Industry Assessments
Contact: John Booth
Phone: (02) 8275 1281
Email: john.booth@planning.nsw.gov.au

Trish McDonald
Umwelt (Australia) Pty Ltd
75 York Street
TERALBA NSW 2284

17/04075
SEAR 1137

Dear Ms Lamb

Resource Recovery Facility
John Renshaw Drive, Buttai (Lots 75 DP 755260)
Secretary's Environmental Assessment Requirements (SEAR) 1137

Thank you for your request for the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the above development proposal. I have attached a copy of these requirements.

In support of your application, you indicated that your proposal is both designated and integrated development under Part 4 of the *Environmental Planning and Assessment Act 1979* and requires an approval under the *Protection of the Environment Operations Act 1997*. It is noted that your application proposes to process less than 100,000 tonnes of waste per year. Please note, should your facility propose more than 100,000 tonnes per year it would be classified as State Significant Development and require a further approval.

In preparing the SEARs, the Department has consulted with the Environment Protection Authority, Department of Industry, Office of Environment & Heritage Environment, WaterNSW and Cessnock City Council. A copy of their requirements for the EIS are attached. The Department has also consulted with the Roads and Maritime Services as required by Schedule 3 of *State Environmental Planning Policy (Infrastructure) 2007* and attaches its requirements for the EIS.

If other integrated approvals are identified before the Development Application (DA) is lodged, you must undertake direct consultation with the relevant agencies, and address their requirements in the EIS.

If your proposal contains any actions that could have a significant impact on matters of National Environmental Significance, then it will require an additional approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact the Commonwealth Department of the Environment and Energy on (02) 6274 1111.

Should you have any further enquiries, please contact John Booth, Industry Assessment, at the Department on (02) 9274 6304.

Yours sincerely

C. Ritchie 19/3/19

Chris Ritchie
Director
Industry Assessments
as delegate of the Secretary

Environmental Assessment Requirements

Section 78A (8) of the *Environmental Planning and Assessment Act 1979.*

Designated Development

SEAR Number	1137
Proposal	Construction and operation of a resource recovery facility to process up to 100,000 tonnes per annum of construction and demolition waste comprising road pavements, masonry and clean fill.
Location	John Renshaw Drive, Buttai (Lots 75 DP 755260)
Applicant	Buttai Gravel Pty Ltd
Date of Issue	19 March 2019
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.*
Key Issues	The EIS must include an assessment of all potential impacts of the proposed development on the existing environment (including cumulative impacts if necessary) and develop appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts. As part of the EIS assessment, the following matters must also be addressed: • **strategic context** – including: – a detailed justification for the proposal and suitability of the site for the development; – a demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies; – a list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out; and – a description of how the proposed recycling management centre integrates with the on-site operations of the existing Quarry; • **waste management** – including: – details of the type, quantity and classification of waste to be received at the site; – details of the resource outputs and any additional processes for residual waste; – details of waste handling including, transport, identification, receipt, stockpiling and quality control; – details of how the EPA's record keeping and reporting requirements will be met; and – the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21,* the *Waste Classification guidelines 2014*, and *Standards for managing construction waste in NSW.* • **hazards and risk** – including: – the Environmental Impact Statement must include a preliminary risk screening completed in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be

	prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis* (DoP, 2011) and *Multi-Level Risk Assessment* (DoP, 2011). • **air quality** – including: – a description of all potential sources of air and odour emissions; – an air quality impact assessment in accordance with relevant Environment Protection Authority Guidelines; and – a description and appraisal of air quality impact mitigation and monitoring measures. • **traffic and transport** – including: – details of road transport routes and access to the site; – road traffic predictions for the development during construction and operation; – an assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development; – a traffic and transport study prepared in accordance with the Roads and Maritime's *Guide to Traffic Generating Developments 2002;* – a Traffic Impact Statement (TIA) to address how the proposed traffic generation will impact the existing intersection treatment on John Renshaw Drive; and – a transport and traffic study taking into account the cumulative study area traffic impacts associated with the development. • **soil and water** – including: – a description of local soils, topography, drainage and landscapes; – details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the *Water Act 1912* and/or the *Water Management Act 2000*; – an assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment; – a detailed site water balance; – details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; – an assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts; and – a description and appraisal of impact mitigation and monitoring measures • **noise and vibration** – including: – a description of all potential noise and vibration sources during construction and operation, including road traffic noise; – a noise and vibration assessment in accordance with the relevant Environment Protection Authority Guidelines; and – a description and appraisal of noise and vibration mitigation and monitoring measures. • **biodiversity** – including a description of any potential vegetation clearing needed to undertake the proposal and any impacts to flora and fauna. • **visual** – including an impact assessment at private receptors and public vantage points. • **heritage** – including Aboriginal and non-Aboriginal cultural heritage.
Environmental Planning Instruments and other policies	The EIS must assess the proposal against the relevant environmental planning instruments, including but not limited to: • *State Environmental Planning Policy (Infrastructure) 2007*; • *State Environmental Planning Policy No. 33 Hazardous and Offensive Development*; • *State Environmental Planning Policy No. 55 Remediation of Land*; • *Cessnock Local Environmental Plan 2011*; and • relevant development control plans and section 94 plans.
Guidelines	During the preparation of the EIS you should consult the Department's Register of Development Assessment Guidelines which is available on the Department's

