

SPASA GUIDE

APPLYING THE NCC TO SWIMMING POOL & SPA PROJECTS

AN INDUSTRY GUIDE FOR POOL
AND SPA BUILDERS AND DESIGNERS

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INTRODUCTION

SPASA has developed this industry guide to assist members in preparing building applications for approval by a building surveyor or local council/authority and to assist members in understanding how the National Construction Code applies. Often a Performance Solution will be required for a building application.

The guide includes six factsheets addressing different topics. Factsheets 3-6 combined provide a mini-guide to Performance Solutions for Pools and Spas. The mini-guide provides pool designers, engineers, builders and building surveyors with a practical approach for preparing a performance solution as supporting documentation for a building application.

The mini-guide includes guidance for three common design scenarios related to pools which rely on the long-standing, industry-accepted technical standards that are not DTS requirements. By preparing a methodical performance solution, you can support the timely approval of a building application by the relevant building surveyor.

FACTSHEET 1 - GETTING APPROVAL FOR YOUR POOL OR SPA PROJECT

This factsheet provides an introduction to building approvals and the National Construction Code to assist pool & spa builders and installers in preparing the required building application plans and specifications for the local council or building surveyor.

The construction or installation of swimming pools and spas across Australia and New Zealand requires approval before work can commence. In most cases, these projects require both planning approval (development approval/consent) from the local council and construction approval (building permit/approval/consent) from the local council or a private building surveyor.

A key part of obtaining building approval is preparing detailed plans and specifications that demonstrate how the pool or spa is designed to meet relevant building code requirements and any technical standards governing the project's engineering elements.

WHEN DOES A POOL OR SPA NEED APPROVAL?

Across Australia and New Zealand, a pool is generally defined in legislation as any excavation, structure, or vessel capable of holding water to a depth of 300 mm or more, primarily designed or used for aquatic activities such as swimming, wading, or paddling. This includes spas and bathing pools but excludes spa baths within a building.

Planning laws generally require a pool of any type to obtain planning approval, but some states may have exemptions or fast-track approvals for pools and spas of certain sizes on residential properties.

Building approvals need to outline how the pool or spa will meet the following key requirements, which show that the pool or spa will be:

- **Structurally safe:** covering the excavation of the pool area;
- **Correctly built or installed:** covering the physical structure of the pool or spa;
- **Designed:** to manage water recirculation;
- **Correctly connected:** to wastewater systems and
- **Correctly protected:** by barriers to limit the risk of accidental drowning.

The building approval process is set by the state or territory government in Australia and by the New Zealand government in building legislation. This legislation will include requirements for building applications and generally requires that application forms, detailed plans, and specifications be submitted.

All building work in both Australia and New Zealand must comply with the relevant Building Code, even if it doesn't require a building approval. This ensures buildings are safe, healthy and durable for everyone who may use them.

PRIMARY BUILDING LEGISLATION FOR POOL AND SPA APPROVALS

AUSTRALIA

- **New South Wales:** Environmental Planning and Assessment Act 1979 – covers both planning and building approval processes.
- **Victoria:** Building Act 1993 – covers only building permits and related construction activities.
- **Queensland:** Building Act 1975 – covers only building approvals and related construction activities.
- **Western Australia:** Building Act 2011 – covers only building approvals and related construction activities.
- **South Australia:** Planning, Development and Infrastructure Act 2016 – covers planning approvals and building rules consent.
- **Tasmania:** Building Act 2016 – covers building approvals and associated activities.
- **Australian Capital Territory:** Building Act 2004 – covers building approvals and associated activities.
- **Northern Territory:** Building Act 1993 – covers building approvals and associated activities

National Construction Code (NCC) – The Australian National Construction Code is referenced in each state and territory's building legislation as the required standard for buildings. The NCC is updated from time to time, and the version that applies to a building application is generally the one in effect on the day the application is submitted. In some states, it may be the version in place at the time the approval is granted.

NEW ZEALAND

Building work in NZ is governed by the Building Act 2004 and Regulations, which set the legal framework for the design, construction, alteration, and demolition of buildings. Plans and specifications are assessed by building consent authorities (BCAs), usually the council, to ensure that the proposed building work complies with the Building Code.

When the BCA is satisfied, it will issue a building consent for the work to proceed. If the work is built to the consented plans and receives a code compliance certificate, it confirms the requirements of the Building Code have been met.

The Building Code is contained in regulations under the Building Act 2004. The Act governs the building sector and also sets out the rules for the construction, alteration, demolition and maintenance of new and existing buildings in New Zealand. It works alongside other legislation for health, safety, consumer protection and land use.

It works in tandem with the Building Code (which outlines performance standards) and is part of the NZ Building Act, overseen by the Ministry of Business, Innovation and Employment (MBIE).

HOW DOES THE NATIONAL CONSTRUCTION CODE APPLY TO POOLS & SPAS IN AUSTRALIA?

In Australia, when you are preparing plans to build or install a pool or spa, you will require a building approval from the local authority. This may be the local council or a private building surveyor or certifier (they have different names in different states).

Your building application will need to be accompanied by a set of plans that demonstrate how the design meets the technical requirements of the NCC and any associated Australian Standards.

A pool or spa is classified under the National Construction Code as a Class 10b structure. This classification applies to both residential and commercial or public pools and spas.

However, the NCC only sets out a small number of performance requirements that apply to the construction or installation of swimming pools and spas.

For pools and spas, the NCC requirements generally requires you to address the following performance requirements related to

- **Site suitability:** the structural integrity of the excavation for the pool or spa (H1P1).
- **Structural reliability:** the structural integrity of a pool or spa (primary construction material). (H1P1)
- **Hydrostatic risk:** addressing the hydraulic design for the pool or spa (H7P2).
- **Disposal** of wastewater and management of surface water (H2P4).
- **Pool safety:** the design of the safety barrier for the pool or spa. (H7P1).

There may be additional requirements depending on the project's design, but these are the typical matters addressed in a building application for a pool or spa.

