

Concessions to Transport Standards

Part 1 - Concessions Process

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2.0	02/11/2015	Renumbered as T MU MD 00011 ST <i>Concessions to ASA Requirements</i> version 2.0. Document number changed and inclusion of process for nonconformances. Changes to associated forms.
1.0	25/08/2021	Renumbered as TS 00003.1:1.0. Version number recommenced in line with new designation.
2.0	24/11/2023	Second version. Change includes addition of value creation requirements.

Preface

This document specifies the process to obtain prior approval for an exception from one or more mandatory requirements within TfNSW standards.

This standard forms part of a series which includes the forms to be completed to obtain a concession:

- TS 00003.2
- TS 00003.3.

This is the second version. The change from the previous content includes new provisions in relation to value creation associated with concession development.

The *TfNSW Standards Management Framework* (SMF) outlines the way standards are developed, managed and governed for application to assets used in the Transport business.

The SMF is designed to provide a consistent, whole-of-life cycle approach and implementation of the framework aims to maximise value for customers, communities and the people of NSW.

Governance is the formal process by which an accountable party makes decisions, checks that predefined activities have been done, and provides a forum to receive and accept assurances.

The key governance activities covered within the SMF include the following:

- creating a new standard or modifying an existing standard
- applying for and approving a concession.

A concession is a permitted exception to a standard to achieve the closest possible asset or service outcome expected from compliance to the standard or to allow innovation to occur on a specific or constrained situation in the operating environment.

While it is expected that every effort is made to comply with requirements contained within TfNSW standards, it may not be reasonably practicable to comply fully with requirements at all times. In some instances, better outcomes can be achieved for TfNSW through noncompliant alternatives even when compliance is reasonably practicable to achieve.

The following two fundamental principles are considered in the determination of concessions:

- safety risk management, demonstrated by an argument with evidence that safety will be ensured so far as is reasonably practicable (SFAIRP)
- value creation, demonstrated by an argument with evidence of optimal asset management outcomes across whole-of-life.

A scaled approach based on five tiers has been adopted to apply an appropriate level of governance and assurance to the development and change management activities associated with standards.

Figure 1 indicates how the change and risk impacts together affect the tier classification.

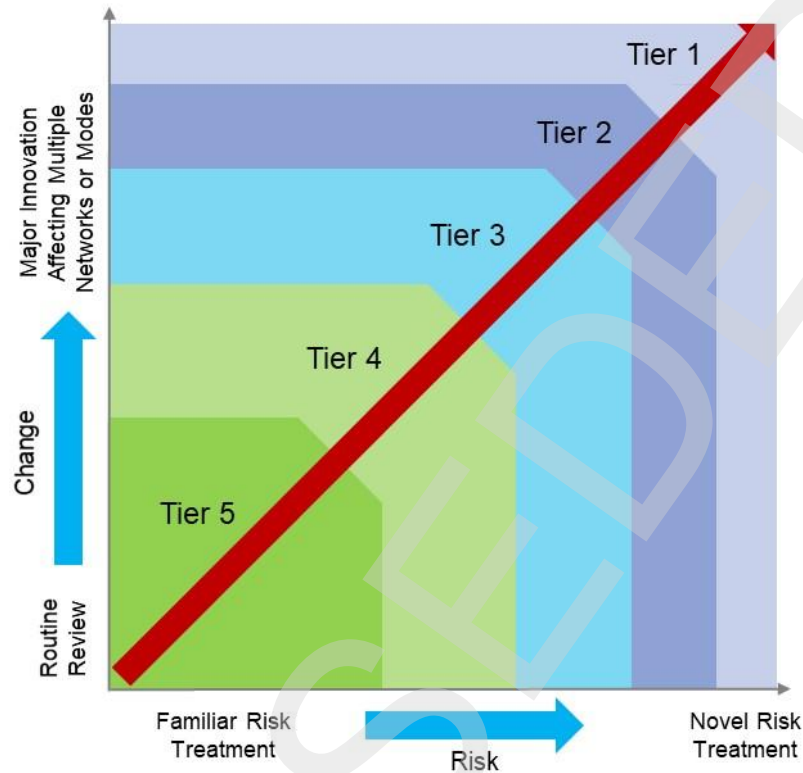


Figure 1 – SMF – Scaled approach to governance

Note: Figure 1 has been reproduced from the SMF.

Table 1 defines the governance arrangements for each tier.

Table 1 – SMF – Concession governance by tier

Tier	Technical review	Process review	Committee endorsement	Final approver
1	AM Advisory Panel	AMB Standards PMO	AM SteerCo	SER Deputy Secretary
2	AM Advisory Panel	AMB Standards PMO	NA	AMB Director Engineering
3	Technical SME and Standards Lead	AMB Standards PMO	NA	AMB Director Engineering
4	Technical SME	AMB Standards PMO	NA	Standards Lead
5	Technical SME (or as prescribed within the standard)	AMB Standards PMO	NA	Technical SME (or as prescribed within the standard)

Note: Table 1 has been reproduced from the SMF.

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SUPERSEDED

1 Scope

This document covers the process to obtain prior approval for an exception from one or more mandatory requirements within TfNSW standards.

This document does not cover nonconformances, which are deviations from TfNSW standards that have occurred without prior approval from TfNSW. These failures to comply with the concession process create value loss and can expose Transport to adverse safety, risk and asset management outcomes. Nonconformances are covered in TS 00004.1.

2 Application

This document describes the process, including workflows and decisions, for the management of concessions to TfNSW standards. The concession management process described in this document is not intended or able to grant concessions to legislative noncompliance.