	website at planning.nsw.gov.au under Development Proposals/Register of Development Assessment Guidelines. Whilst not exhaustive, this Register contains some of the guidelines, policies, and plans that must be taken into account in the environmental assessment of the proposed development.
Consultation	During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult with the: • Environment Protection Authority; • Department of Industry; • Office of Environment and Heritage; • Roads and Maritime Services; • WaterNSW; • Cessnock City Council; and • the surrounding landowners and occupiers that are likely to be impacted by the proposal. Details of the consultation carried out and issues raised must be included in the EIS.
Further consultation after 2 years	If you do not lodge an application under Section 78A (8) of the *Environmental Planning and Assessment Act 1979* within 2 years of the issue date of these SEARs, you must consult with the Secretary in relation to any further requirements for lodgement.

Secretary's Environmental Assessment Requirements - Water Supply Work Approval under Section 90 of the *Water Management Act 2000*

Resource Recovery Facility at John Renshaw Drive, Buttai NSW 2323 (Lots 75 & 76 DP 755260)

Water is a limited resource and must be managed sustainably for immediate and long-term needs. WaterNSW is responsible for protecting and managing access to surface and groundwater, and ensuring it is shared between the environment, towns and cities, and farmers and industry as well as for Aboriginal cultural activities.

Water Supply Work	**Information to be provided in the EIS**	**Additional information**
An approval is required under section 90 of the WM Act to construct and then use a water supply work (that is, the work which enables a person to physically pump or extract water from a water source) to: • extract water from a river (for example via a pump), unless you are taking water under a basic landholder right (although an approval is required to construct a dam or water bore regardless of whether it is for a basic landholder right) • extract water from a groundwater body (for example via a bore) • capture more rainwater run-off than your harvestable right (for example in a farm dam) • store water taken from a river or aquifer, in tanks or off-river storages • convey water to another location via irrigation channels • divert water away from an area, via banks or levees, includes floodplain banks • hold back water in a river, via a weir or in a dam other than under a harvestable right. **A water supply work approval** authorises its holder to construct and use a specified work, for example, pumps, bores, spear points or wells, at a specified location; Following works are exempt from requiring an approval: • pumps, pipes, troughs or tanks to take and store water from a river under a basic landholder right. However, if you are taking water through a bore from aquifer underlying your property, you will still need a water supply works approval. • dams within the maximum dam capacity under the harvestable right for your property • conveyance works, provided they are located wholly within land that is subject to a water use approval.	Relevant property details, including the lot or portion, deposited plan. Location plans must clearly identify (using GPS co-ordinates where possible) the site of each work. The coordinate projection must be clearly identified (such as GDA 94 for longitude and latitude of MGA 94) and include zone, easting/northing. Plans or diagrams showing: • the width of any setbacks from water source – river, stream, lake, wetland or estuary; • indicative footprint (dimensions and size) of the proposed work - if dam or diversion structure include the height of embankments or walls; • distances of setbacks from water source and areas of water front land including width of riparian corridors; • flow characteristics or flow regime of the water source or floodplain, • amount of water to be extracted including annual extraction volumes and purpose of extraction (including through inflow and seepage.) • Detailed description of the work (if relevant, include pump outlet sizes and capacity) • Information on site rehabilitation (restoration, replanting or rehabilitation of disturbed area, rehabilitation of affected water sources,) • Acid Sulphate Soil Management Plan and Flood Management Plan For dams including existing dams and any dams proposed under the development application, provide the following information: • Stream order of the location • Water holding capacity of each dam • Intended water use from each dam • amount of water to be extracted including annual extraction volumes and purpose of extraction All applicants must also provide a detailed assessment to demonstrate (where relevant) how their proposal will minimise or mitigate impacts (including accumulative impacts) on the following matters: • water sources, floodplains and dependent ecosystems (including groundwater dependent ecosystems and wetlands, swamps, bogs, depressions and perennial streams) which should be protected and restored where possible, • habitats, animals and plants that benefit from water, • water quality including sediment and dissolved oxygen, its beneficial use classification and impacts, • groundwater pollution, disposal and contamination, including short and long-term protection measures, • acidity, waterlogging, or salinity (including dryland salinity where relevant), • cumulative impacts associated with other approvals, and impacts on existing groundwater users, • geographical and other features of indigenous, major cultural, heritage or spiritual significance (natural or built), • soil erosion and compaction (impact of final land form on groundwater regime), • vegetation clearing (include dimensions of area and details of native species to be cleared). • contamination of soils, sediment control, contamination of water and other relevant sites, • geomorphic instability and impacts on other users. Information on site rehabilitation (restoration, replanting or rehabilitation of disturbed area, rehabilitation of affected water sources,)	Applicant must be familiar with and comply with the requirements of the relevant water sharing plan for the water source. If granted an approval, it will be subject to conditions including recording of water meter using a log book. A water access licence with a nominated water supply work is required to take water. The applicant/landholder must hold enough shares of water access licences to account for the water take from each water source. Following are offences under the Water Management Act 2000 60A Taking water without, or otherwise than authorised by, an access licence 60B Contravention of terms and conditions of access licence 60C Taking water for which there is no, or insufficient, water allocation 60D Taking water otherwise than by or from water supply work or extraction point nominated in access licence