The NCC adopts reference standards, generally Australian Standards, to provide designers and builders with supplementary technical guidance. When these reference standards are adopted, they become 'Deemed-to-Satisfy' (DTS) requirements that provide a level of certainty for designers, builders and certifiers. When a pool or spa is constructed to meet these standards, it is expected to meet the underlying NCC performance standards for structural integrity and operation.

Where there are no DTS requirements in the Code, the designer will need to prepare a performance solution demonstrating how the design meets the performance requirements. The performance solution may refer to accepted industry standards, including Australian Standards, that the NCC does not directly reference. Or the performance solution may require engineering designs prepared using first-principles calculations.

WHY DO SOME BUILDING APPROVALS NEED A PERFORMANCE SOLUTION?

A performance solution is a written document that explains how the pool or spa you are designing, building or installing will meet the NCC performance requirements when there are no DTS requirements.

As the NCC is a performance-based building code, this does not impede the use of appropriate technical reference standards; however, it means that designers, engineers and building surveyors/certifiers must follow the NCC pathway for performance solutions when preparing the plans and specifications.

Currently, the NCC does not reference three key Australian Standards used by pool manufacturers, builders and designers.

- **AS 2873: 2025:** Use of reinforced concrete for small swimming pools is the industry-accepted standard for the design and construction of concrete swimming pools, including cast and pneumatically applied reinforced concrete pools. Some designs may also refer to AS 3600 or AS 3735 where relevant.
- **AS 1838:2021:** Swimming pools – Pre-moulded fibre reinforced plastics – Design and fabrication is the industry-accepted standard for the design and fabrication of pre-moulded fibre-reinforced plastic (FRP) swimming pool shells.
- **AS 1839: 2021:** Swimming pools – Pre-moulded reinforced plastics – Installation is the industry-accepted standard for the installation and inspection of pre-moulded fibre-reinforced plastic (FRP) swimming pool shells.
- Until NCC 2025, the key reference standard for management of surface water was also not referenced; however, AS 3500.2 is now included as a DTS reference.

Because these Australian Standards are not currently reference standards under the NCC, and not all states have adopted NCC 2025, which adopts AS 3500.2, preparing a building application currently requires a performance solution.

SPASA GUIDE TO PERFORMANCE SOLUTIONS FOR POOLS AND SPAS

SPASA has developed an industry guide to assist members in preparing a Performance Solution when required for a building application. The guide includes guidance for three common design scenarios related to pools that rely on the long-standing, industry-accepted technical standards that are not DTS requirements. By preparing a methodical performance solution, you can support the timely approval of a building application by the relevant building surveyor.

FACTSHEET #2 - THE NCC IN PLAIN ENGLISH (JUST THE BASIC STUFF)

The National Construction Code (NCC) is a performance-based building and plumbing code adopted by all states and territories under the relevant building legislation. The NCC sets out the minimum technical requirements for new buildings, new building work in existing buildings, and plumbing and drainage work. The NCC covers swimming pools in several respects.

The NCC sets out the Performance Requirements that a building must achieve to ensure the structure is fit for purpose. These performance requirements are the mandatory outcomes that must be achieved in a building design. The Governing Requirements in Section A of the NCC explain how a building application must verify that these outcomes can be satisfied.

THE NCC VOLUMES

For swimming pools, the relevant NCC volume depends on the class of building or structure, the use of the site and whether plumbing or drainage work is part of the scope:

- **Volume One:** applies to pools associated with Class 2 to 9 buildings, including apartments, hotels, commercial facilities and public buildings. It may also apply to certain Class 10b swimming pool access matters.
- **Volume Two and the ABCB Housing Provisions:** apply to domestic pools associated with Class 1 dwellings and with swimming pools classified as Class 10b structures.
- **Volume Three:** applies to plumbing or drainage work related to buildings. This includes sanitary drainage, regulated discharge, on-site wastewater, and evidence of plumbing and drainage products.

BUILDING CLASSIFICATIONS AND NCC VOLUME SELECTOR

The NCC classifies buildings and structures according to use and risk. The classification determines which NCC volume and Performance Requirements must be used when preparing a building application.

For most private domestic swimming pool projects, the pool will be treated as a Class 10b structure.

Generally, the following applies:

- For a private pool associated with a Class 1 dwelling, use Volume Two / Housing Provisions for the building and structure pathway and Volume Three where plumbing or drainage work is carried out.
- For a pool associated with apartments, hotels, commercial premises, public facilities or other Class 2 to 9 buildings, use Volume One and Volume Three where plumbing or drainage work is carried out.

It is also important to check any State or Territory variations that may apply, which will be set out in the relevant Appendix of the NCC volume being applied.

HOW TO READ AND APPLY THE NCC

The NCC should be read as a sequence, not as a collection of isolated clauses.

A reference such as A1G2, A2G2 or H2P4 is a direction to open that part of the NCC, check whether it applies to the project, and then, as relevant, address these performance requirements in the plans and specifications for the project-specific submission.

For swimming pool work, use the following order:

- **First**, identify the project context and the correct NCC volume:
 - Volume Two / Housing Provisions for pools associated with a Class 1 dwelling, or
 - Volume One for pools associated with a Class 2 to 9 building and some Class 10b matters, and
 - Volume Three where plumbing or drainage work is involved.
- **Second**, confirm the building classification. For most pool projects, this means checking whether the swimming pool is treated as a Class 10b structure and whether any other classification, access, or use issues affect the project.
- **Third**, check the State or Territory adoption basis, variations, additions, deletions and any local building or plumbing requirements.
- **Fourth**, identify the relevant Performance Requirements for the swimming pool. This will include structural and non-structural matters ranging from the pool shell to surface water, pool emptying, plumbing, barriers, recirculation, access, energy, and adjoining property requirements.
- **Fifth**, identify the compliance pathway for each part of the swimming pool design. This means deciding whether the design, or each aspect of the design, can be dealt with by a DTS Solution, a Performance Solution, or a combination of both.
- **Sixth**, connect each Performance Requirement to the Assessment Method and the evidence to be relied upon. The building application should explain the design claim, the evidence relied upon, the evaluation of that evidence, and any conditions or limitations on the design.

