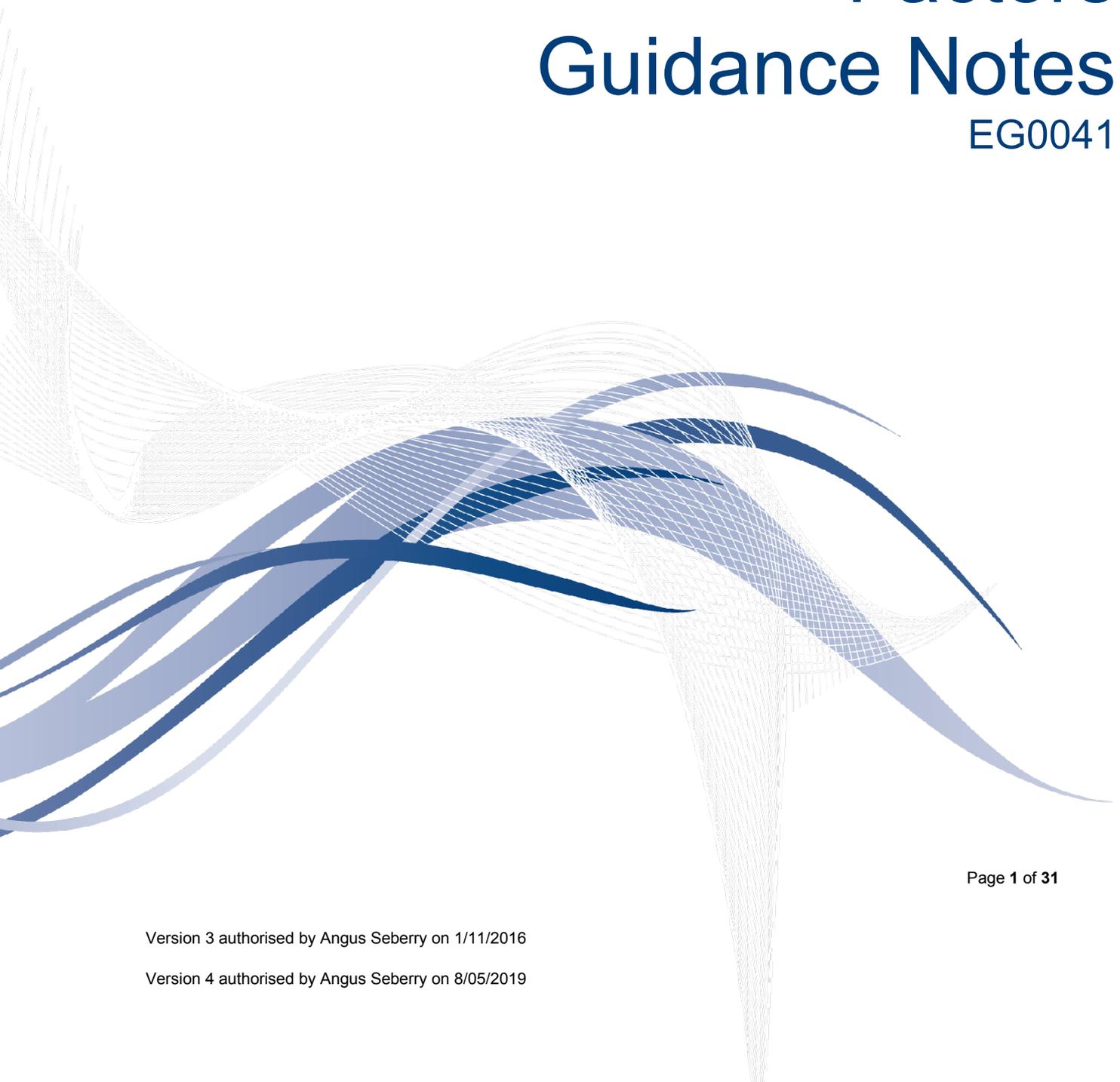




HUNTER WATER CORPORATION

Review of Environmental Factors Guidance Notes

EG0041



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4.0	October 2016	Minor notation to dangerous goods and chemicals – independent review of design may be required per contaminated sites strategy 2016	R Bow	A Seberry
5.0	April 2019	Periodic review and update for legislative changes.	M Thomas	A Seberry

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PART A

REF Preparation Process

1 Purpose of the Guidance Notes

This document is to be used to provide guidance for the preparation of a Review of Environmental Factors (REF) under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It provides minimum requirements and an example template for the preparation of a REF.

Hunter Water is prescribed as a State Owned Corporation by Schedule 5 of the State Owned Corporations Act (1989) and is classified as a public authority under the EP&A Act. The State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) was introduced to facilitate the delivery of infrastructure across the State by improving regulatory certainty and efficiency. The ISEPP defines which activities can be assessed and determined by public authorities under Division 5.1 of the EP&A Act.

Prior to the approval for any activities to which Division 5.1 applies, Hunter Water will require a REF be submitted for approval. A REF considers the likely impacts an activity may have on the environment and will assist Hunter Water to make a determination on whether the works should proceed.