Our Ref: DOC19/204690

Department of Planning and Environment
Industry Assessments
GPO Box 39
SYDNEY NSW 2001
John.booth@planning.nsw.gov.au

Attn: Mr John Booth

Standard Post and Electronic Mail
11 March 2018

Dear Sir

SEARs 1137 – Resource Recovery Facility – review of additional information - Buttai

I refer to your request for review of additional information relating to the Secretary's Environmental Assessment Requirements (SEARs) for proposed resource recovery facility at Lots 75 and 76 DP 755260, John Renshaw Drive Buttai (the Premises). The Premises currently operates as a quarry, and the proposed resource recovery facility will adjoin the quarry.

I understand the Department of Planning and Environment issued SEARs on 6 April 2017 which included information provided by the Environment Protection Authority (**EPA**).

The EPA has reviewed the additional information and changes proposed for the resource recovery facility, which were provided on 27 February 2019. The EPA recommends that the proponent considers current EPA publications regarding waste facilities when preparing their EIS, including:

1. "*Waste Classification Guidelines,* 2014" https://www.epa.nsw.gov.au/publications/wasteregulation/140796-classify-waste ; and
2. "*Standards for managing construction waste in NSW*", November 2018 https://www.epa.nsw.gov.au/publications/managewaste/18p1270-standards-for-managing-construction-waste-in-nsw

Please contact Melissa Moore on 4908 6892 if you have any further questions.

Yours sincerely

11/3/2018

STEVEN JAMES
Unit Head Waste Compliance
Environment Protection Authority

Phone 131 555
Phone 02 4908 6800
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DOC19/172639-1

SEAR 1137

John Booth
Planning Officer, Industry Assessments
Department of Planning and Environment
John.Booth@planning.nsw.gov.au

Dear Mr Booth

Input into Secretary's Environmental Assessment Requirements Extension – Designated Development - Resource Recovery Facility, John Renshaw Drive, Buttai (Lots 75 & 76 DP 755260) – SEAR 1137

I refer to your e-mail dated 27 February 2019 seeking input into the Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for a local designated development.

The Office of Environment and Heritage (OEH) understands that the applicant is seeking an extension to the previously issued SEARs to allow for the preparation of an EIS and subsequent DA to be lodged with Council post the date of 6 April 2019, when the current SEARs will expire. OEH has considered your request and provides amended SEARs for the proposed development in **Attachment 1**.

OEH notes that the *Biodiversity Conservation Act 2016* (BC Act) commenced on 25 August 2017. Under clause 27 of the Biodiversity Conservation (Savings and Transitional) Regulation 2017, if the Secretary of the Department of Planning and Environment determines in writing that the proponent had undertaken substantial environmental assessment in connection with the EIS before the commencement of the BC Act (Clause 27(a) and the application is made within 18 months after that determination), or an application for a planning approval was made before the commencement of the BC Act but was not finally determined before the commencement of the BC Act (Clause 27(d)), then the project can continue to be assessed under the former planning provisions. Otherwise, the BC Act will apply. The requirements for each planning pathway are outlined within **Attachment 1**.