Example: For a private fibreglass pool associated with a Class 1 dwelling, the designer would usually start by checking Volume Two & the Housing Provisions and whether Volume Three is triggered by the plumbing or drainage work. The designer would then confirm the Class 10b classification, check State or Territory variations, then consider the relevant Performance Requirements such as structural resistance, surface water, pool drainage, barriers and recirculation only to the extent they are included or affected and identify the compliance pathway under Part A2 for each.

COMPLIANCE PATHWAYS AND ASSESSMENT METHODS

NCC compliance is achieved by complying with the Governing Requirements and the relevant Performance Requirements. The Performance Requirements may be satisfied by a Performance Solution, a DTS Solution, or a combination of both.

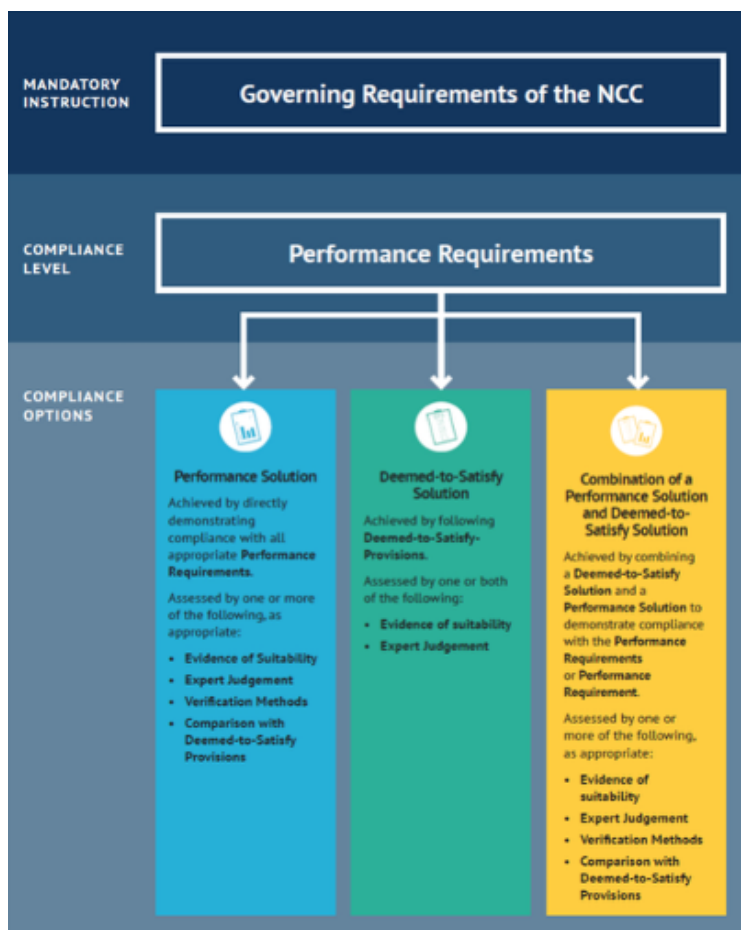


Figure A.1 Demonstrating compliance with the NCC, ABCB Performance Solution Handbook, 2021

A. Compliance options

- **A performance solution:** is a project-specific method for demonstrating that the relevant Performance Requirements have been met. It is commonly used where the Deemed-to-Satisfy provisions are not followed, are not available, or do not fully fit the project.
- **A deemed-to-satisfy solution:** follows the prescribed acceptable solution set out in the NCC. This acceptable solution may be specified in the specific NCC clause or may refer to an endorsed reference standard that sets out the design requirements.
- **A combination solution:** uses both pathways. Part of the work may follow DTS provisions while another part is justified through a Performance Solution. Where this occurs, a performance solution is still required for the element that is not reliant on the DTS provisions.

B. Assessment Methods

Assessment Methods are the methods used to show that a proposed solution complies with the NCC. A Performance Solution may use one Assessment Method or several Assessment Methods together. The allowable methods are:

- **Evidence of suitability:** the usual primary method for standard products, shell, installation and design evidence. Examples include manufacturer certificates, Product Technical Statements, engineering certificates, test reports, installation declarations, photographs and concrete dockets.
- **Verification method:** used where a test, calculation, inspection, model or other defined methodology verifies performance against stated criteria. Examples include uplift calculations, geotechnical assessments, drainage calculations and inspection reports.
- **Expert judgement:** used where a competent person must interpret technical evidence, site conditions, departures or non-standard circumstances. Examples include an engineer's assessment of groundwater, surcharge, reactive clay or partially out-of-ground construction.
- **Comparison with DTS provisions:** used where a Performance Solution is benchmarked against a relevant DTS pathway to show an equivalent or better outcome.

PREPARING A PERFORMANCE SOLUTION

The ABCB provides a range of information about performance solutions to assist industry in understanding how to follow the design process. This information is traditionally focused on complex building designs and includes a significant amount of detail.

For pool or spa design, the performance requirements set out in Volume Two of the NCC provide the relevant criteria to consider for all residential pool or spa projects. A performance solution may not require all of the steps or documentation outlined in the ABCB guidance material. It is recommended that you discuss the requirements with your building approval authority before completing your building application plans and documentation.

For pool construction work, the essential process is:

1. **Prepare a performance-based design brief:** agree on what is being assessed, who must contribute, what evidence is required and what acceptance criteria will be used.
2. **Carry out the analysis:** collect and test the evidence, including drawings, shell data, installation method, drainage/hydrostatic records, site triggers, engineering advice, and declarations.
3. **Evaluate the results:** explain whether each criterion is satisfied, satisfied subject to condition, unresolved or outside the scope of the report.
4. **Prepare the final report:** provide the authority with the completed concrete or fibreglass template, drainage module, evidence register, findings, conditions and limitations.

