

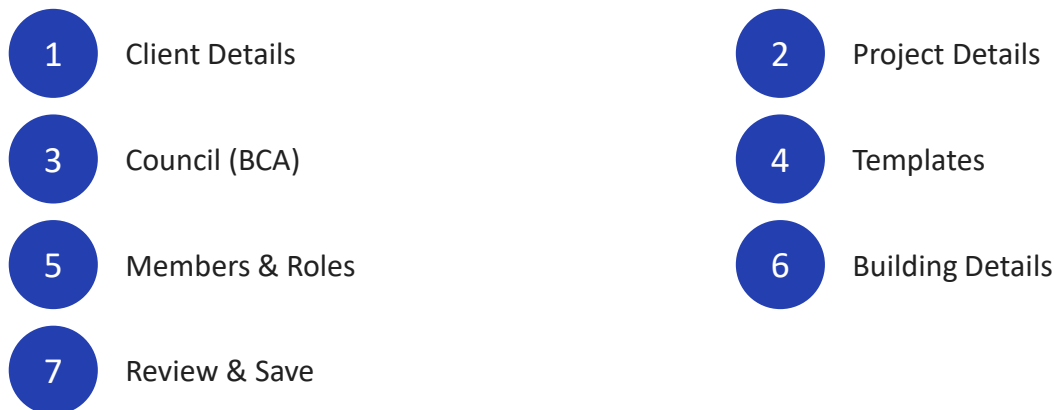
Every drawing & structural tool - plus zoom, undo/redo, colour.

3D model view An interactive 3D model of your marked-up project, from the right sidebar.

Project Setup & Building Details

Set the project up correctly once - every load combo, factor, and section thereafter is driven from these inputs.

Seven-Tab Project Form



Critical Load Drivers

Foundation Slab on ground / Subfloor + height (m)

Wind zone Very Low to Extra High

Earthquake Z hazard factor + Importance Level

Snow zone None / Low / Medium / Alpine + Island

Preferred products Default species, grade, sections

Cladding presets Wall + roof from variant catalogue

Structural Member Tools

Every member type unlocks once scale + reference perimeters are set. One keystroke, one tool.

B	Beam Timber/steel beams Floor/Roof/Wind/Portal	R	Rafter Pitched roof rafters
J	Joist Floor, deck	L	Lintel + Lumberlok uplift
W	Wall Walls + stud check	C	Column Combined N-M
E	Bearer Sub-floor bearers	P	Pile Foundation piles
T	Truss Supplier-designed	G	Girder Truss Receives truss loads
F	PolyFrame Rafter, truss, joist, concrete floor	M	Masonry Foundation, storey, lintel
K	Concrete Floor Seismic mass and reactions	S	Slab Edge, rib, waffle
X	Bracing Mode Isolates bracing layer		

Loading Modal / Calculate / ULS / SLS

AUTO-ASSEMBLED LOADS

No manual input. Loads come from the geometry you draw.

Dead - roof / floor Weight x member spacing

Live load (Q) 1170.1 imposed x tributary

Wind up / down Zone x Cpe/Cpi x tributary

Snow balanced + drift 1170.3 kp x zone x IL

Upstream reactions Passed down dependency chain

Portal lateral Iterative FEA split header / column

Resolved load path Detected, transferred and traced through to the foundations

Override any auto-value with point loads / UDLs at any position.

ULS / SLS DESIGN CHECKS

Bending ULS $M^*/\phi.M_n \leq 1.00$

Shear ULS $V^*/\phi.V_n \leq 1.00$

Bearing ULS Perpendicular-to-grain timber

Combined N-M ULS Columns + walls

Deflection - live SLS $\delta \leq \text{span} / \text{limit}$

Deflection - wind SLS $\delta \leq \text{span} / \text{limit}$

Deflection limits SLS Editable span ratios + absolute mm caps (Calculation Settings)

Portal sway ULS $H/100$ - SLS $H/300$

Lintel face load ULS Out-of-plane wind on the lintel face

Calculate All runs every member in dependency order - green = pass.

Bracing Design

Bracing Mode isolates the bracing layer so demand and capacity are resolved per direction, per storey.