Part A of this document provides an overview of the REF process and Part B provides an example REF structure and requirements to be addressed in the REF.

2 Scope of these Guidance Notes

In order to demonstrate due diligence and comply with the requirements of the EP&A Act a REF may be required for works carried out by or on behalf of Hunter Water including but not limited to construction or upgrade of water or wastewater services.

This document applies to external developer works and Hunter Water internal activities including the capital works program and relevant operational and maintenance activities.

2.1 External Developer Works

External developer works are projects which have been initiated by developers for the provision of water and sewer services to a development located within Hunter Water's area of operations. The developer work activities to which these guidance notes apply include, but may not be limited to:

- Construction of new water or sewer mains.
- Extension, replacement, relocation or upgrade of water or sewer mains.
- Construction of wastewater pumping stations.
- Construction of water pumping stations.
- Construction of directed wastewater overflow structures.
- Construction of water tanks / reservoirs.

Hunter Water would generally require the preparation of a REF when the activity occurs outside of the approved development boundary and therefore environmental impacts would not have been considered. Hunter Water may however, require an REF for activities within an approved development boundary if it is considered that there are high risks of environmental impact of the activity. Examples of when this may occur are creek crossings, new wastewater pumping stations or when it cannot reasonably be demonstrated that the environmental impacts of the proposed infrastructure has been considered in the development application (DA) process under Division 4.1 of the EP&A Act.

2.2 Internal Activities

Hunter Water undertakes various activities that require the preparation on an REF. These include some operational activities and capital works projects. To determine if an activity requires the preparation of an REF refer to the Hunter Water Exempt Development Checklist ([HW2012-738/4/7.009](#)) and/or consult with a Hunter Water Environmental Planner.

Capital work activities encompass all of Hunter Water's current and proposed capital projects. Capital projects are those works relevant to the acquisition, development, construction, improvement or replacement of an asset.

The Asset Creation Framework (ACF) is the process for the planning, development and delivery of capital infrastructure assets at Hunter Water. Project Managers are required to follow the framework whilst creating capital infrastructure assets. The framework also outlines environmental assessment requirements.

3 Planning for Preparation of Review of Environmental Factors

3.1 External Developer Works

Before commencing the preparation of a REF, consultation with Hunter Water should be carried out to discuss requirements. A Hunter Water Environmental Planner will be able to provide advice regarding consultation requirements and level of assessment required including if specialist assessments are needed. Early consultation with Hunter Water may avoid unnecessary time and costs in the preparation of the REF.

The REF must clearly demonstrate that the proponent has identified all environmental impacts of a proposal and mitigation measures to minimise impacts. The REF must also be appropriate to the nature and scale of the proposal and must be specific to the proposed water or wastewater works and not the related development. For example, related studies for the adjacent development may be used to support an assessment but specialist studies must cover the entire location of the proposed works.

All REFs submitted to Hunter Water in support of an application for approval of an activity must comply with the REF content requirements set out in the following sections of these guidelines. Submissions that do not comply with the guidelines may be rejected or may require revision.

The contents and level of assessment required in a REF will vary greatly depending on the nature of a proposal and the location. Therefore Hunter Water should be consulted prior to the preparation of a REF to confirm project specific requirements.

3.2 Internal Activities

During the project initiation phase the Project Manager is to identify whether external approvals are required or whether the works are considered an exempt development and do not require

development consent or approval under planning legislation. This will be undertaken in consultation with the Hunter Water Environmental Planner.

During the project development phase and prior to the commencement of a REF, a project inception meeting is to be undertaken with the Project Manager, relevant project personnel and a Hunter Water Environmental Planner. The Hunter Water Environmental Planner will be able to provide advice and guidance regarding environmental aspects, consultation requirements and level of assessment required including if specialist assessments are needed. If the works are not considered an exempt development a review of environmental impacts of the proposal will be undertaken. This review is referred to as a REF, a Statement of Environmental Effects (SEE) or an Environmental Impact Statement (EIS). This guidance document is only applicable to the preparation of REFs.

During the project initiation phase value management workshops are undertaken. The HWC ACF also provides for ongoing risk assessments to be undertaken at each stage of the gateway process (QT098 & QT099). The HWC Environmental Planner involved in the project is to assist project managers adequately understand and consider environmental risks through this process of analysis and review. Risks identified in the initiation and project development ACF phase are to be dealt within the REF process.

4 Determination of Review of Environmental Factors

4.1 External Developer Works

Following the completion of the Division 5.1 assessment process, Hunter Water will review the REF and provide comments on the content. If the REF does not meet the Hunter Water requirements subsequent revisions may be required.

If all the requirements are met, Hunter Water will issue a formal letter to confirm determination of the REF. The formal letter of approval will contain specific conditions to be met by the approval holder. These conditions will require compliance along with any other commitments outlined in the REF.

If works are anticipated to commence 12 months after the initial approval, it is a requirement that a review of the REF be undertaken to ensure there have been no changes to legislation or the scope of works during that period. If the REF is still relevant the approval will be renewed. If changes have occurred and further assessment is required, Hunter Water will advise on what is required to obtain a new approval.