EVIDENCE AND DOCUMENTATION

A Performance Solution is not just a narrative. It must be supported by reliable documentation showing why the relevant Performance Requirements are met.

From a building certifier or local authority perspective, the issue is not how many documents are attached. The issue is whether the documents actually prove the compliance claim being made.

Use these evidence rules throughout the manual:

- **Use complete records:** do not rely on cropped, unsigned or unexplained extracts where the context matters.
- **Tie every claim to evidence:** every conclusion should point to a drawing, certificate, manufacturer's document, installer's declaration, engineering report, photograph, test report, or authority record.
- **Explain the evaluation:** a Standard reference is not enough. The report must explain how the project-specific evidence satisfies the relevant Performance Requirement.
- **State limits clearly:** any assumptions, exclusions, design limits, jurisdictional limits or unresolved matters must be stated.
- **Do not certify outside competence:** the designer may coordinate the report, but other experts, such as engineers, plumbers, electricians, and manufacturers, should provide the necessary support for the solution.

THE SIMPLE FORMULA

Use the same four-part formula for every major compliance statement:

1. **Claim:** state what is being submitted as satisfying the relevant Performance Requirement.
2. **Evidence:** identify the document, inspection, certificate, record or technical advice that supports the claim.
3. **Evaluation:** explain why that evidence answers the relevant Performance Requirement.
4. **Condition:** state what assumptions, limitations or continuing requirements must remain true for the conclusion to hold.

WANT TO KNOW MORE ABOUT PERFORMANCE SOLUTIONS FOR SWIMMING POOLS AND SPAS?

This factsheet outlines the general principles and process for preparing a Performance Solution.

Factsheets 3-6 in this Guide provide more detailed information to assist members in preparing performance solutions specific to the construction of a concrete pool or installation of a fibreglass pool. These Factsheets are intended to assist designers, engineers, builders and building surveyors with a practical approach for preparing the required documentation to accompany a building application.

FACTSHEET #3 - PERFORMANCE SOLUTIONS FOR POOLS AND SPAS (A QUICK GUIDE)

SPASA's Guide to Performance Solutions for Pools and Spas has been prepared to provide pool designers, engineers, builders and building surveyors with a practical approach that can be used when preparing a performance solution to accompany a building application for a pool or spa.

The Quick Guide is the starting point. This Quick Guide helps you understand a swimming pool Performance Solution in a simple, practical way. It explains which template document to use, what each document does and what must be kept separate.

1. SCOPE OF THE GUIDE

A Performance Solution is limited to the specific performance requirements of the NCC that are nominated in that solution.

This guide is intended to address only performance-related solutions for the pool shell and its installation. It does not address compliance matters such as pool barriers, electrical work, equipotential bonding, plumbing, water recirculation systems, retaining walls, paving, landscaping, access requirements or authority approvals unless those matters are expressly included and supported by separate evidence.

The approach set out in this guide can serve as a model for preparing separate performance solutions for these matters.

The guide sets out a methodology and provides guidance to prepare the required performance solution. However, it should not be taken as a universal approach that will be accepted by all approval authorities. The appropriate approval authority must decide the merits of a performance solution based on the project-specific material provided.

Definitions and references

- For a **fibreglass swimming pool**, the pool shell refers to the structural body of the pool and the immediate installation requirements needed to support it.
- For a **concrete swimming pool**, this generally includes the reinforced concrete floor and walls, reinforcement, concrete strength, durability, joints, penetrations, structural support, groundwater and hydrostatic considerations.
- For a **pre moulded fibreglass swimming pool**, this generally includes the manufactured fibreglass shell, model identification, shell design and fabrication evidence, bedding, backfill, installation support, hydrostatic control and manufacturer installation requirements.

2. KEY DESIGN ELEMENTS FOR POOLS & SPAS

DESIGN ELEMENTS	WHAT IT COVERS	WHERE IT IS DEALT WITH
SHELL / DESIGN / INSTALLATION	Concrete and Fibreglass pool shell, design, construction, fabrication, installation, support conditions and immediate site conditions.	Refer to Worked Examples and Project Forms
POOL WATER DISCHARGE / DRAINAGE	How pool water is lawfully discharged, including sanitary drainage, alternative discharge and authority requirements.	Refer to Water Discharge and Drainage document

3. WHAT THE GUIDE INCLUDES

DOCUMENT	PURPOSE	USE IT WHEN
QUICK GUIDE	Explains the overall process and informs you of what to do next.	You need to understand the Performance Solution pathway before starting.
WORKED EXAMPLES	Shows what a finished Performance Solution submission can look like for concrete and fibreglass pools.	You want sample wording and structure.
PROJECT FORMS	Provides the forms for project-specific submissions.	You are preparing the actual project submission.
WATER DISCHARGE AND DRAINAGE	Provides the separate pathway for how pool water is discharged.	The project involves discharge, drainage, pumped discharge or authority requirements.

4. STEP BY STEP PROCESS FOR THE DESIGNER/BUILDER

STEP	WHAT TO DO
1	Confirm whether the job involves shell/design/installation matters, water discharge/drainage matters, or both.
2	Confirm the shell type: concrete pool or premoulded fibreglass / FRP pool.
3	Read the matching worked example for your shell type so you can see the shape of the final submission.
4	Complete the matching project form and attach the actual project evidence.
5	If water discharge is relevant, complete the separate Water Discharge and Drainage document.
6	Send the completed forms and attachments to the certifier, engineer or approval authority, along with relevant plans and specifications for the project.

5. POOL SHELL TYPE AND MAIN DESIGN BENCHMARKS

POOL TYPE	MAIN BENCHMARK	MAIN FOCUS
REINFORCED CONCRETE POOL	AS 2783 is within scope; AS 3600 or AS 3735 is needed where a broader assessment is needed.	Structural reliability, engineering design, reinforcement, concrete, durability, support and groundwater assumptions.
PREMOULDED FIBREGLASS / FRP POOL	AS 1838 for shell design/fabrication and AS 1839 for installation.	Shell identification, manufacturer evidence, engineering/installation method, bedding, backfill, level control, support and hydrostatic controls.