1

Press X

Bracing Mode isolates the bracing layer

2

Draw walls

Configure sheet type + fixings per wall

3

Choose system

GIB EzyBrace, Elephant QuickBrace or SED plywood

4

SED plywood shear walls

Seven configurations, fully designed and detailed

5

RAB toggle

Rigid-air barrier

6

Bracing settings

Storey ductility (μ) and diaphragm options, set per storey

7

Demand vs capacity

Per direction X / Y - Capacity $\leq$ Demand

8

Subfloor piles

BU values per NZS 3604

Report Output & Sharing

Five report modes, smart grouping to keep them readable, and project import / export for peer review.

Report output

- **Full Report**
Consent submission - all members, full workings
- **Summary Report**
Condensed schedule - section, unity, pass/fail
- **Full + Summary**
Both, combined in one PDF
- **Smart grouping**
Grouped by type + section - governing member in full, the rest summarised
- **Bracing Report**
Standalone bracing demand/capacity PDF
- **Individual Member**
Single-element peer review

Sharing & revision control

- **Import / export projects**
Send a project to a peer reviewer using Nodey - and import theirs back
- **Organize - file swap**
Replace a revised drawing while every markup stays in place
- **Version history**
Save a snapshot at each milestone and restore in one click

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03

Best Practice Workflow

Project from 0 to 100

The recommended sequence -
from sign-up to consent-ready PDF.

The 10-Step Workflow

Run a project end-to-end in this order. Every step builds on the last.

01

Set up your organisation

02

Create the project

03

Upload + organise the drawing

04

Set the scale

05

Place reference points & perimeters

06

Mark up structural members

07

Run calculations

08

Design bracing

09

Save a version

10

Download the report

Steps 1 to 5 - Setup & Reference

1

Organisation

6-step wizard. Upload logo + brand colours BEFORE the first report.

2

Project

Lock client / BCA / wind / seismic / IL / foundation before markup.

3

Upload + Organise

PDF or DWG. Strip non-structural pages BEFORE markup - leaner = faster.

4

Scale

Set BEFORE any markup. Use a preset scale or calibrate from longest available dimension on the drawing.

5

Reference

Foundation -> Level 1 -> Level 2 -> Roof. Activates structural tools.

Steps 6 to 10 - Markup to Report

6

Markup

Top-down: roof -> L2 -> L1 -> foundations

7

Calculate

Use Calculate + Reset Optimums based on user defined optimisation logic.

8

Bracing

Press X. Add walls until along & across demand $\leq$ capacity.

9

Version

Save different versions for historic version control.

10

Report

Full for consent. Five-phase progress bar.

SECTION

04

Software User Best Practice

Get the most accurate answers from Nodey

Nodey behaves like FEA software. Treat it that way and your results will be clean, traceable, and fast.

Best Practice - Project Setup

Lock these in before you draw anything - they pull through to every calculation.

Critical building details first

Number of units, foundation type, seismic zone, wind zone - these auto-flow to every downstream calculation. Skip them and the software will block you when you go to design.

Measure-as-you-go fields can wait

Building heights, height above eaves, etc. can be filled in from the markup workspace while you're measuring off the drawing.

Project templates

Set up template folders so file structure is consistent across projects. Saves setup time on every new job.

User permissions

Configure roles per user - who can create, delete, or change project-specific information. Restrict capability where needed.

Reference planes & scale FIRST

You cannot draw any structural element until reference planes and scale are set per page. Do this immediately on every page or apply a set scale to a page range.

Stay inside the building perimeter

Anything drawn outside won't know which level it's on and will pull spurious building details info.

Best Practice - Draw It Like FEA

Treat Nodey as finite element software. Clean nodes = clean answers.

RULE All connecting nodes must converge to one node. Nodes a few millimetres apart produce spurious FEA results.

Recommended drawing sequence

1

Walls + Lintels

Draw structural walls and lintels first, before anything else.

2

Framing over the top

Beams and lintels - landing on the walls below.

3

Rafters / Joists between

Place last so you have nodes to snap to.

After drawing, always:

- Open each element to verify support points are picked up correctly.
- Disable spurious internal supports - e.g. a lintel just touching a rafter midspan should not be treated as a support.
- Use snap functions (endpoints, structural members, alignment) for precise framing intersections.