Tier 1 concessions entail significant levels of risk and change, best managed by existing corporate governance arrangements. The workflows and implementation for the management of routine concessions outlined in Section 8 do not apply to tier 1 concessions.

Tier 5 concessions give rise to insignificant levels of risk and change. This standard does not apply to certain tier 5 concessions where the relevant Transport standard contains specific prescription on the handling of exceptions. In this case the specific prescriptions within the relevant Transport standard take precedence over this standard.

The process in this document applies to the following:

- Transport agencies, Service Providers and TAOs that are required to comply with TfNSW standards
- TfNSW projects and contracts where scope includes providing new assets or altering existing assets (this includes property lease agreements such as air space developments and easements)
- third parties whose work affects a designated transport corridor or service and are required by a planning instrument to comply with TfNSW requirements
- third party operators or owners of rolling stock or transport assets.

As stated in TS 01455, all necessary concessions are required to be obtained prior to progressing through configuration management gates 3 (for construction) and 4 (ready for testing).

This process applies where a configuration change has not yet progressed through gate 3 for requirements that relate to the design of the solution.

This process applies where a configuration change has not yet progressed through gate 4 for requirements that relate to the implementation or testing of an added or altered asset.

This document does not cover cases where a configuration change has been progressed through configuration management gates 3 or 4 as applicable, without obtaining prior approval for an exception from TfNSW standards. This is regarded as a failure to comply with the concession process and can expose Transport to adverse safety, risk and asset management outcomes. An alternative process defined in TS 00004.1 applies in these cases and focuses on capturing lessons learnt and management of residual risk across the whole-of-life of the asset.

The provisions of Section 6.2.3 are transitional and effective for 12 months from the date of publication of this document. It is expected that these provisions will be reviewed after this transitional period.

3 Referenced documents

The following documents are cited in the text. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document applies.

International standards

ISO/IEC 19510:2013 Information technology — Object Management Group Business Process Model and Notation

TfNSW standards

TS 01505 (T MU AM 01001 ST) *Life Cycle Costing*

TS 01455 *Configuration Management*

TS 04981 (T MU MD 20001 ST) *System Safety Standard for New or Altered Assets*

TS 00003.2 *Concession to Transport Standards Part 2 - Form*

TS 00003.3 *Concession to Transport Standards Part 3 - Form for Tier 5 Concessions*

TS 00004.1 *Nonconformances to Transport Standards Part 1 – Nonconformance Process*

Other referenced documents

The following documents are not publicly available. To obtain access email standards@transport.nsw.gov.au

Transport for fNSW, *Standards Management Framework*

Transport for NSW, *Value Creation Toolkit*

4 Terms, definitions and abbreviations

The following terms, definitions and abbreviations apply in this document:

AMB Asset Management Branch

AMAP Asset Management Advisory Panel; provides independent asset management, technical advice and assurance to the Transport Executives who are responsible for decision making

asset custodian the TfNSW Division accountable for the end to end life cycle management and performance of assets (including asset condition, risk and reporting) on behalf of the asset owner to achieve agreed customer and community outcomes

asset steward the entity given the responsibility by an asset custodian to oversee part of the life cycle process for an asset

BPMN business process model and notation

concession a permitted exception to a standard to achieve the closest possible asset or service outcome expected from compliance to the standard or to allow innovation to occur on a specific or constrained situation in the operating environment. It provides TfNSW assurance that deviations from standard requirements are managed appropriately

DMN Decision Model and Notation

EMG Executive Management Group

KPI Key performance indicator

OMG Object Management Group

PMO Project Management Office

RASCI Responsible, Accountable, Supportive, Consulted, Informed

SER Safety, Environment and Regulation (Branch of TfNSW)

service provider a party external or internal to an organisation providing a service on behalf of an accountable party either directly or through a supply chain

SFAIRP so far as is reasonably practicable; that which is, or was at a particular time, reasonably able to be done to ensure health and safety, taking into account and weighing up all relevant matters including:

- a) The likelihood of the hazard or the risk concerned occurring.
- b) The degree of harm that might result from the hazard or the risk.
- c) What the person concerned knows, or ought reasonably to know, about the hazard or risk, and ways of eliminating or minimising the risk.
- d) The availability and suitability of ways to eliminate or minimise the risk, and

e) After assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

SME subject matter expert

SMF Standards Management Framework

Standard the collective term used to identify asset and related process requirement documents for managing the configuration of transport assets and services through the asset life cycle

standard lead accountable for management of the standard across its life cycle

technical SME responsible for the technical content of the standard

TAO Technically Assured Organisation

TfNSW Transport for NSW

value financial and/or non-financial benefit associated with an activity in the context of the Transport cluster and its customers, relative to an alternative course of action or non-action

value creation an increase in value realised from an activity and expressed as the incremental change, rather than the absolute amount of value realised from the activity

value loss a decrease in value realised from an activity, for example due to a nonconformance

5 Overview of concession process

The high-level concession process consists of three main steps, as highlighted in Figure 2.