6. RELATED NCC PERFORMANCE REQUIREMENTS

Pools and spas will be required to meet additional performance requirements under the NCC, including water discharge and drainage, safety barriers, and water recirculation.

These matters each require separate documentation and evidence that shows how the design of the pool or spa will meet these NCC requirements.

SPASA recommends that a performance solution is prepared for each performance requirement that a building application may need to address, rather than combining them into a single performance solution.

For example, it is recommended that pool water discharge or safety barriers within a performance solution be set out in a separate performance solution rather than in one focused on the pool shell. By providing separate documents, the building certifier can more easily follow the proposed solution.

FACTSHEET #4 PERFORMANCE SOLUTIONS FOR POOLS AND SPAS: WORKED EXAMPLES

SPASA has prepared two examples to show members what a concise residential swimming pool Performance Solution may look like. These worked examples are not approval-ready and should only be used as a guide to support the preparation of a site-specific and project-specific performance solution.

These examples show the level of structure and reasoning that may be suitable for straightforward residential swimming pool Performance Solutions. They are not project approvals and they must not be copied into a submission without the addition of project-specific evidence for the specific pool project you are seeking approval for.

Each example is limited to the pool shell and immediate installation/support matters. Associated works remain separate unless expressly included and supported by competent evidence.

How to use these worked examples

- Use the example that matches the pool type.
- Replace all sample wording with project-specific evidence before issue.
- Prepare or obtain from relevant engineers or building professionals the supporting documentation that outlines the matters addressed in the solution.

EXAMPLE 1 – REINFORCED CONCRETE SWIMMING POOL

A builder is designing an in-ground reinforced concrete swimming pool associated with a Class 1 dwelling. As part of the building application/permit, the designer (builder or engineer) is electing to use AS 2783:2025 as the technical benchmark for the structural design. AS 2783 is not a current reference standard under the NCC; therefore, a Performance Solution is needed to address the structural adequacy of the concrete pool shell and immediate structural installation conditions. The performance solution is submitted with the plans and detailed engineering designs as part of the building application/permit.

PROJECT RESPONSE SUMMARY

ITEM	PROJECT RESPONSE
BUILDING CLASSIFICATION	Class 1 dwelling with associated Class 10b swimming pool, unless the relevant authority determines otherwise.
NCC VOLUME	NCC Volume Two / Housing Provisions, subject to jurisdictional adoption and project-specific authority requirements.
PERFORMANCE REQUIREMENT	HIP1 – structural reliability and resistance, to the extent applicable to the pool shell and relevant support/installation elements.
COMPLIANCE PATHWAY	Performance Solution for included shell/design/installation matters.
ASSESSMENT METHODS	Evidence of Suitability and Expert Judgement, supported by Verification Method where calculations or engineering assessment are relied upon.
TECHNICAL BENCHMARK	AS 2783 where within scope, supported by project-specific engineering evidence.
RELATED MATTERS	Pool water discharge/drainage and safety barriers are not assessed in this solution. These are addressed separately.

ASSESSMENT TABLE

ISSUE	EVIDENCE	EVALUATION
POOL IDENTIFICATION	Project drawings, site plan and pool dimensions.	The proposed reinforced concrete swimming pool is identified and located.
APPLICABLE TECHNICAL BENCHMARK	AS 2783 and engineering evidence.	The technical benchmark is identified and used only where the pool is within scope.
DESIGN / CONSTRUCTION BASIS	Engineer certificate, drawings and specifications.	Pool dimensions, structural design, reinforcement, concrete strength, cover and durability are identified.
CONSTRUCTION / INSTALLATION METHOD	Builder and/or engineer documentation.	Excavation, formwork, reinforcement placement, concrete placement, curing, construction controls and tolerances are identified.
SUPPORT AND IMMEDIATE SITE CONDITIONS	Soil information, site plan and engineering assumptions.	Bearing, site levels, excavation support and immediate support conditions are identified or conditioned.
GROUNDWATER / HYDROSTATIC / HYDRODYNAMIC RISK	Engineer assessment and nominated controls.	Groundwater assumptions, hydrostatic relief, drainage layer, subsoil drainage or other controls are addressed.
SITE-SPECIFIC CONDITIONS	Soil report, site plan and engineer advice.	Fill, reactive clay, surcharge, retaining walls, nearby footings and boundary structures are considered or conditioned.
POOL WATER DISCHARGE	Separate Water Discharge and Drainage record.	Cross-referenced only and not determined by this example.

Final report statement: Subject to the stated assumptions, conditions and limitations, the proposed reinforced concrete swimming pool shell at [insert project address] is submitted as satisfying HIP1 by way of a Performance Solution.

EXAMPLE 2 – PREMOULDED FIBREGLASS / FRP SWIMMING POOL

The builder proposes to install an in-ground premoulded fibre-reinforced plastic swimming pool associated with a Class 1 dwelling. The Performance Solution addresses the manufactured shell, shell support and immediate site conditions required for the shell to perform as intended. AS 1838:2021 and AS 1839:2021 are used as technical benchmarks, supported by manufacturer requirements and project-specific evidence.

PROJECT RESPONSE SUMMARY

ITEM	PROJECT RESPONSE
BUILDING CLASSIFICATION	Class 1 dwelling with associated Class 10b swimming pool, unless the relevant authority determines otherwise.
NCC VOLUME	NCC Volume Two / Housing Provisions, subject to jurisdictional adoption and project-specific authority requirements.
PERFORMANCE REQUIREMENT	H1P1 – structural reliability and resistance, to the extent applicable to the pool shell and relevant support/installation elements.
COMPLIANCE PATHWAY	Performance Solution for included shell/design/fabrication/installation matters.
ASSESSMENT METHODS	Evidence of Suitability and Expert Judgement, supported by Verification Method where calculations, testing or competent person assessment are relied upon.
TECHNICAL BENCHMARK	AS 1838 for shell design/fabrication and AS 1839 for installation, supported by manufacturer requirements and project-specific site evidence.
RELATED MATTERS	Pool water discharge/drainage and safety barriers are not assessed in this solution. These are addressed separately.