Subsequent reviews of the REF may also be required if the works are to be undertaken in a staged approach (e.g. residential subdivision).

Irrespective of the contents of the REF and approval, it is the responsibility of those carrying out the activity to ensure compliance with all legislative and regulatory requirements including any changes following to approval.

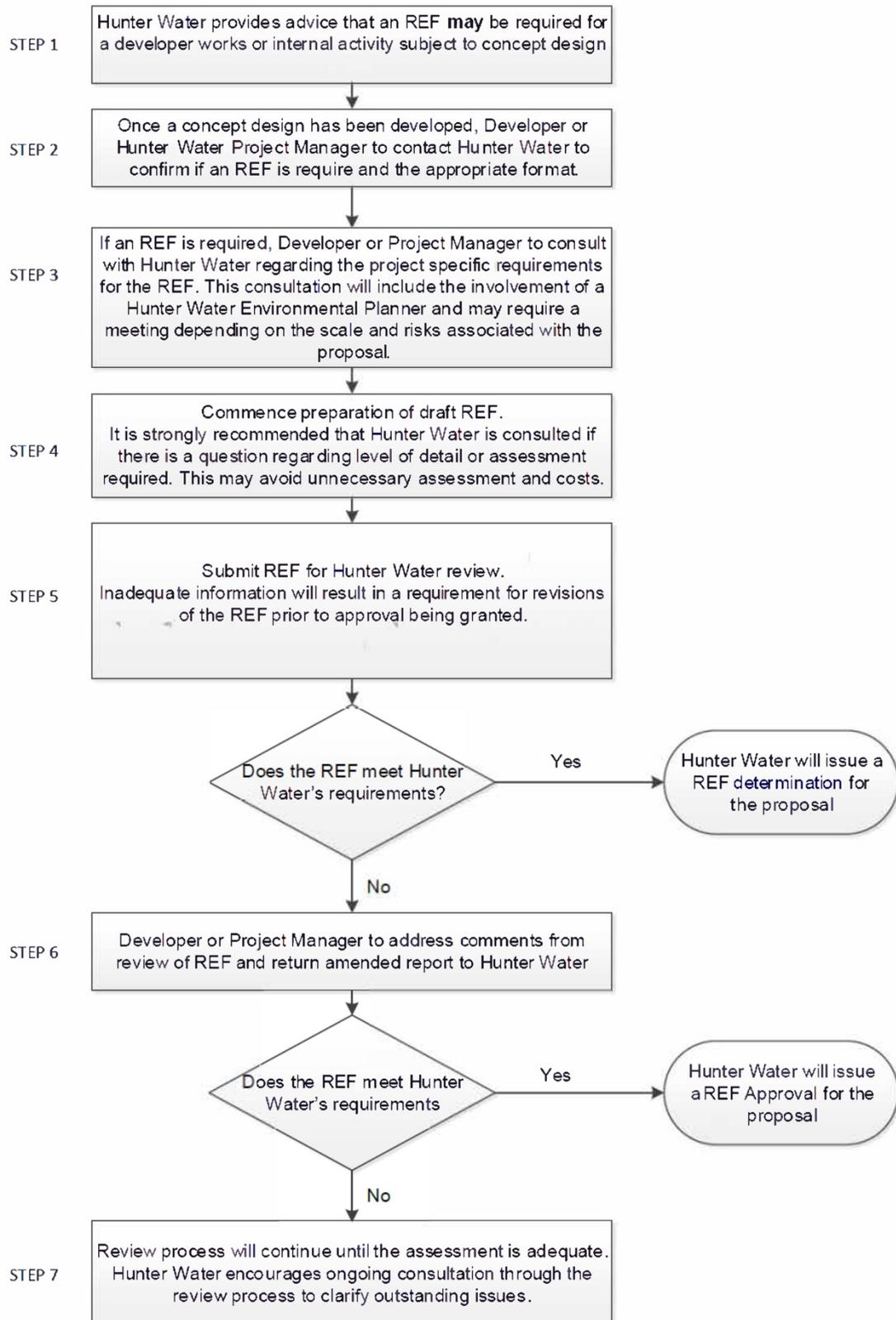
4.2 Internal Activities

Following the completion of the Division 5.1 assessment process, the Hunter Water Environmental Planner will review the REF and provide comments on the content. If the REF does not meet the requirements subsequent revisions may be necessary. If the REF meets Hunter Water's requirements determination will be granted to proceed with the works.

5 Scope Change Management

A change in the scope of the approved activities may require further assessment and approval by Hunter Water. If there is a change to project scope after the project has been approved Project Managers are to complete the ET0020 Environmental Project Change Assessment guideline form to determine if additional approvals are required.

6 REF preparation process



Part B

REF Structure and Guidance Notes

Instructions on the use of Part B of these Guidance Notes

Structure:

The table of contents below provides an example of a REF structure. This structure is a guide only, however, if a different structure is used the information must still be included. The requirements for each section are provided under each heading below. These headings may be used as a template for the REF.