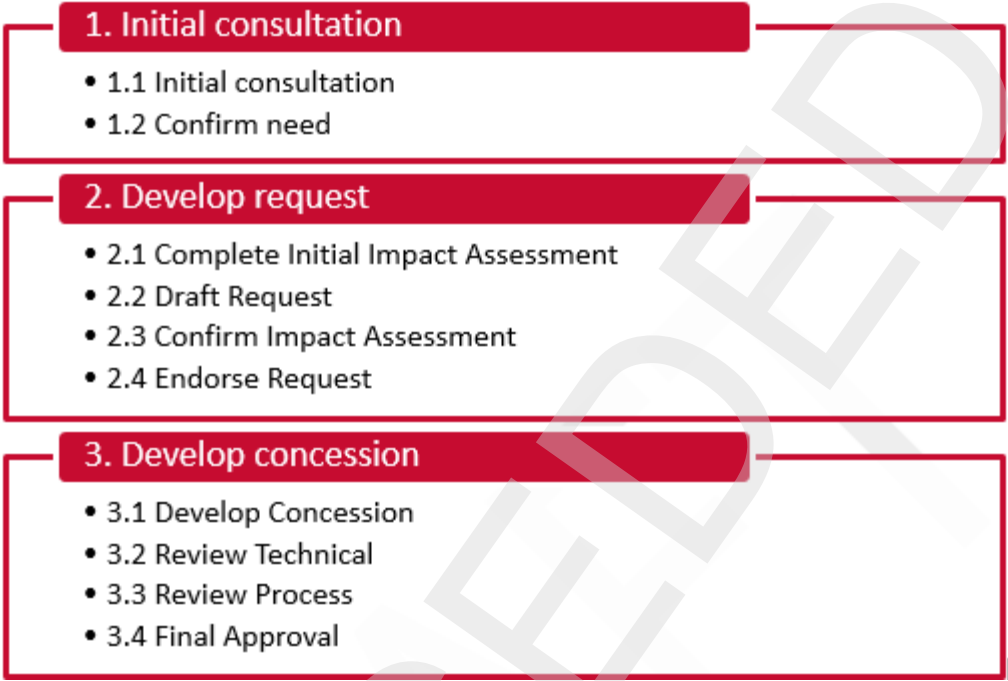


Figure 2 – Overview – Concession process

Figure 3 shows how the tasks within steps two and three of the concession process are scaled by the concession tier.

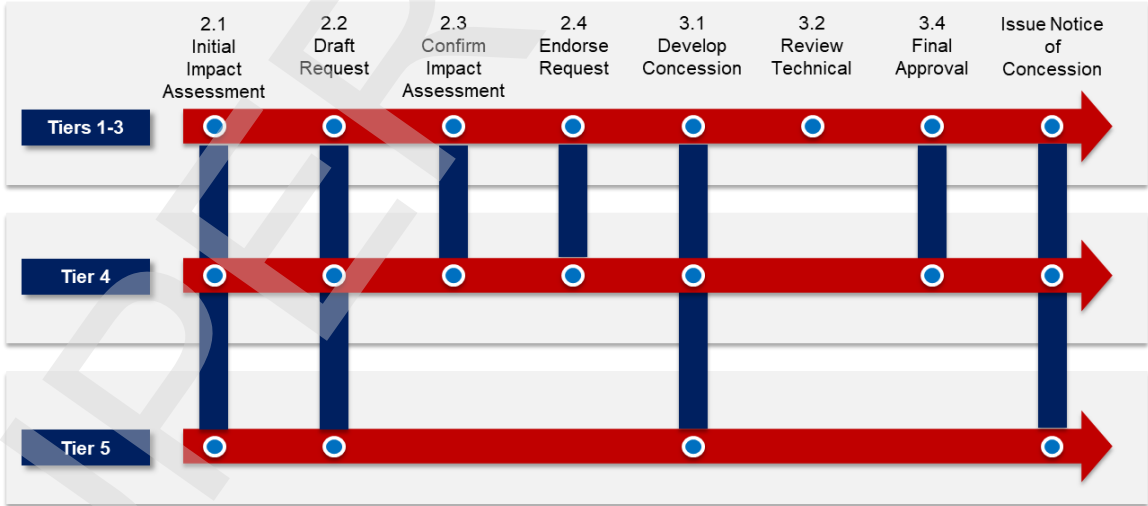


Figure 3 – Overview – Concession process scaling by tier

6 Governance

A tiered approach is adopted to apply an appropriate level of governance and assurance to the management of concessions. The tiered approach ensures an appropriate level of authority is identified to support efficient decision making.

6.1 Determining the tier

The business rules for determining the concession tier are based on the risk and change impacts of the proposed concession.

6.1.1 Risk impact criteria

The risk impact of the proposed concession consists of three criteria, as described in Table 2.

Each criteria shall be assessed by the requester as either low, medium, or high based on the guidance associated with each rating.

The requester shall fully justify the selection of each criteria and provide supporting evidence.

Table 2 – Determine tier – Risk impact criteria

ID	Criteria	Low	Medium	High
RC1	Level of noncompliance with standard.	Partial noncompliance with a standard.	Substantial noncompliance with a standard.	Complete noncompliance with a standard.
RC2	Safety impact of concession.	No increase in residual safety risk(s).	No increase in residual safety risk(s) with addition of administrative controls.	Increase in residual safety risk(s).
RC3	Complexity.	No impacts on other systems, disciplines or projects.	Some impacts on other systems, disciplines or projects.	Significant impacts on other systems, disciplines or projects.

Note 1: RC1 addresses the extent of noncompliant requirements within a standard. It does not call for a subjective assessment as to the significance or importance of requirements within the standard.

Note 2: RC2 addresses the relative change in residual safety risk associated with the noncompliant proposed solution compared to a compliant solution.

6.1.2 Change impact criteria

The change impact of the proposed concession consists of three criteria, as described in Table 3.

Each criteria shall be assessed by the requester as either low, medium, or high based on the guidance associated with each rating.

The requester shall fully justify the selection of each criteria and provide supporting evidence.

Note 1: CC1 addresses the relationship of multiple independent concessions associated with the same program, project or work.