ASSESSMENT TABLE

ISSUE	EVIDENCE	EVALUATION
POOL IDENTIFICATION	Manufacturer, model, serial number if available, shell dimensions and site plan.	The nominated premoulded fibreglass / FRP pool shell is identified and linked to the project.
APPLICABLE TECHNICAL BENCHMARK	AS 1838 and AS 1839, supported by manufacturer, installer and site evidence.	The shell design/fabrication and installation benchmarks are identified and connected to project evidence.
DESIGN / CONSTRUCTION BASIS	Manufacturer statement or product technical evidence.	The nominated shell is submitted as conforming with the relevant shell requirements.
CONSTRUCTION / INSTALLATION METHOD	Installer method statement and manufacturer requirements.	Excavation, bedding, backfill, placement, levelling, water/backfill balancing and installation controls are identified.
SUPPORT AND IMMEDIATE SITE CONDITIONS	Installer assessment, site plan and supporting site information.	Bedding, backfill, level control, shell support and immediate installation conditions are identified or conditioned.
GROUNDWATER / HYDROSTATIC / HYDRODYNAMIC RISK	Site assessment and installer or competent person confirmation.	Hydrostatic valve, standpipe, sump, pump, subsoil drainage or other controls are identified where required.
SITE-SPECIFIC CONDITIONS	Soil information, site plan and competent person advice.	Fill, reactive clay, surcharge, retaining walls, nearby footings and boundary structures are considered or conditioned.
POOL WATER DISCHARGE	Separate Water Discharge and Drainage record.	Cross-referenced only and not determined by this example.

Final report statement: Subject to the stated assumptions, conditions and limitations, the proposed pre-moulded fibreglass / FRP swimming pool at [insert project address] is submitted as satisfying Performance requirement H1P1 by way of a Performance Solution.

FACTSHEET #5 SWIMMING POOL PERFORMANCE SOLUTION: PROJECT TEMPLATES

This factsheet provides two templates (project forms) that can serve as the basis for preparing a site-specific and design-specific performance solution. Every performance solution must be tailored to the specific project being designed.

These templates help a designer or builder ensure that a performance solution includes the necessary elements required under the National Construction Code and state building legislation. When completed, they should be included with the documentation submitted to the approval authority to obtain building approval.

How to use these forms

- Use **Form A** for projects that involve the construction of a reinforced concrete pool.
- Use **Form B** for projects involving the installation of a pre-moulded fibreglass/FRP pool.
- As the designer, builder or applicant for the building application, you must review and complete these templates to set out the specific details of the project.
- The template assumes that you will prepare or obtain from relevant engineers or building professionals the details that support this solution. Where the template states that a document or information is 'included', this must be attached with the solution. Do not use these templates or state that a matter is satisfied without ensuring you have evidence references to support your solution. Where evidence is missing, mark the matter as conditional, unresolved, not applicable or separate process.

FORM A – REINFORCED CONCRETE SWIMMING POOL

1. PROJECT DETAILS

This section identifies the project, the applicable NCC context and the person or organisation preparing the submission.

FIELD	PROJECT RESPONSE
PROJECT / ADDRESS	
STATE / TERRITORY	
NCC EDITION / ADOPTION	NCC 2022 or NCC 2025 – [Check application]
NCC VOLUME / CLASSIFICATION	Volume Two - Class 10b swimming pool associated with a Class 1 dwelling
RELEVANT AUTHORITY	[insert RBS / certifier / council / approval authority]
BUILDER / POOL CONTRACTOR	[insert]
PREPARED BY / DATE / VERSION	[insert]

2. SCOPE AND SEPARATE PROCESS CHECK

This section defines the shell/design/installation matters covered by this Performance Solution and records matters that must follow a separate process.

MATTER	TREATMENT	EVIDENCE / PERSON
POOL IDENTIFICATION	Included	Project drawings, site plan and pool dimensions.
APPLICABLE TECHNICAL BENCHMARK	Included	AS 2783 relied on where within scope, supported by project-specific engineering evidence.
DESIGN / FABRICATION BASIS	Included	Engineer certificate and drawings identifying structural design, dimensions, reinforcement, concrete strength, cover and durability.
CONSTRUCTION / INSTALLATION METHOD	Included	Builder and/or engineer documentation confirming excavation, formwork, reinforcement placement, concrete placement, curing and tolerances.
SUPPORT AND IMMEDIATE SITE CONDITIONS	Included	Engineering assumptions, soil information and site plan confirming bearing conditions, excavation support, site levels and immediate support requirements.
GROUNDWATER / HYDROSTATIC / HYDRODYNAMIC RISK AFFECTING SHELL SUPPORT	Included	Engineer assessment identifying groundwater assumptions, hydrostatic relief, drainage layer, subsoil drainage or other controls.
SITE-SPECIFIC CONDITIONS, INCLUDING FILL, REACTIVE CLAY, SURCHARGE AND NEARBY STRUCTURES	Included	Soil report, site plan and engineer advice confirming whether these issues affect the design or construction.
POOL WATER DISCHARGE / DRAINAGE	Separate document	Not assessed in this form. Use the Water Discharge and Drainage document.

3. NCC PATHWAY

ITEM	ENTRY
PERFORMANCE REQUIREMENT/S	The shell and relevant support or installation elements are submitted as satisfying H1P1 of NCC Volume Two, to the extent applicable.
COMPLIANCE PATHWAY	Performance Solution for included shell, design, construction and installation support matters.
ASSESSMENT METHOD/S	Evidence of Suitability and Expert Judgement, supported by Verification Method where relied upon.
TECHNICAL BENCHMARK/S	AS 2783:2025 where the pool is within scope, supported by project-specific engineering evidence. AS 3600 or AS 3735 may be relevant where broader structural assessment is required.