Note: for proposals that would not result in a more than minor impact on any aspect of the environment Hunter Water has a template for a Minor Works REF that may be used. It is recommended that prior to commencing an REF the author consult with a Hunter Water Environmental Planner to confirm the appropriate format.

Required information:

Guidance on the information required for each section is described in the grey boxes. These boxes are not to be included in a REF, they are for information and guidance only. Any text not in a grey box must be included in the REF.

The level of information to be included is dependent on the scale of the project. The level of information provided in the REF should be appropriate for the potential environmental impacts, irrespective of the scale of the works.

Note: the information provided can be brief but must answer the questions where relevant and provide the reason and justification for that answer, e.g. "No threatened flora species will be impacted because the site is completely clear of vegetation."

REF content:

At the discretion of Hunter Water, additional content requirements may be applied to specific activities or circumstances. For example, information may be requested on;

Details of compliance with Hunter Water Standard Technical Specifications for asset classes.

Details of compliance with the Australian Building Code where a building or structure is regulated by the code or there is sufficient reason to believe elements of the code should be applied to the building or structure for due diligence.

For developments in bush fire prone land – An appraisal of relevant concepts in AS3959-2009.

For developments involving dangerous & Hazardous goods – relevant WHS legislation, an appraisal of concepts in NOHSC: 105 (2001), AS1940, AS/NZ 23297:2001, a consideration of other industry codes of practice (*Managing Hazardous Chemicals in the Work Place 2012*), or equivalent documentation where such matters are managed in a risk based process. Large installations or bulk storages will require design review by an independent expert prior to construction.

Information related to WHS regulations for risk assessment, standards or codes of practice that apply to the activity that may affect operation – ie: AS2865-1995 (confined spaces)

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1 Introduction

1.1 Proposal identification

A brief introduction to the proposal is to be provided in this section. This section must explain the context of the proposal, any development associated with the proposal, and the consent status of that development.

The key components should be briefly mentioned. This may be in dot point form. Further detail as to the design and construction methodology will be provided in Section 3.

This section must include a figure showing the location of the proposal. Key points of interest in the vicinity of the proposal should be labelled (e.g. schools, creeks, and development boundaries). The land tenure of any land that will be impacted or used for access must be identified.

1.2 Purpose of the report

This section should include the following:

- Identify who has prepared the report.
- Identify on behalf of who the report was prepared.
- Identify who the proponent and the determining authority are.
- Define the purpose of the REF.

2 Proposal need and justification

The REF must include the justification for the proposal. This will describe why the proposed works were selected and what other options were considered. The objectives of the proposal should be clearly stated.

The following is a typical chapter structure for this section:

2.1 Objectives of the proposal

2.2 Existing water/wastewater infrastructure

2.3 Options considered

2.4 Preferred option justification

The justification must be clearly set out and show consideration of the principles of ecologically sustainable development, which is required to satisfy the objects of the EP&A Act.

This section may be very simple for a minor proposal (e.g. 40m watermain extension). If so, this may be brief and there is no need to use the subheadings. If there were no other options other than the proposal and 'do nothing', then this should just be clearly stated.

For a more complex proposal, options that were considered should be described and the reasons for choosing the preferred option provided. The option selection should take into account environmental impacts as well as other considerations such as costs and constructability.

3 Description of the proposal

3.1 Scope of works

This section of the REF is to include a description of each feature of the scope of works expanding on the summary in section 1.1. Additional plans, diagrams and photographs (including aerial imagery where available) may also be provided where these will assist in describing the activity.

3.2 Construction activities

The following construction related information is to be included in the REF, where applicable:

- Description of pre-construction, construction, and remediation activities.
- Construction footprint and surface disturbance area including vegetation clearance.
- Construction methods, materials and equipment.
- Sustainability measures including choice of materials (such as recycled content) and water and energy efficiency.
- Estimate of on-site employee or contractor numbers.

3.3 Operational requirements

The REF needs to outline any operational related management requirements, maintenance or inspection activities, future extensions or additions required by the proposal.

3.4 Timing and staging

The REF needs to clearly state the construction staging, duration and working hours. Hours of construction for the proposal need to be in accordance with the *Interim Construction Noise Guideline (DECC, 2009)*. If works are required outside of the standard working hours it must be clearly justified and appropriate control measures identified.

3.5 Ancillary facilities and access

The following information regarding ancillary facilities need to be provided if applicable to the proposal:

- The location of site compound/s.
- Detail regarding storage and stockpile locations, and on site management for materials used in construction.
- Additional signage (including any temporary signs, banners or structures), roads, infrastructure and bush fire hazard reduction, if applicable.

If the exact locations of the above are not known, criteria for the areas that will be selected need to be set. For example, compound locations will be located in previously cleared areas and will not require any disturbance of the ground surface etc.

4 Statutory framework

This section of the REF is to identify the relationship between the proposal and the planning framework. The section should address relevant Environmental Planning Instruments, NSW and Commonwealth legislation.