Best Practice - Loads, Reactions & Load Path

Know what Nodey adds automatically - and what you must add yourself.

AUTOMATIC

1170 load combos ULS + SLS combos are fixed - user cannot override.

Wall framing weight 0.4 kPa default for wall framing.

Brick veneer to bracing Veneer weight tracks into bracing analysis.

Default point loads 1.1 / 1.8 kN per 1170 for floor & roof framing.

Roof pitch (steepest) Drives bracing analysis - set the steepest at building level.

USER MUST ADD

Cantilever cladding Brick veneer on a cantilever - add as G load on the beam.

Floor point loads Add manually as user-defined point loads / UDLs.

Custom UDLs / loads Anything beyond default combos.

Columns under point loads Draw a column to track the reaction down to the foundation.

Per-element roof pitch Override for multi-pitched roofs - affects length & snow.

Best Practice - Bracing & QA

BRACING

Where to draw

GIB & ply brace walls in Bracing Mode (X). Portal frame headers are drawn as beams in regular framing then set to PORTAL.

Direction convention

Across-page = 'across' bracing; up/down page = 'along' bracing. Keep building orientation consistent across pages.

QUALITY ASSURANCE

Hand checks

As with any structural software, hand-check a random selection of elements.

Verify reactions

Open elements + supporting elements above and below. Confirm supports + reactions are correct and the model is in equilibrium.

REPORTS & VERSIONING

Full + Summary

Full calc for the first instance of each element type, summary for the rest. Condenses long reports.

Versioning + themes

Save a snapshot per milestone. Customise drawing colours and dark/light theme to match company preferences.

Support - How to Get Help Fast

OUR COMMITMENT

Confirmed bugs deployed within 24-48 hours

How to submit a support ticket

Open a Ticket

1

Click the Help icon (?) in the top-right of the app, or email support@nodey.nz - either opens a tracked ticket.

Describe the Issue

2

Include: what you were doing, what you expected, what actually happened. Screenshots or a screen recording help enormously.

Get a Ticket Number

3

Automatic confirmation with a ticket ID arrives within minutes - your reference for all follow-up.

Engineer Assigned

4

A Nodey engineer is assigned within 4 business hours with a diagnosis or request for more info.

Fix Deployed

5

Confirmed bugs deployed in 24-48 hours. You receive an email with release notes when live.

Feedback - Shape Our Roadmap

Every feature on Nodey's roadmap was requested by a user. Here is how to contribute yours.

**FEAT**

Feature Requests

Submit via the in-app Feedback button. Vote on existing requests - top-voted items get prioritised in our quarterly planning cycle.

**BUG**

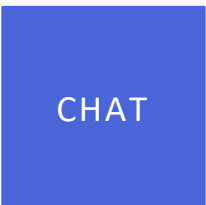
Bug Reports

Report via the Help icon (?) or email support@nodey.nz. Confirmed bugs fixed in 24-48 hours with deployment notification to you.

**BETA**

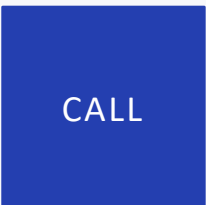
Beta Programme

Test new features 2-4 weeks before general release. Direct line to the engineering team and early-adopter recognition.

**CHAT**

Community Forum

Connect with other Nodey users. Share tips, discuss structural engineering challenges, follow product announcements.

**CALL**

User Interviews

Sign up for 30-minute user interviews via the app or email. Your insight helps us build the right things, faster.

Roadmap & Next Steps

Coming next - targeted over the next month

NEXT

Foundations & Deep Piles

Full foundation design, plus timber driven piles to NZS 3604 and bored concrete piles with shaft friction, end bearing and pile cap.

NEXT

Connection Design Modules

Dedicated design modules for structural connections.

NEXT

Retaining Walls

Retaining wall design brought into the same markup-to-report workflow.

NEXT

Revit Plugin

Export your Nodey design directly to Revit - auto-generates structural family instances and details.

Also in development: slab on grade, and waffle / TC2 - TC3 slabs.

Ready to build a project?

Sign in at app.nodey.nz

Sign-up takes under three minutes. Your first report can ship today.

nodey.nz

nodey.nz/contact

app.nodey.nz

nodey.nz/pricing