4. SITE RISK CHECK

This check deals with conditions affecting the pool shell, support and installation. Pool water discharge/drainage is dealt with separately.

TRIGGER	STATUS	RESPONSE
FILL, BEARING MATERIAL, REACTIVE CLAY OR SEASONAL MOVEMENT	[No / Yes / Unknown]	[insert]
GROUNDWATER, HYDROSTATIC PRESSURE OR MOVING SUBSURFACE WATER AFFECTING SHELL/SUPPORT	[No / Yes / Unknown]	[insert]
NEARBY FOOTINGS, RETAINING WALLS, SURCHARGE OR BOUNDARY STRUCTURES	[No / Yes / Unknown]	[insert]
RAISED, SUSPENDED, VANISHING EDGE, FLOOD/COASTAL OR AGGRESSIVE ENVIRONMENT	[No / Yes / Unknown]	[insert]
LATER WORKS MAY AFFECT SUPPORT/LOADING	[No / Yes / Unknown]	[insert]
POOL WATER DISCHARGE/DRAINAGE	Separate document	[insert separate document reference]

5. EVIDENCE AND FINDING

This section records the evidence relied on and the finding reached for each included matter. If the evidence is incomplete, qualified, outside the scope of this submission or still to be provided, the finding should be recorded as conditional, separate or unresolved.

ELEMENT	EVIDENCE REFERENCE	FINDING / STATUS
DESIGN BASIS	[insert]	[Satisfied / Conditional / Unresolved]
STRUCTURAL ACTIONS	[insert]	[insert]
CONCRETE, REINFORCEMENT AND DURABILITY	[insert]	[insert]
HYDROSTATIC AND GROUNDWATER RESPONSE AFFECTING SHELL/SUPPORT	[insert]	[insert]
CONSTRUCTION CONTROLS AND NON-STANDARD CONDITIONS	[insert]	[insert]
POOL WATER DISCHARGE/DRAINAGE	[insert separate document reference]	[Separate / N/A]

FORM B – PREMOULDED FIBREGLASS / FRP SWIMMING POOL

1. PROJECT DETAILS

This section identifies the project, the applicable NCC context and the person or organisation preparing the submission.

FIELD	ENTRY
PROJECT / ADDRESS	
STATE / TERRITORY	
NCC EDITION / ADOPTION	NCC 2022 or NCC 2025 – [Check application]
NCC VOLUME / CLASSIFICATION	Class 10b swimming pool – associated with a Class 1 dwelling
RELEVANT AUTHORITY	[insert RBS / certifier / council / approval authority]
BUILDER / POOL CONTRACTOR	[insert]
PREPARED BY / DATE / VERSION	[insert]

2. SCOPE AND SEPARATE PROCESS CHECK

This section defines the shell/design/installation matters covered by this Performance Solution and records matters that must follow a separate process.

MATTER	TREATMENT	EVIDENCE / PERSON
POOL IDENTIFICATION	Included	Manufacturer, model, serial number if available, shell dimensions and site plan.
APPLICABLE TECHNICAL BENCHMARK	Included	AS 1838 relied on for shell design/fabrication and AS 1839 relied on for installation, supported by manufacturer, installer and site evidence.
DESIGN / FABRICATION BASIS	Included	Manufacturer statement or product technical evidence confirming the nominated shell and its basis.
CONSTRUCTION / INSTALLATION METHOD	Included	Installer method statement confirming excavation, bedding, backfill, placement, levelling and installation controls.
SUPPORT AND IMMEDIATE SITE CONDITIONS	Included	Installer assessment, site plan and supporting site information confirming bedding, backfill, level control, shell support and immediate installation conditions.
GROUNDWATER / HYDROSTATIC / HYDRODYNAMIC RISK AFFECTING SHELL SUPPORT	Included	Site assessment and installer or competent person confirmation identifying nominated controls where required.
SITE-SPECIFIC CONDITIONS, INCLUDING FILL, REACTIVE CLAY, SURCHARGE AND NEARBY STRUCTURES	Included	Soil information, site plan and competent person advice confirming whether these issues affect the installation.
POOL WATER DISCHARGE / DRAINAGE	Separate document	Not assessed in this form. Use the Water Discharge and Drainage document.

3. NCC PATHWAY

ITEM	ENTRY
PERFORMANCE REQUIREMENT/S	The shell and relevant support or installation elements are submitted as satisfying HIP1 of NCC Volume Two, to the extent applicable.
COMPLIANCE PATHWAY	Performance Solution for included shell, design/fabrication, installation and support matters.
ASSESSMENT METHOD/S	Evidence of Suitability and Expert Judgement, supported by Verification Method where relied upon.
TECHNICAL BENCHMARK/S	AS 1838 for shell design/fabrication and AS 1839 for installation, supported by manufacturer requirements and project-specific site evidence.

4. SITE RISK CHECK

This check deals with conditions affecting the pool shell, support and installation. Pool water discharge/drainage is dealt with separately.

TRIGGER	STATUS	RESPONSE
FILL, BEARING MATERIAL, REACTIVE CLAY OR SEASONAL MOVEMENT	[No / Yes / Unknown]	[insert]
GROUNDWATER, HYDROSTATIC PRESSURE OR MOVING SUBSURFACE WATER AFFECTING SHELL/SUPPORT	[No / Yes / Unknown]	[insert]
NEARBY FOOTINGS, RETAINING WALLS, SURCHARGE OR BOUNDARY STRUCTURES	[No / Yes / Unknown]	[insert]
RAISED, SUSPENDED, VANISHING EDGE, FLOOD/COASTAL OR AGGRESSIVE ENVIRONMENT	[No / Yes / Unknown]	[insert]
LATER WORKS MAY AFFECT SUPPORT/LOADING	[No / Yes / Unknown]	[insert]
POOL WATER DISCHARGE/DRAINAGE	Separate document	[insert separate document reference]

5. EVIDENCE AND FINDING

This section records the evidence relied on and the finding reached for each included matter. If the evidence is incomplete, qualified, outside the scope of this submission or still to be provided, the finding should be recorded as conditional, separate or unresolved.