Note 2: CC3 addresses the whole-of-life impacts of the noncompliant proposed solution compared to a compliant solution. It should consider the relative impacts on total expenditure including capital and recurrent expenditure, either positive or negative.

Table 3 – Determine tier – Change impact criteria

ID	Criteria	Low	Medium	High
CC1	Aggregation of concessions	Single independent concession.	Multiple independent concessions.	Multiple interdependent concessions.
CC2	Precedence / novelty	Proposed solution used previously by TfNSW in previous concession.	Proposed solution used previously within Australian transport industry.	Proposed solution not previously used within Australian transport industry.
CC3	Impact on whole-of-life	Low impact to asset management outcomes across whole-of-life. (for example, change in costs/benefits < \$1M, either as a net increase or decrease)	Medium impact to asset management outcomes across whole-of-life. (for example, change in costs/benefits > \$1M and < \$50M, either as a net increase or decrease)	High impact to asset management outcomes across whole-of-life. (for example, change in costs/benefits > \$50M, either as a net increase or decrease)

6.1.3 Tier determination

The risk impact shall be determined based on the decision table where the risk impact is determined by the first matched rule (first hit policy), as described in Table 4.

Table 4 – Determine tier – Risk impact decision table

Rule	Input – RC1	Input – RC2	Input – RC3	Output – Risk impact
1		High		Significant
2	High		High	Significant
3	High			Intermediate
4			High	Intermediate
5		Medium		Intermediate
6	Medium		Medium	Intermediate
7	Medium			Minor
8			Medium	Minor
9	Low	Low	Low	Negligible

Note: As safety risks are considered critical to the determination of the risk impact, RC2 provides an overriding selection.

The change impact shall be determined based on the decision table where the change impact is determined by the first matched rule (first hit policy), as described in Table 5.

Table 5 – Determine tier – Change impact decision table

Rule	Input – CC1	Input – CC2	Input – CC3	Output – Change impact
1	High	High		Level 1
2	High		High	Level 1
3		High	High	Level 1
4	High			Level 2
5		High		Level 2
6			High	Level 2
7	Medium	Medium		Level 2
8		Medium	Medium	Level 2
9	Medium		Medium	Level 2
10	Medium			Level 3
11		Medium		Level 3
12			Medium	Level 3
13	Low	Low	Low	Level 4

The tier shall be determined from Table 6, based on the risk and change impacts.

Table 6 – Determine tier – Tier determination

Risk impact	Level 4 change	Level 3 change	Level 2 change	Level 1 change
Significant	Tier 3	Tier 2	Tier 1	Tier 1
Intermediate	Tier 4	Tier 3	Tier 2	Tier 1
Minor	Tier 5	Tier 4	Tier 3	Tier 2
Negligible	Tier 5	Tier 5	Tier 4	Tier 3

6.2 Supporting evidence

A tiered approach is adopted to ensure that an appropriate level of evidence be supplied in support of proposed concessions. The requester shall work collaboratively with the relevant Asset Steward and Asset Custodian as applicable to ensure adequate supporting evidence is supplied.

At a minimum, the evidence described in Table 7 shall be provided.

Table 7 – Determine tier – Supporting evidence for concession

Tier	Evidence
1 & 2	Safety risk statement Whole-of-life statement Whole-of-life cost assessment Hazard log / risk assessment Stakeholder consultation records Safety assurance report
3 & 4	Safety risk statement Whole-of-life statement Whole-of-life cost assessment Hazard log / risk assessment Stakeholder consultation records
5	Safety risk statement Whole-of-life statement

6.2.1 Whole-of-life statement

A high-level summary shall be presented that demonstrates asset management outcomes across whole-of-life of asset have been considered in implementing the proposed concession.

6.2.2 Whole-of-life cost assessment

A detailed whole-of-life cost assessment shall be provided for the proposed solution and other options considered in comparison to compliant solutions. Refer to TS 01505 for more information.

6.2.3 Value creation

Financial and non-financial value creation should be provided in accordance with the *Value Creation Toolkit* for Tier 1, Tier 2, Tier 3 and Tier 4 concessions.

Non-financial value creation should be provided in accordance with the *Value Creation Toolkit* for Tier 5 concessions.

These provisions are transitional and effective for 12 months from the date of publication of this document. It is expected that these provisions will be reviewed after this transitional period.

6.2.4 Safety risk statement

A high-level summary shall be presented that demonstrates that safety will be ensured SFAIRP in implementing the concession.

6.2.5 Hazard log or risk assessment

A detailed risk assessment shall be prepared by a competent person with appropriate stakeholder engagement that demonstrates the residual risk is mitigated to SFAIRP. The risk assessment shall be of a level commensurate with the level of risk. The risk assessment shall identify and assess all risks associated with the asset in its operational state that will be impacted by the concession. For each risk, its impact from the concession should be addressed and it should be demonstrated that the risk has been reduced SFAIRP. Refer to TS 04981 for further information on the safety assurance requirements.

6.2.6 Safety assurance report

Where there is a significant level of risk, the risk assessment and argument shall be independently verified. Refer to TS 04981 for further information on the safety assurance requirements.

6.2.7 Stakeholder consultation records

Stakeholder consultation details shall be provided including identification of all relevant stakeholders and their organisational titles.

6.3 Types of concessions

There are two types of concessions: permanent or temporary. Permanent concessions are covered in Section 6.3.1. Temporary concessions are covered in Section 6.3.2.

6.3.1 Permanent concessions

A permanent concession can be issued when the circumstances that cause the exception to occur are not expected to change over the life of the asset to which the concession applies.