4.1 Environmental Planning Instruments

The EP&A Act provides for the creation and implementation of State Environment Planning Policies (SEPPs) and Local Environment Plans (LEP). Collectively they are referred to as Environmental Planning Instruments (EPIs) and can be used to determine whether an activity is permissible.

To determine whether an activity is permissible you must look at the provisions of the SEPPs that apply to the site including the zonings that may apply with the LEP. The REF must identify SEPPs and LEPs relevant to the proposal. The characterisation of the proposal in accordance with the relevant Clauses of the State Environment Planning Policy (Infrastructure) 2007 and therefore its permissibility must be detailed.

4.2 NSW and Commonwealth legislation

The REF must address other relevant legislation and make an assessment as to whether the legislation applies to the proposal. Other legislative requirements include, but are not limited to, the following:

Environment Protection and Biodiversity Conservation Act 1999

Protection of the Environment Operations Act 1997

Water Management Act 2000

Waste Avoidance and Resource Recovery Act 2001

Biodiversity Conservation Act 2016

Roads Act 1993

Heritage Act 1977

Water Act 1912

National Parks and Wildlife Act 1974

Hunter Water Act 1991

This section must include a summary of any additional approvals required such as a controlled activity approval (developer works only), approval under the Roads Act or dewatering licence. This also includes any requirements for an Environmental Protection Licence (EPL).

Note:

Hunter Water holds EPL's for its wastewater treatment works under the *Protection of the Environment Operations Act 1997*. The scope of these licences includes wastewater pumping stations and there are specific requirements that must be addressed for any new proposed directed overflow structures. If this is included in the scope of the proposal, the licence requirements must be addressed in the REF.

5 Stakeholder and community consultation

5.1 Government agency and other stakeholder consultation

A number of stakeholders and government authorities may need to be consulted. This may include notifications and submissions made to Local Council or government authorities and consultation and/or notification undertaken with the local community or affected landowners.

The level of consultation must be appropriate to the scale and potential impacts of the proposal. Larger proposals or projects may attract significant community interest and therefore broader community consultation would be required prior to submission of a REF.

The ISEPP specifies circumstances where consultation with councils and other public authorities is required with a 21 days response period prescribed. These requirements must be reviewed and written notice provided in accordance with ISEPP.

The information below for consultation activities should be included in the REF.

- Details of any consultation undertaken (evidence of consultation such as letters sent and received to be provided as an appendix to the REF).
- Details of comments received and response or the location in the REF where these were addressed (e.g. erosion controls addressed in Section X.X).
- Ongoing consultation arrangements during the construction and operational phases if required.
- Stakeholder management procedures, if applicable (may be relevant for larger scale proposals).

Note, where Council consultation is required, this must be done specifically for the proposal, and in addition to any consultation undertaken for a development as part of a DA process.

5.2 Community consultation

In preparing a REF, consultation with the following community groups must be considered and undertaken is relevant. Details of the consultation and outcomes are to be included in the REF.

- Adjoining, and/or affected, landholders.
- Local Aboriginal communities (if indicated as required by the due diligence process as per Section 6.7).

The general community.

Ongoing / planned consultation should be described (eg notification prior to commencement, planned website etc project communications).

6 Environmental assessment

Instructions for use of this section

The REF must include an assessment of the impacts of the proposal on the environment. Specific environmental aspects that must be addressed in the REF are set out under individual headings in this section. **Please consult with Hunter Water if in doubt about the level of detail required as this can vary greatly between project types.**

The questions under each section are to be used as prompts for the information to be provided. Where the answer to a question is yes, a description of the existing environment and potential impacts is required and measures to control the impacts included. If details are not provided a determination of the appropriateness of the assessment cannot be made.

The information provided does not have to be limited to these questions and it is the responsibility of the proponent to include any additional relevant information in order to carry out a full assessment.

In some cases specialist advice/investigations may be required. This will depend on the nature of the works and existing environment. If in doubt as to when input may be required please contact Hunter Water.

The assessment needs to consider impacts during all phases of the activity including site establishment, construction, operation, rehabilitation, and demobilisation if relevant. Depending on the proposal some activities may not have any potential impacts in some areas of assessment. If this is the case, please outline that no potential issues were identified and the details of any investigations undertaken, if applicable.

Where a particular standard or guideline is required to be followed, this information is provided in each section below. Please note it is the responsibility of the author to ensure all current requirements are met.

Content requirement

For each environmental aspect the following need to be described:

- Existing environment: describe the nature of the aspect at the time of REF preparation. Where appropriate details from specialist reports describing the nature of the environment should be included (e.g. vegetation types and condition).
- Impact assessment: assess the environmental impacts of the proposed works during construction and operation phases.
- Mitigation measures: specify controls to be implemented during the construction and operation of the proposal. Controls should be relevant to the impacts identified. If an impact is not identified, control measures should not be included.