ELEMENT	EVIDENCE REFERENCE	FINDING / STATUS
SHELL IDENTIFICATION	[insert]	[Satisfied / Conditional / Unresolved]
SHELL DESIGN/FABRICATION BASIS	[insert]	[insert]
INSTALLATION METHOD AND MANUFACTURER REQUIREMENTS	[insert]	[insert]
HYDROSTATIC, GROUNDWATER AND SITE MOVEMENT RESPONSE AFFECTING SHELL/SUPPORT	[insert]	[insert]
POST-INSTALLATION CONTROLS AND NON-STANDARD CONDITIONS	[insert]	[insert]
POOL WATER DISCHARGE/DRAINAGE	[insert separate document reference]	[Separate / N/A]

FACTSHEET #6 - PERFORMANCE SOLUTIONS FOR SWIMMING POOL WATER DISCHARGE AND DRAINAGE

This factsheet provides an outline of how to prepare a performance solution to meet the relevant NCC performance requirements for pool water discharge and drainage (H2P4).

This requirement must be addressed for every building approval for a swimming pool or spa. Until NCC 2025, there were no deemed-to-satisfy provisions available, meaning all designs required a performance solution.

NCC 2025 now includes a deemed-to-satisfy provision which references AS 3500.2. Applications prepared under NCC 2025 can now choose to use AS 3500.2 or may still choose to use a performance solution for a specific design that meets the site-specific needs and project design.

1. PURPOSE

Use this document when you need to show how pool water will be lawfully discharged from the site. It sits alongside any other NCC requirements you may need to address in your building application, such as the shell or safety barriers.

2. STARTING POSITION

For the purposes of this process, the first step is to confirm the NCC edition adopted in the relevant jurisdiction and any associated local requirements. The starting position for pool water discharge should then be determined according to the table below.

NCC POSITION	STARTING POINT
NCC 2025 ADOPTED	A DTS pathway may be available where pumped pool discharge is discharged to the sanitary drainage system in accordance with AS/NZS 3500.2.
NCC 2022 APPLIES	Prepare a separate Performance Solution or other authority-accepted approach. The NCC 2025 pathway may be put forward as a technical benchmark only if accepted by the relevant authority.

3. DECISION PATHWAY

Once the starting position has been identified, the proposed discharge method should be worked through in a structured sequence, so the correct pathway, evidence and authority requirements are clearly identified. The table below sets out the decision pathway for determining whether the proposal may proceed by a simpler pathway or requires a separate Performance Solution or other authority-accepted approach.

STEP	DECISION / ACTION
1	Confirm the State or Territory, the adopted NCC edition and any local plumbing, water authority or council requirements.
2	Confirm whether the project proposes pumped discharge to sanitary drainage, another approved outlet or an alternative discharge method.
3	Confirm whether AS/NZS 3500.2 applies to the proposed sanitary drainage connection.
4	Confirm the competent person evidence required for the pathway.
5	Confirm whether the water authority, council or relevant authority allows the proposed discharge method.
6	If the simple pathway applies, record the pathway and evidence. If it does not, prepare a separate Performance Solution or authority-accepted approach.
7	Do not include the final discharge conclusion in the shell Performance Solution.

4. COMPLIANCE PATHWAY SELECTION

Once the relevant jurisdiction, discharge method and available evidence have been identified, the appropriate compliance pathway should be selected by reference to the circumstances of the project. The table below sets out the typical pathway for common situations, together with the evidence generally required to support that pathway.

SITUATION	PATHWAY	EVIDENCE NEEDED
NCC 2025 adopted and pumped discharge connects to sanitary drainage in accordance with AS/NZS 3500.2	DTS pathway may be available. Record it here, not inside the shell document.	Competent person evidence confirming sanitary drainage details, pump/discharge details, authority requirements and AS/NZS 3500.2 reference.
NCC 2025 adopted but site specific design and builder preference is to use alternate solution (not AS 3500.2)	Prepare a separate Performance Solution or submit the NCC 2025 pathway as a technical benchmark for authority consideration.	Competent person evidence confirming sanitary drainage details, pump/discharge details, authority requirements and AS/NZS 3500.2 reference.
NCC 2022 in force in relevant jurisdiction	Prepare a separate Performance Solution or submit the NCC 2025 pathway as a technical benchmark for authority consideration.	Competent person evidence confirming sanitary drainage details, pump/discharge details, authority requirements and AS/NZS 3500.2 reference.
Sanitary drainage connection is not available or not permitted	Separate Performance Solution or authority-accepted approach required.	Alternative discharge design, authority approval, site levels, flow path and impact assessment.
Site constraints make the simple pathway impossible to follow	Separate Performance Solution required.	Alternative method, risk controls, authority advice and final report.

5. EVIDENCE CHECKLIST

The evidence checklist below is intended to ensure that the selected discharge pathway is supported by clear project-specific documentation and that all relevant authority, technical and risk matters have been addressed. Each item should be completed by reference to the document, drawing, correspondence, or competent person evidence relied upon for the proposed discharge method.

EVIDENCE ITEM	STATUS / REFERENCE
Project drawings, pool location, levels and proposed discharge route	[insert]
NCC edition / adoption and jurisdictional pathway check	[insert]
Competent person evidence confirming sanitary drainage details	[insert]
AS/NZS 3500.2 connection details where sanitary drainage is used	[insert]
Pump discharge details, pipework, connection point and flow rate where relevant	[insert]
Water authority, council or relevant authority requirements / correspondence	[insert]
Assessment of illness risk, property impact, flooding, nuisance, erosion and stagnation	[insert]
Alternative discharge controls where sanitary drainage is not used	[insert]
Final conclusion and limitations	[insert]