6.3.2 Temporary concessions

A temporary concession can be issued in one of the following situations:

- work is of a temporary nature and full compliance is not reasonably practicable
- temporary conditions prevent full compliance but are expected to return to normal in the foreseeable future.

The Asset Steward shall perform one of the following actions prior to expiry:

- advise AMB Standards PMO that full compliance to standards has been achieved and provide supporting evidence to formally close the temporary concession
- obtain another temporary concession

- withdraw the temporary concession and obtain a permanent concession.

7 Roles and responsibilities

The roles and responsibilities performed by each participant in the process is described by one or more of the RASCI elements, highlighted in Figure 4.

R	Responsible	Performs task
A	Accountable	Accountable for the outcome
S	Support	Assists those responsible
C	Consulted	For advice / clarification
I	Informed	Of progress and affected by outcome

Figure 4 – RASCI – Elements

All participants in the process shall be authorised through delegation from their organisation and hold appropriate qualifications and competencies necessary to perform the task.

7.1 Initial consultation step

The RASCI for the initial consultation step is defined in Table 8.

The identification of a need for a concession may arise from multiple parties, including the Service Provider, Asset Steward or Asset Custodian.

The requester should undertake some form of initial consultation with designated Technical SME to discuss the proposed concession (task 1.1). Records initial consultations shall be kept and submitted as part of the supporting evidence should a request for a concession proceed.

Note: In-principle agreements may be reached during initial consultation to support advancement of projects.

In some cases the requester may be unsure whether a concession is needed. In this case the requester should consult with the Technical SME to confirm the need for a concession (task 1.2). Task 1.2 is optional and records are not required to be formally submitted as supporting evidence.

Table 8 – RASCI – Initial consultation step

Task	Standard Lead	Technical SME	AMB Standards PMO	Service Provider	Asset Steward	Asset Custodian
1.1 Initial Consultation						
Tiers 1-5	I	C		R	R	
1.2 Confirm Need		R		I	I	

7.2 Develop request step

The RASCI for the develop request step is defined in Table 9.

The Service Provider is responsible for completing the initial impact assessment from which the tier is determined, in consultation with the relevant Asset Steward and Technical SME (task 2.1).

The Service Provider is responsible for developing the request with supporting evidence (task 2.2). The Service Provider may specify a date (task 2.1) they require the concession to be finalised. This date should allow for the following processing times for the finalisation of the concession:

- 15 business days for tier 2
- 10 business days for tier 3
- 5 business days for tier 4
- 1 business day for tier 5.

Note: Tier 1 concessions as agreed between AMB and stakeholders.

Incomplete or insufficiently supported requests may extend the processing time.

The Asset Steward is responsible for confirming the impact assessment, as initially completed by the Service Provider (task 2.3). This ensures that an adequate level of governance and assurance is applied to the management of the concession.

Depending on the tier, the responsible party for endorsing the request for concession is either the Asset Steward or Asset Custodian (task 2.4).

Table 9 – RASCI – Develop request step

Task	Standard Lead	Technical SME	AMB Standards PMO	Service Provider	Asset Steward	Asset Custodian
2.1 Complete Initial Impact Assessment	I	C		R	C	
2.2 Draft Request				R	C	I
2.3 Confirm Impact Assessment						
Tiers 1-4	I	C		S	R	
2.4 Endorse Request						
Tiers 1-2	I				S	R
Tiers 3-4	I				R	I

7.3 Develop concession step

The RASCI for the develop concession step is defined in Table 10.

The Technical SME is responsible and accountable for reviewing the request for concession and developing the technical content of the concession (task 3.1).

The party responsible for conducting the technical review is dependent upon the tier (task 3.2).

Note: The purpose of the technical review is to ensure the technical solution is coordinated across programs and projects and supports the strategic engineering and asset management outcomes.

The AMB Standards PMO is responsible for conducting audits of the concession process (task 3.3).

Note: This task is performed in parallel and independently to the concession process and is not discussed further in this document.

The party responsible for the final approval of the concession is dependent on the tier (task 3.4).

The AMB Standards PMO is responsible and accountable for reporting of concessions (task 4.1). Reporting metrics may include the following:

- open and closed concessions
- approved, rejected and withdrawn concessions
- concession raised in relation to TfNSW configuration management review gates
- value creation and whole-of-life cost benefit of concession

- active temporary and permanent concessions
- concessions against standards.

Table 10 – RASCI – Develop concession step

Task	Standard Lead	Technical SME	AMB Standards PMO	AM Advisory Panel	AM SteerCo	AMB Director Engineering	SER Deputy Secretary
3.1 Develop Concession		A, R					
3.2 Review Technical							
Tier 1				A, R	S	I	I
Tier 2				A, R		I	
Tier 3	A, R						
3.3 Review Process			R				
3.4 Final Approval							
Tier 1							A, R
Tier 2						A, R	
Tier 3						A, R	
Tier 4	A, R						
Tier 5		A, R					
4.1 Reporting			A, R				

8 Concession process workflow

The workflow model is displayed in BPMN format in Figure 5.

This business process has been developed to be implemented within a process execution engine with minimal use of external manual tasks.

See Appendix A for further information on BPMN and Appendix B for further information on implementation of the concession process.