6.1 Soils and geology

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will the work require excavation? (if yes refer to note 1)		
Will the work be within a landslip area?		
Will the work be within an area of high erosion potential?		
Could the work disturb any natural cliff features, rock outcrops or rock shelves?		
Will the work result in permanent changes to surface slope or topography?		
Are there acid sulphate soils within or immediately adjacent to the boundaries of the work area? And could the works result in the disturbance of acid sulphate soils? (if yes refer to note 2)		
Will the work be within an area affected by salinity?		
Is there potential for the work to encounter any contaminated material? (see note 3)		

Note 1:

Depending on the area of ground that will be disturbed an Erosion and Sediment Control Plan or a Soil and Water Management Plan may be required during construction. Information regarding which is applicable and the requirements can be found in the Blue Book (reference below). These plans are not required as part of the REF but should be included as a mitigation measure.

Note 2:

If Acid Sulphate Soils will or may be disturbed an Acid Sulphate Soil Management Plan will be required to be prepared prior to construction in accordance with the Acid Sulphate Soil Manual (ASSMAC, 1998). This plan is not required as part of the REF but should be included as a mitigation measure.

Note 3:

At a minimum a search of the online EPA Contaminated Land Record and List of NSW contaminated sites notified to EPA should be done. Identification of known or potentially contaminated land that may be disturbed during construction should be made with consideration of the *Contaminated Land Management Act 1997*, *SEPP 55 – remediation of Land* and *Guidelines for Consultants Reporting on Contamination*.

If known or potentially contaminated land is identified the characterisation of the nature and extent of contamination is required.

Information sources

- Acid sulphate soils - <http://www.environment.nsw.gov.au/acidsulfatesoil/riskmaps.htm>
- Erosion and sediment control - *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) (the Blue Book).

6.2 Hydrology, flooding and water quality

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will the work be located on the bank of a natural watercourse?		
Do the work involve a creek crossing?		
Will the work be located within a floodplain?		
Does the proposal involve the diversion of a creek?		
Will the work intercept groundwater?		
Will a licence under the <i>Water Act 1912</i> or the <i>Water Management Act 2000</i> be required? Will a Controlled Activity Approval be required?		
Could the work impact upon a water catchment area? Do any of the work areas drain directly to areas within the Hunter Water special areas?		
Could the work result in a discharge/overflow of sewage?		
Will pipe flushing activities result in potable water being discharged to a waterway? (if yes refer to note 1)		

Note 1:

If potable water would be discharged from site, water quality parameters including chlorine and pH need to be considered and appropriate mitigation measures described.

6.3 Ecology

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Could the work affect any <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i> listed threatened species, ecological community or migratory species? (refer to note 1)		
Could the work affect any <i>Biodiversity Conservation Act (2016)</i> listed threatened species, populations or ecological communities? (refer to note 2)		
Could the work affect a National Park or reserve administered by the Office of Environment and Heritage?		
Is there any important vegetation or habitat (i.e. SEPP (Coastal Management) 2018) within or adjacent to the work area?		
Could the work impact on any aquatic flora or habitat (i.e. seagrasses, mangroves)?		
Are there any priority weeds present within the work area?		
Will clearing of native vegetation be required? (if yes refer to note 3)		

Note 1:

Department of Environment Protected Matters Search tool
<http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act/protected>

Note 2:

Office of Environment and Heritage Wildlife Atlas database
http://www.environment.nsw.gov.au/atlaspublicapp/UI_Modules/ATLAS_/AtlasSearch.aspx

Note 3:

If native vegetation is to be cleared or modified the REF must include the following:

- The total area of plants or vegetation communities to be cleared or modified and the species.
- Whether the vegetation provides important habitat for native species including threatened species (e.g. hollow-bearing trees, roosting sites etc.), and if so the area, condition and value of the habitat
- Whether a Threatened Ecological Community (TEC) may be affected and if so the area, condition and value of the community.
- The likely response of the species, population or vegetation community to the type of disturbance proposed.
- An Assessment of Significance (five part test) in accordance with S.7.3 of the BC Act is required for any threatened species, population, ecological community or their habitats related to the site. This must be appended.
- Figures clearly showing the area of disturbance including access roads, construction corridors and mapped flora and fauna details.

6.4 Noise and vibration

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Are there residential properties or other sensitive land uses or areas that may be affected by noise from the proposal during construction? (i.e. schools, nursing homes, residential areas or native fauna populations)?		
Will any receivers be affected by noise for greater than three weeks? (if yes refer to note 1)		
Will the work result in permanent changes to background noise?		
Are there sensitive land uses or areas that may be affected by noise from the proposal during operation? (if yes refer to note 2)		
Will the work be undertaken outside standard working hours? Monday – Friday: 7am to 6pm Saturday: 8am to 1pm Sunday and public holidays: no work (if yes refer to note 3)		
Will the work result in vibration being experienced by any surrounding properties or infrastructure? (if yes refer to note 4)		

Note 1:

The assessment of construction noise impacts must be carried out in accordance with the *Interim Construction Noise Guidelines (DECC 2009)*. If sensitive receivers will be impacted for greater than 3 weeks a quantitative assessment is required.