If you require any further information regarding this matter please contact Brendan Mee, Senior Conservation Planning Officer, on 4904 2730.

Locked Bag 1002 Dangar NSW 2309
Level 4, 26 Honeysuckle Drive Newcastle NSW 2300
Tel: (02) 4904 2615 Fax: (02) 4904 2597
ABN 30 841 387 271
www.environment.nsw.gov.au

Yours sincerely

STEVEN COX

Senior Team Leader – Planning
Hunter Central Coast Branch
Conservation and Regional Delivery Division

13 March 2019

Contact officer: BRENDAN MEE
02 4904 2730

Enclosure: Attachments A and B

Attachment 1 – OEH's recommended Secretary's environmental assessment requirements (SEARs) for designated development

TABLE OF CONTENTS

1. The proposal

The objectives of the proposal should be clearly stated and identify:

- the size, scale and type of the proposed activity / development
- all anticipated environmental impacts including: direct and indirect; construction and operational; and extent of vegetation / habitat clearing or disturbance
- threatened species, populations, ecological communities or habitats impacted upon
- the staging and timing of the proposal
- the proposal's relationship to any other proposals and developments.

2. Environmental impacts of the proposal

The proponent must consider, assess, quantify and report on the likely environmental impacts of the proposal if applicable, particularly:

- Aboriginal cultural heritage
- threatened biodiversity
- OEH estate: land reserved or acquired under the *National Parks and Wildlife Act 1974*
- flooding, floodplain issues and coastal erosion
- acid sulfate soils
- historic heritage.

The Secretary's Environmental Assessment Requirements should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines and reference material is presented in **Attachment 2**. Appropriate justification should be provided in instances where the below matters are not addressed.

3. Aboriginal cultural heritage

- The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the proposal. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (DECCW, 2011) and consultation with OEH regional branch officers. The Due Diligence process is not appropriate to use as an assessment here.

- Impacts on Aboriginal cultural heritage values are to be assessed and documented in an Aboriginal Cultural Heritage Assessment Report (ACHAR). The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.

- Consultation with Aboriginal people must be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.

- Where harm to an Aboriginal object or declared Aboriginal place cannot be avoided, an Aboriginal Heritage Impact Permit (AHIP) will be required from OEH under the *National Parks and Wildlife Act 1974*. You must apply to OEH for an AHIP prior to commencing works that will directly or indirectly harm an Aboriginal object or a declared Aboriginal place.

Project specific requirements

- The assessment of cultural heritage values must include a surface survey undertaken by a qualified archaeologist in areas with potential for subsurface Aboriginal deposits. The result of the surface survey is to inform the need for targeted test excavation to better assess the integrity, extent, distribution, nature and overall significance of the archaeological record. The results of surface surveys and test excavations are to be documented in the ACHAR.

- The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the development to formulate appropriate measures to manage unforeseen impacts.

- The ACHAR must outline procedures to be followed in the event Aboriginal burials or skeletal material is uncovered during construction to formulate appropriate measures to manage the impacts to this material.

4. Biodiversity

(i) Requirements if former planning provisions apply

Concurrence

OEH understands that the proposed development is a Part 4 application being considered by Cessnock City Council in accordance with the EP&A Act. As such, OEH has a statutory role only if council as the consent authority determines that the development is likely to significantly affect a threatened species, population, ecological community, or its habitat, as listed under the *Threatened Species Conservation Act 1995* (TSC Act).

As the consent authority, council will need to assess whether or not the proposal will have a significant impact on threatened species, populations, or ecological communities, or their habitat. Assessment of significance should be determined in accordance with the procedures and

assessment approaches contained within the *Threatened Species Assessment Guidelines: The Assessment of Significance* (DECC 2007). If council determines a significant impact is likely, then pursuant to Section 79B of the EP&A Act, council must seek the concurrence of the Chief Executive of OEH or the Minister administering the TSC Act.

Under this scenario OEH will have a concurrence role, which will include the likely provision of Chief Executive Requirements for a Species Impact Statement (SIS) and assessment of the SIS.

If concurrence is required, then council will need to advise the proponent that they need to obtain a SIS to assess the impact. If the proponent decides to proceed with a SIS they will need to write to OEH for SIS Chief Executive Requirements.