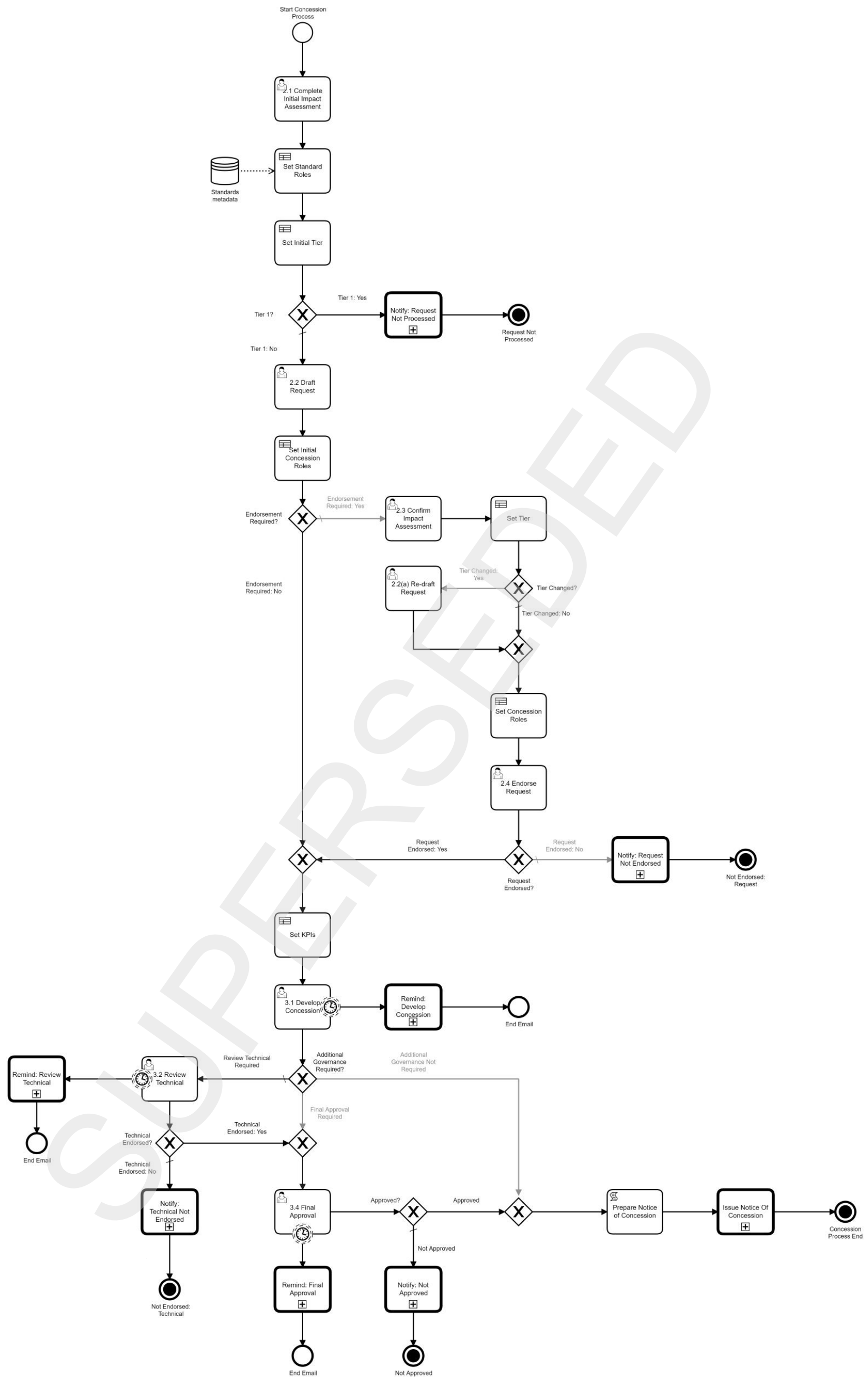


Figure 5 – Concession process – Visual notation

Each task of Figure 5 is described in Table 11.

A process execution engine is intended to execute the entire process, including the userTask, businessRuleTask and callActivity elements.

Table 11 – Concession process – Task description

Name	Id	Element	Element documentation
2.1 Complete Initial Impact Assessment	completeInitialImpact Assessment	userTask	User task requires the initiator to rate and justify various risk and change criteria associated with the concession. The initiator should indicate whether the proposed solution complies with all applicable laws, regulations and statutory licences.
Set Standard Roles	setStandardRoles	businessRuleTask	Business rule task to set the Standard Lead and Technical SME roles for the relevant standard.
Set Initial Tier	setInitialTier	businessRuleTask	Business rule task to set the risk impact, change impact and the initial concession tier.
Notify: Request Not Processed	notifyRequestNotProcessed	callActivity	Call activity to notify the initiator the request for a tier 1 concession cannot be processed further using this process. A concession that does not comply with all applicable laws, regulations and statutory licences is deemed to be tier 1 and is escalated to the EMG for noting and reporting to NSW Treasury using an alternative process.
2.2 Draft Request	draftRequest	userTask	User task requires the initiator to draft the request for concession, including detailing the proposed solution, justification, other options, whole-of-life and safety risk implications. Additional information is required based on the tier.
Set Initial Concession Roles	setInitialConcessionRoles	businessRuleTask	Business rule task to set the Request Endorser, Technical Endorser and Final Approver roles as appropriate for the handling of the concession based on the initial tier.
2.3 Confirm Impact Assessment	confirmImpactAssessment	userTask	User task requires the Asset Steward to confirm or amend the risk and change criteria associated with the concession. The Asset Steward should confirm whether the proposed solution complies with all applicable laws, regulations and licences.
Set Tier	setTier	businessRuleTask	Business rule task to set the risk impact, change impact and the concession tier.
2.2(a) Re-draft Request	redraftRequest	userTask	User task requires the initiator to redraft the request for concession as the Asset Steward has amended the tier and additional information is required.