Note 2:

The assessment of operational noise impacts must be in accordance with the *NSW Industrial Noise Policy (DECC, 1999)*.

Note 3:

If construction work is required outside the standard construction hours defined above, an assessment of noise impacts and clear justification for why this is required should be included. Appropriate mitigation measures to manage noise during extended working hours must be included.

Note 4:

Potential impacts from vibration during construction and/or operation must be quantified. Refer to *Assessing Vibration: a technical guideline (DEC, 2006)*

6.5 Air quality and energy

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Could the work result in dust generation?		
Could the work generate odours (during construction or operation)?		
Will the work involve the use of fuel-driven heavy machinery or equipment?		
Will the work be located in an area or adjacent to land uses that may be highly sensitive to dust, odours, or emissions? (e.g. schools, hospitals, nursing homes)		
Have energy use considerations been included in the project design?		

6.6 Non-Aboriginal heritage

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Are there any heritage items listed on the following registers within or in the vicinity of the work area (see note 1): <ul style="list-style-type: none"> • NSW heritage database • Hunter Water section 170 register • Commonwealth EPBC heritage list • Australian Heritage Places Inventory • Local Environment Plan(s) heritage list 		
Will work occur in areas that may have archaeological remains?		

Note 1:

Items of state or local heritage significance listed on the State register, a government agency Section 170 register or in a Councils Local Environment Plan can be searched for on the State Heritage Register located at <http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx>.

6.7 Aboriginal heritage

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail and/or assessment is required.

Questions to consider include	Yes	No
Will the work result in ground disturbance? (if yes see note 1)		
Will the work disturb any culturally modified trees? (if yes see note 1)		
Are there any <u>known</u> items of Aboriginal heritage located in the work area or in the vicinity of the work area? (see note 2)		
Are there any other sources of information that indicate Aboriginal objects are likely to be present in the area (e.g. previous studies or reports from related projects)?		
Will the work occur in the location of one or more of these landscape features and is on land not previously disturbed? (if yes see note 1)		
<ul style="list-style-type: none"> • Within 200m of waters. • Located within a sand dune system. • Located on a ridge top, ridge line or headland. • Located within 200m below or above a cliff face. • Within 20m of or in a cave, rock shelter or a cave mouth. 		

Note 1

A due diligence assessment to assess the likelihood of Aboriginal heritage impacts must be carried out. The minimum requirements for a level 1 due diligence assessment is outlined in the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010)*. The questions above are in line with this document and you should refer to the Code of Practice to ensure all requirements are met. The outcomes of the questions may determine further assessment and site inspections are required. If this is the case the REF must describe the investigations undertaken and the outcomes. Any specialist report must be appended.

Note 2

A search of the online Aboriginal Heritage Information Management System (AHIMS) is mandatory for any works that will disturb the ground. This includes access tracks or compound sites. The search results must be appended to the REF.

Note 3

Hunter Water has developed a template for preparing a due diligence assessment. This shows the minimum standard required. If you would like to refer to, or use this template please contact Hunter Water.

6.8 Visual amenity

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will the work be visible from residential properties or other land uses that may be sensitive to visual impacts? (see note 1)		
Will the work be located in areas of high scenic value? (see note 1)		
Will the work involve night work requiring lighting? (see note 2)		

Note 1:

Affected residents/businesses/land owners must be consulted with and issues considered during the project design phase.

Note 2:

Notification must be given to local residences prior works being undertaken.

6.9 Traffic and access

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will the work be located in a Roads and Maritime Services (RMS) road reserve, or a Council road? (see note 1)		
Will the work affect traffic or access on any local or regional roads? (see note 1)		
Will the work disrupt access to private properties? (see note 2)		
Will there likely to be any difficulties associate with site access?		
Are the works located in an area that may be highly sensitive to movement of vehicles or machinery to and from the work site (i.e. schools, quiet streets)? (see note 2)		
Will full or partial road closures be required? (see note 1)		
Will the work result in a more than minor increase in the volume of traffic on local roads during construction?		

Note 1:

A Traffic Management Plan is required to be prepared if the activity is likely to impact on the operational efficiency of the road network. Refer to the Roads and Maritime Authority and AS1742 Set - Manual of uniform traffic control devices Set for more information. A road occupancy licence may be required.

Note 2:

Notification must be given to local residences prior works being undertaken.

6.10 Land uses and services

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will the work result in a temporary or permanent disruption of an existing land use?		
Will the work be located in an area of high recreational value or commercial area?		
Will the work involve the installation of structures or services that may be perceived as objectionable or nuisance?		
Will the work involve the disturbance or removal of asbestos?		
Will the work impact on or be in the vicinity of other services? (see note 1)		
Will the work result in a temporary disruption to water or sewer services?		
Will the work require leasing or acquisition?		

Note 1:

A Dial Before You Dig must be undertaken prior to any works commencing in order to locate buried services. If works are to be undertaken below power lines refer to Ausgrid Guidelines NS 209 Operating Cranes and Plant in Proximity to Power Line. If works are to be undertaken within the vicinity of Telstra pits refer to the Network Integrity Help Desk on 1800 653 935.