If OEH is required to provide concurrence (including the review of the SIS), council will need to ensure the following documents are supplied so that the concurrence requirements of clause 59(a) of the Environmental Planning and Assessment Regulation 2000 are satisfied through a:

Species Impact Statement:

a. A copy of the development application.

b. One hard copy and one digital copy of the following:
    - the species impact statement and any document upon which the SIS relies
    - any preliminary fauna and flora assessment (i.e. the report addressing the assessment of significance) undertaken prior to preparation of the SIS
    - any council assessment report
    - any submissions or objections received by council concerning the development application
    - any social and economic impact assessments that have been undertaken in relation to the development application.

c. Confirmation that the SIS has been publicly exhibited in accordance with clauses 86–91 of the Environmental Planning and Assessment Regulation 2000, and all public submissions received by council are forwarded to OEH for their consideration (including any objections regarding the proposed activity). If no comments were received please advise OEH accordingly.

d. $320 administration fee – in accordance with clause 252A of the Environmental Planning and Assessment Regulation 2000; made payable to OEH.

Impact assessment

All direct and indirect impacts (offsite) must be considered in any environmental assessment of the proposal and must be conducted in accordance with the following recommendations:

1. The EIS should include a detailed biodiversity assessment, including assessment of impacts on threatened biodiversity, native vegetation and habitat. This assessment should address the matters included in the following sections.

2. A field survey of the surrounding site should be conducted and documented in accordance with relevant guidelines, including:
    - the *NSW Guide to Surveying Threatened Plants* (OEH 2016)
    - the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians* (DECC 2009)
    - *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC 2004), and
    - Threatened species survey and assessment guideline information on www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm.

It is preferable for proponents to use the *BioBanking Assessment Methodology 2014* (OEH 2014) to collect the vegetation plot data for the project site, and any offset site associated with the project (even when the proponent does not intend to use the BBAM credit calculator).

If a proposed survey methodology is likely to vary significantly from the above methods, the proponent should discuss the proposed methodology with OEH prior to undertaking the EIS, to determine whether OEH considers that it is appropriate.

Recent (less than five years old) surveys and assessments may be used. However, previous surveys should not be used if they have:

- been undertaken in seasons, weather conditions or following extensive disturbance events when the subject species are unlikely to be detected or present, or
- utilised methodologies, survey sampling intensities, timeframes or baits that are not the most appropriate for detecting the target subject species, unless these differences can be clearly demonstrated to have had an insignificant impact upon the outcomes of the surveys. If a previous survey is used, any additional species listed under the TSC Act since the previous survey took place, must be surveyed for.

For targeted surveys, particularly some flora, they must be undertaken during the known flowering / fruiting times of each likely species. Surveying at these times is required for species that are not readily detectable (i.e. are cryptic), where flowers or fruits (or both) are necessary for their positive identification. If targeted flora surveys for these species are conducted outside a species known phenology then justification must be provided as to why; if this is not provided or considered inappropriate, then all such species will be considered to be present on all available habitats and in viable numbers. For species which do not require flowers / fruits for positive identification (e.g. large trees / shrubs), then survey as appropriate (though please provide justification).

Determining the list of potential threatened species for the site must be done in accordance with the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC 2004 & DECC 2009). The OEH Threatened Species website www.environment.nsw.gov.au/threatenedspecies/ and the Bionet Atlas database must be the primary information sources for the list of threatened species present. The BioBanking Threatened Species Database, the Vegetation Types databases (available on OEH website at www.environment.nsw.gov.au/biobanking/VegTypeDatabase.htm) and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums (http://australianmuseum.net.au/Australian-Museum-Collection-Search), previous or nearby surveys etc.) may also be used to compile the list.

3. The EIS should contain the following information as a minimum:

   a. The requirements set out in the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC 2004 & DECC 2009).

   b. Description and geo-referenced mapping of study area (and spatial data files), for example overlays on topographic maps, satellite images or aerial photos (or both), including details of map datum, projection and zone, all survey locations, all vegetation communities (including classification and methodology used to classify), key habitat features and reported locations of threatened species, populations and ecological communities present in the subject site and study area. Separate spatial files (*.shp format) to be provided to OEH should include, at a minimum, shapefiles of the project site, impact footprint, vegetation mapping and classification for both the impact and any offset site(s).

   c. Description of survey methodologies used, including timing, location and weather conditions.

   d. Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EIS.

e. Detailed description of all vegetation communities (both forested and non-woody [e.g. derived grasslands], including classification and methodology used to classify) and including all plot data. Plot data should be supplied to the OEH in electronic format (e.g. MS-Excel) and organised by vegetation community.

f. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status.

g. Description of the likely impacts of the proposal on biodiversity and wildlife corridors, including direct and indirect and construction and operation impacts. Wherever possible, quantify these impacts such as the amount of each vegetation community or species habitat to be cleared or impacted, or any fragmentation of a wildlife corridor. The proposal should provide an assessment of the cumulative impacts of the proposal in relation to other nearby developments.

h. Identification of the avoidance, mitigation, offsetting / compensatory habitat and management measures that will be put in place as part of the proposal to avoid or minimise impacts, including details about alternative options considered and how long term management arrangements will be guaranteed.

i. Description of the residual impacts of the proposal. If the proposal cannot adequately avoid or mitigate impacts on biodiversity, then a biodiversity offset package is expected (see the requirements for this at point 6 below).

j. Provision of specific Statement of Commitments relating to biodiversity.

Appropriate justification should be provided in instances where the above issues are not addressed.

4. An assessment of the significance of direct and indirect impacts of the proposal must be undertaken for threatened biodiversity known or considered likely to occur in the study area based on the presence of suitable habitat. This assessment must consider:

a. the factors identified in s.5A of the EP&A Act, and

b. the guidance provided by *The Threatened Species Assessment Guideline – The Assessment of Significance* (DECC 2007) which is available at: www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf

Offsets

5. Where an offsets package is proposed by a proponent for impacts to biodiversity this package should:

a. Meet either the requirements of the (i) BioBanking Assessment Methodology 2014 (OEH 2014). For additional assistance please contact your nearest OEH office or the BioBanking Team on 131 555.

b. Identify the conservation mechanisms to be used to ensure the long term protection and management of the offset sites.

c. Include an appropriate Management Plan (such as vegetation or habitat) that has been developed as a key amelioration measure to ensure any proposed compensatory offsets, retained habitat enhancement features within the development footprint, and impact

mitigation measures (including proposed rehabilitation or monitoring programs, or both) are appropriately managed and funded.

Please Note: The BioBanking Assessment Methodology 2014 can be used to assess impacts of a proposal and to determine required offsets. In the latter instances, if the required credits are not available for offsetting, appropriate alternative options may be developed in consultation with the OEH and in accordance with OEH policy.

With respect to managing and conserving a proposed offset in perpetuity, OEH considers and supports the following as appropriate conservation mechanisms:

- the establishment of Biodiversity Stewardship Sites under the BC Act
- the dedication of land under the *National Parks and Wildlife* (NPW) *Act 1974*
- a Conservation Agreement under the NPW Act
- a Planning Agreement under the EP&A Act.

Note:

- OEH no longer supports public positive covenant under s88E of the *Conveyancing Act 1919* as an appropriate conservation mechanism to secure and manage biodiversity offsets.

- Although OEH supports the use of conservation agreements under the NPW Act as one of the acceptable offsetting mechanisms, it is advisable that if you are considering this mechanism you contact the Biodiversity Conservation Trust about its applicability.

6. Where appropriate, likely impacts (both direct and indirect) on any adjoining or nearby National Parks and Wildlife Service estate (or both) reserved under the NPW Act or any marine and estuarine protected areas under the *Fisheries Management Act 1994* or the *Marine Estate Management Act 2014 s*hould be considered. Refer to the *Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water* (DECCW 2010).

7. With regard to the Australian Government *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify any relevant 'Matters of National Environmental Significance' and whether the proposal has been referred to the Australian Government or already determined to be a controlled action.

(ii) Requirements if *Biodiversity Conservation Act 2016* applies

Biodiversity Assessment Methodology for the Biodiversity Offsets Scheme (BOS)

The EIS should include an assessment of the following:

a. The EIS must assess the impact of the proposed development on biodiversity values to determine if the proposed development is "likely to significantly affect threatened species" for the purposes of Section 7.2 of the Biodiversity Conservation Act 2016 (BC Act), as follows:

    a. The EIS must demonstrate and document how the proposed development exceeds, or does not exceed, the biodiversity offsets scheme threshold as set out in Section 7.4 of the BC Act 2016 and Clause 7.1 of the Biodiversity Conservation Regulation 2017 (BC Regulation) by determining whether the proposed development involves:

        i. **The clearing of native vegetation exceeds the thresholds** listed under Clause 7.23 of the BC Regulation, **or**

        ii. The clearing of native vegetation, or other action, **on land included on the Biodiversity Values Map** published under Clause 7.23 of the BC