Name	Id	Element	Element documentation
Set Concession Roles	setRoles	businessRuleTask	Business rule task to set the Request Endorser, Technical Endorser and Final Approver roles as appropriate for the handling of the concession based on the confirmed tier.
2.4 Endorse Request	endorseRequest	userTask	User task requires the Request Endorser to endorse or not endorse the request for concession.
Notify: Request Not Endorsed	notifyRequestNotEndorsed	callActivity	Call activity to notify the initiator that the request for a concession is not endorsed.
Set KPIs	setKpis	businessRuleTask	Business rule task to set the key performance indicators as appropriate for the handling of the concession based on the tier.
3.1 Develop Concession	developConcession	userTask	User task requires the Technical SME to draft the technical content of the concession, including detailing the outcome, justification and controls.
Remind: Develop Concession	remindDevelopConcession	callActivity	Call activity to notify the assignee that the key performance indicator (KPI) for the task has been exceeded.
3.2 Review Technical	reviewTechnical	userTask	User task requires the Technical Endorser to endorse or not endorse the concession.
Remind: Review Technical	remindReviewTechnical	callActivity	Call activity to notify the assignee that the KPI for the task has been exceeded.
Notify: Technical Not Endorsed	notifyTechnicalNotEndorsed	callActivity	Call activity to notify the affected parties that the concession is not endorsed.
3.4 Final Approval	finalApproval	userTask	User task requires the Final Approver to approve or not approve the concession.
Remind: Final Approval	remindFinalApproval	callActivity	Call activity to notify the assignee that the KPI for the task has been exceeded.
Notify: Not Approved	notifyNotApproved	callActivity	Call activity to notify the affected parties that the concession is not approved.
Issue Notice Of Concession	issueNoticeOfConcession	callActivity	Call activity to issue the notice of concession to affected parties.

Appendix A Business process model and notation

Business process workflows and decisions are modelled and notated using international standards developed and specified by the Object Management Group (OMG).

A.1 Business process model and notation

Business processes have been developed using Business Process Model and Notation (BPMN) version 2.0 which is formally standardised as ISO/IEC 19510:2013 *Information technology — Object Management Group Business Process Model and Notation*.

BPMN is a standardised notation that is easy to use and flowchart like to document business process diagrams. It is readily understandable by all stakeholders and developers responsible for implementing the process. Furthermore, it's precise enough to allow BPMN diagrams to be translated into software process components and is independent of any particular implementation environment.

BPMN categories modelling elements into five basic categories:

- flow objects including events, activities and gateways
- data
- connecting objects
- swimlanes
- artefacts.

ISO/IEC 19510:2013 describes the modelling elements and their graphical notation.

A.2 Decision model and notation

Decisions have developed using Decision Model and Notation (DMN) version 1.3 which is formally specified by the OMG.

DMN is a modelling language and notation for precise specification business decisions and business rules. It provides a common notation that is understandable by all stakeholders, including analysts creating decision requirements and models, through to developers responsible for automating the decisions in process, and finally people who manage and monitor decisions made. Business rules are defined simply and reliably in unambiguous decision tables and easily readable diagrams.

A.3 Business process layers

The layered approach to the development of the concession process is illustrated in Figure 6.

The following layers are:

- layers 1-3 consist of an enterprise map and value chains that link contextual, conceptual, logical functions to business processes
- layer 4 consists of an implementable workflow model in BPMN format
- layer 5 consists of an implementable decision model in DMN format.

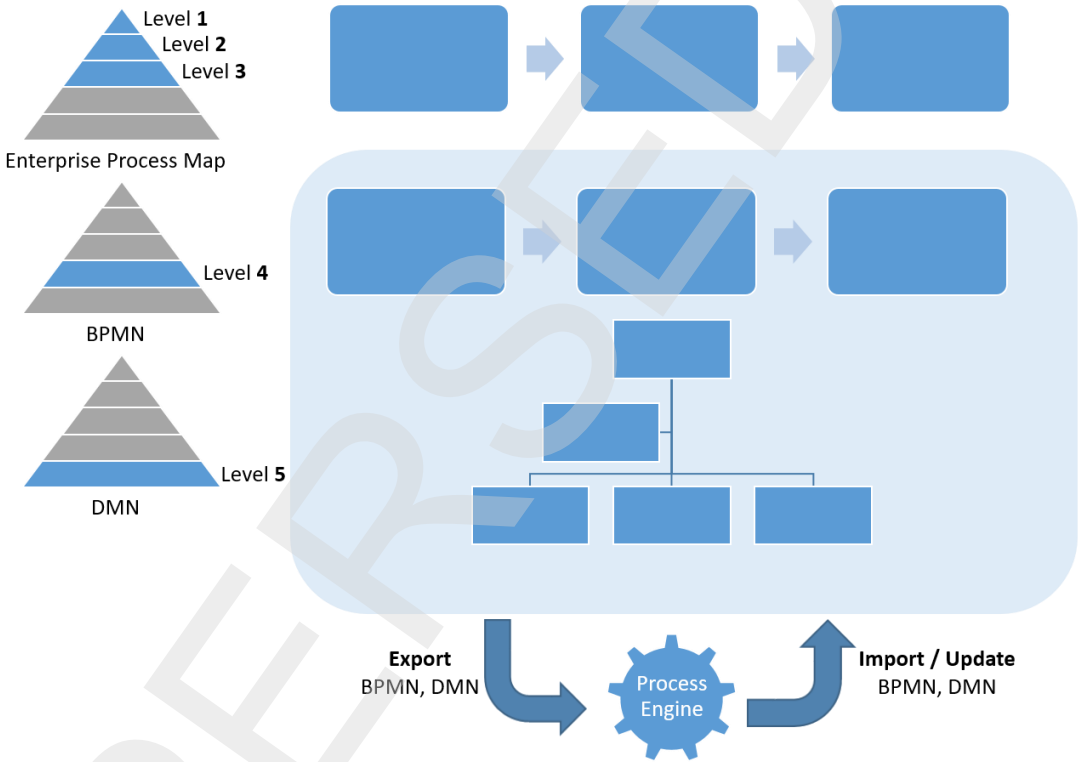


Figure 6 – Business process – Layered approach

Appendix B Implementation of the concession process

This process can be implemented using automation through a process execution engine, manually or both.