6.11 Waste generation

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will work result in the generation of non-hazardous waste?		
Will the work result in the generation of hazardous waste?		
Will the work result in the generation of wastewater requiring offsite disposal?		

Note:

All waste in NSW must be classified per NSW EPA guidelines and may only be disposed of at a licensed waste facility – the REF should estimate the main types of waste that may be generated and specify options or requirements for handling and disposal.

6.12 Cumulative Impacts

Use the table below as a checklist of considerations for this section. Do not include this table in the REF. It is a guide only and the information can be presented in a format appropriate to the specific proposal (e.g. tabulated, dot points, or text). If the answer is yes to any questions further detail is required.

Questions to consider include	Yes	No
Will the same receiver experience different impacts (e.g. combined effects of noise and visual impacts resulting in an overall significant impact)?		
Will there be a combination of impacts from other projects in the vicinity (e.g. traffic impacts from the proposal and residential development works combining to result in an overall significant impact)?		
Will any aspect of the project cause a supplementary consequential impact? (eg: The temporary closure of a road for works may impact on normal vehicle and pedestrian access. Will this have a consequential impact on the trade of local business or the access to a social service or activity?)		

7 Mitigation Measures and Other Requirements

7.1 Mitigation measures

Include a summary table of environment mitigation measures for impacts identified in the assessment section. Using the template below identify the aspect, timing, mitigation measure/control monitoring requirements and responsibility for ensuring the actions are carried out.

These controls are to be included in the Construction Environment Management Plan (CEMP) for implementation during the works.

Aspect	Mitigation measure	Timing	Responsibility
E.g. soils and geology	E.g. an erosion and sediment control plan will be prepared	Pre-construction	Project Manager
	E.g. erosion and sediment control to be undertaken in accordance with the Blue Book – Managing Urban Stormwater: Soils and Construction	Site preparation and construction	Site supervisor

7.1 Other Requirements

Include a list of any licenses, approvals or other requirements identified.

8 Conclusion

The REF must describe whether there is likely to be a significant effect on the environment, the approval holder must describe whether the activity as a whole will have a significant effect on the environment and explain the justification for this conclusion.

The conclusion should include consideration of the principles of ecologically sustainable development as defined in Schedule 2 of the EP&A Act (listed below):

- The precautionary principle
- Intergenerational equity
- Conservation of biological diversity and ecological integrity
- Improved valuation, pricing and incentive mechanisms

9 Declaration

This Review of Environmental Factors provides a true and fair review of the activity in relation to its likely impact on the environment. It addresses to the fullest extent possible, all the factors listed in Clause 228 of the Environmental Planning and Assessment Regulation Act (as amended) and the Commonwealth Environmental Protection and Biodiversity Conservation Act (as amended).

Signed:

Name:

Position:

Date:

10 References

Include relevant references.

11 Appendix

The following documents may be required to be appended to the REF. The items in bold are mandatory. The remaining are examples of other documents which may be included. Examples of the checklists are included in this guidance notes below for use if desired.

- **Proposal design**
- **Clause 228 environmental factors checklist**
- **Matters of National Environmental Significance checklist**
- **Aboriginal Heritage Information Management System (AHIMS) search report**
- Consultation records (e.g. letters sent to and received from Council).
- Other – any other database search results should be appended (e.g. atlas search or NSW heritage database search)
- Flora and fauna impact assessment report.
- Aboriginal heritage due diligence assessment.
- Geotechnical report.

If specialist studies are referred to in the document, these should be appended along with any other information used to justify the proposal.

12 Clause 228 Environmental factors checklist

Has the REF considered the following points?	Positive	Negative
Any environmental impact on a community?		
Any transformation of locality?		
Any environmental impact on the ecosystems of the locality?		
Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?		
Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?		
Any impact on the habitat of protected fauna (within the meaning of the <i>Biodiversity Conservation Act 2016</i>)?		
Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?		
Any long-term effects on the environment?		
Any degradation of the quality of the environment?		
Any risk to the safety of the environment?		
Any reduction in the range of beneficial uses of the environment?		
Any pollution of the environment?		
Any environmental problems associated with the disposal of waste?		
Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?		
Any cumulative environmental effect with other existing or likely future activities?		
Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?		

13 Matters of National Environmental Significance (MNES) checklist

Matters of National Environment Significance are matters protected under national environmental law (*Environment Protection and Biodiversity Conservation Act, 1999*). The following checklist provides guidance on whether an action is likely to have an impact on one of these matters, and whether further assessment of significance is required.

This checklist or similar should be included in the REF to demonstrate that all matters have been considered.

Significance matter	Yes / No	Relevant details
Any impact on nationally listed threatened species and communities?		
Any impact on nationally listed migratory species?		
Any impact on a Ramsar wetland of international importance?		
Any impact on Commonwealth marine environment?		
Any impact on a World Heritage properties?		
Any impact on a National Heritage place?		
Does the proposal involve a nuclear action?		
Any impact on a water resource, as a result of coal seam gas development and large coal mining development?		