Regulation (this map includes areas of outstanding biodiversity value, as declared under Section 3.1 of the BC Act).

b. If the proposal does not trigger any of the criteria in (a) above, then the EIS must determine whether the proposed development is likely to have a significant impact based on '*the test for determining whether proposed development likely to significant affect threatened species or ecological communities'* in Section 7.3 of the BC Act.

c. Where there is reasonable doubt regarding potential impacts, or where information is not available, then a significant impact upon biodiversity should be considered likely when applying the test in Section 7.3 of the BC Act. Where it is concluded that there is no significant impact, the EIS must justify how the conclusion has been reached.

d. If the development exceeds the thresholds in (a) or (b), then the EIS must be accompanied by a biodiversity development assessment report (BDAR) prepared in accordance with Part 6 of the BC Act. That is, the Biodiversity Assessment Methodology applies.

Required Information

Where development is considered "likely to significantly impact on threatened species" and a Biodiversity Development Assessment Report is required, the following requirements apply:

- Biodiversity impacts related to the proposal are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), Biodiversity Conservation Regulation 2017 (s6.8) and Biodiversity Assessment Method.
- The BDAR must document the application of the avoid, minimise and offset hierarchy including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.
- The BDAR must include details of the measures proposed to address the offset obligation as follows:
    - The total number and classes of biodiversity credits required to be retired for the proposal.
    - The number and classes of like-for-like biodiversity credits proposed to be retired.
    - The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules.
    - Any proposal to fund a biodiversity conservation action.
    - Any proposal to make a payment to the Biodiversity Conservation Fund.
- If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.

The BDAR must be prepared by a person accredited to apply the Biodiversity Assessment Method under s6.10 of the *Biodiversity Conservation Act 2016*.

Where a BDAR is not required and a threatened species assessment is prepared to support a conclusion of "no significant impact", the EIS must include a field survey of the site, conducted and documented in accordance with the relevant guidelines including the Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW, 2009), Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004) and Guidelines for Threatened Species Assessment (Dept Planning, July 2005). The approach should also reference the field survey methods and assessment information on the OEH website including the Bionet Atlas, Threatened Species Profile and Bionet Vegetation Classification (see Attachment 2).

5. OEH estate

Land reserved or acquired under the *National Parks and Wildlife Act 1974* (NPW Act)

If the proposed development is within, adjacent to, or in proximity to, or in proximity to a watercourse that flows directly into OEH-managed conservation estate (e.g. a national park, nature reserve, state conservation area, land which is declared wilderness under the *Wilderness Act 1987*) then the EIS should include:

- The following (as appropriate):
    - Evidence that the proponent has consulted with OEH on the legal permissibility of the proposal under the NPW Act and its appropriateness.
    - In the case of proposals on land declared as wilderness under the *Wilderness Act 1987*, evidence that the proponent has consulted with OEH on the appropriateness of the proposal. That is, whether it is consistent with the objects of the *Wilderness Act 1987* (section 3) and the management principles for wilderness areas (section 9).
    - Alternative options that have been explored to avoid the OEH estate (on-park) and a clear justification of any on-park components of the proposal.
    - If on-park impacts are considered unavoidable, consideration of the issues, including details of any compensation proposal, consistent with the OEH *Revocation, Recategorisation and Road Adjustment Policy* (2012) for proposals that are located wholly or partly in a National Park or other land acquired or reserved under the *National Parks and Wildlife Act 1974*.

- Consideration of the matters identified in the *Guidelines for developments adjoining land and water managed by the OEH* (DECCW 2010) where a proposal adjoins or is immediate vicinity of OEH estate, or is upstream of OEH estate.

- A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified impacts associated with the proposal. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

6. Water and soils

- The EIS must map the following features relevant to water and soils including:
    - Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map)
    - Rivers, streams, estuaries (as described in s4.2 of the Biodiversity Assessment Method)
    - Wetlands (as described in s4.2 of the Biodiversity Assessment Method)
    - Groundwater
    - Groundwater dependent ecosystems
    - Proposed intake and discharge locations.

- The EIS must describe background conditions for any water resource likely to be affected by the proposal, including:
    - Existing surface and groundwater.
    - Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.
    - Water Quality Objectives (as endorsed by the NSW Government) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
    - Indicators and trigger values/criteria for the identified environmental values in accordance with the ANZECC (2000) *Guidelines for Fresh and Marine Water Quality* and / or local objectives, criteria or targets endorsed by the NSW Government.