B.1 Automated implementation

A process execution engine that complies with standards developed and specified by the Object Management Group can execute the entire process, including the userTask, businessRuleTask and callActivity elements.

See Appendix A for further information.

In an automated implementation participants are only required to perform userTask elements by completing electronic forms.

B.2 Manual implementation

A manual implementation based on fillable forms is also possible.

In a manual implementation participants are required to perform all userTask, businessRuleTask and callActivity elements manually.

As a result the fillable forms contain more sections and fields than in the automated implementation.

B.3 Form definition

The forms fields are defined in Section B.3.1 to Section B.3.6.

B.3.1 Impact assessment

The form fields for user tasks completeInitialImpactAssessment and confirmImpactAssessment are described in Table 12.

Table 12 – User task form fields – Impact assessment

Label	Type	Description
Asset custodian	Select	TfNSW Branch name e.g. SER
Asset steward	Select	Asset steward for Delivery, Operate, or Maintain
Standard	Select	Document number, title and version

Label	Type	Description
RC1: Level of compliance with standards	Select	Low, Medium, High
Justification	Text	Supporting statement for scoring RC1
RC2: Safety impact of concession	Select	Low, Medium, High
Justification	Text	Supporting statement for scoring RC2
RC3: Complexity of solution	Select	Low, Medium, High
Justification	Text	Supporting statement for scoring RC3
CC1: Aggregation of concessions	Select	Low, Medium, High
Justification	Text	Supporting statement for scoring CC1
CC2: Precedence or novelty	Select	Low, Medium, High
Justification	Text	Supporting statement for scoring CC2
CC3: Impact on asset management outcomes	Select	Low, Medium, High
Justification	Text	Supporting statement for scoring CC3
Attestation of compliance to applicable laws, regulations and statutory licences	Checkbox	Confirmation that the applicant acknowledges the concession is compliant to all applicable laws, regulations and statutory licenses.

B.3.2 Draft request

The additional form fields for user tasks draftRequest and redraftRequest are described in Table 13.

Table 13 – User task form fields – Draft request

Label	Type	Description
Project name	Text	-
Concession description	Text	General description of what the concession applies to.
Section(s)	Select	Specific section of TfNSW standard against which the concession is sought.
Clause(s)	Text	State the clauses or requirements against which concession is sought as set out in the standard.
Concession type	Select	Permanent, Temporary

Label	Type	Description
Start date	Date	(for Temporary concessions only)
Expiry date	Date	(for Temporary concessions only)
Requested date	Date	Requested date for Concession to be approved.
Configuration gate (last passed)	Select	CM Gate last passed for affected asset (0, 1, 2, 3, 4, 5, 6)
Proposed solution	Text	Specify the proposed alternative solution that will apply in the place of relevant TfNSW requirement.
Request justification	Text	Specify why the requirement is not reasonably practicable to be met or how the proposed alternative solution provides a better outcome to TfNSW than a compliant solution.
Other options identified (if relevant)	Text	Specify other alternative solutions identified and why the proposed alternative is best suited and others excluded.
Whole-of-life statement	Text	Provide whole-of-life asset management outcomes of the proposed solution.
Safety risk statement	Text	The risk assessment includes hazards, risk controls to mitigate risk to SFAIRP (so far as is reasonably practicable), risk control owners and residual risk. Factors which bear on risk, both positively and negatively will also be included.
Other supporting documents or artefacts (optional)	File	Attachment

In addition to Table 13, additional form fields apply to tiers 2-4 as described in Table 14.

Table 14 – User task form fields – Draft request – Additional fields for tiers 2-4

Label	Type	Description
Whole-of-life cost assessment	File	Attachment
Hazard log / risk assessment	File	Attachment
Stakeholder consultation records	File	Attachment

B.3.3 Endorse request

The additional form fields for user tasks endorseRequest are described in Table 15.

Table 15 – User task form fields – Endorse request

Label	Type	Description
Request endorsement	Select	Endorsed or Not Endorsed

Label	Type	Description
Endorser comments	Text	-

B.3.4 Develop concession

The additional form fields for user tasks developConcession are described in Table 16.

Table 16 – User task form fields – Develop concession

Label	Type	Description
Concession outcome	Select	Granted or Rejected
Concession justification	Text	-
Concession controls	Text	-

B.3.5 Review technical

The additional form fields for user tasks reviewTechnical are described in Table 17.

Table 17 – User task form fields – Review technical

Label	Type	Description
Technical outcomes endorsement	Select	Endorsed or Not Endorsed
Endorser comments	Text	-

B.3.6 Final approval

The additional form fields for user tasks finalApproval are described in Table 18.

Table 18 – User task form fields – Final approval

Label	Type	Description
Final Approval	Select	Approved or Not Approved
Approver comments	Text	-