- *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions*.

- The EIS must assess the impacts of the proposal on water quality, including:
  - The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the proposal protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
  - Identification of proposed monitoring of water quality.
  - Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan).

- The EIS must assess the impact of the proposal on hydrology, including:
  - Water balance including quantity, quality and source.
  - Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.
  - Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
  - Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
  - Changes to environmental water availability, both regulated / licensed and unregulated / rules-based sources of such water.
  - Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
  - Identification of proposed monitoring of hydrological attributes.

Project specific requirements

Where the proposal (or part thereof) is located on land marked Class 1, 2, 3 or 4 on the relevant Acid Sulfate Soil Planning Map OR within 500 metres of adjacent Class 2, 3 or 4 land that is below 5 metres Australian Height Datum (AHD) and likely to lower the water table in this adjacent land below 1 metre AHD, the EIS should include the following:

- An assessment of the potential impacts of the proposal on acid sulfate soils in accordance with the relevant guidelines in the Acid Sulfate Soils Manual (Stone *et al*. 1998) and the Acid Sulfate Soils Laboratory Methods Guidelines (Ahern *et al*. 2004).

- Mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

Where the proposal is large or high risk with a heightened potential to impact on water quality and hydrology, the EIS should include the following:

- A description of existing water quality / hydrology based on suitable data (meaning data collection may be required) and must include:
  - Water chemistry.
  - A description of receiving water processes, circulation and mixing characteristics and hydrodynamic regimes.

- Lake or estuary flushing characteristics.
- Sensitive ecosystems or species conservation values.
- Specific human uses and values (e.g. fishing, proximity to recreation areas).
- A description of any impacts from existing industry or activities on water quality.
- A description of the condition of the local catchment e.g. erosion, soils, vegetation cover.
- An outline of baseline groundwater information, including, for example, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment.
- Historic river flow data.

- An assessment of the impacts of the proposal on water quality and hydrology including:

  - Water circulation, current patterns, water chemistry and other appropriate characteristics such as clarity, temperature, nutrient and toxicants, and potential for erosion.
  - Changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, and groundwater).
  - Disturbance of acid sulfate soils and potential acid sulfate soils.
  - Stream bank stability and impacts on macro invertebrates.
  - Water quality and hydrology modelling and / or monitoring, where necessary.

- Proposed water quality monitoring in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW* (DEC 2004). The water quality and aquatic ecosystem monitoring program must include:

  - Adequate data for evaluating maintenance, or progress towards achieving, the relevant Water Quality Objectives.
  - Measurement of pollutants identified or expected to be present.

7. Flooding

- The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:

  - Flood prone land.
  - Flood planning area, the area below the flood planning level.
  - Hydraulic categorisation (floodway and flood storage areas).
  - Flood hazard.

- The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.

- The EIS must model the effect of the proposal (including fill) on the current flood behaviour for a range of design events as identified above, and the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

- All site drainage, stormwater quality devices and erosion / sedimentation control measures should be identified in the EIS and the onsite treatment of stormwater and effluent runoff and predicted stormwater discharge quality from the proposal should be detailed.

- Modelling in the EIS must consider and document:

  - Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.
  - The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood (PMF), or an equivalent extreme flood.

- Impacts of the proposal on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazard categories and hydraulic categories.
- Impacts of earthworks and stockpiles within the flood prone land up to the PMF level. The assessment should be based on understanding of cumulative flood impacts of construction and operational phases.
- Relevant provisions of the NSW Floodplain Development Manual 2005.

- The EIS must assess the impacts on the proposal on flood behaviour, including:

  - Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
  - Consistency with Council floodplain risk management plans.
  - Compatibility with the flood hazard of the land.
  - Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
  - Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
  - Whether there will be a direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
  - Appropriate mitigation measures to offset potential flood risk arising from the proposal. Any proposed mitigation work should be modelled and assessed on the overall catchment basis in order to ensure it fits its purpose and meets the criteria of the Council where it is located, and to ensure it has no adverse impact to surrounding areas.
  - Any impacts the proposal may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council.
  - Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.
  - Emergency management, evacuation and access, and contingency measures for the proposal during both construction and operational phases considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the NSW SES.
  - Any impacts the proposal may have on the social and economic costs to the community as a consequence of flooding.

8. Coastal hazards

- The EIS must describe the potential effects of coastal processes and coastal hazards (within the meaning of the *Coastal Protection Act 1979*, including sea level rise and climate change:

  - On the proposal.
  - Arising from the proposal.

- The EIS must consider the effects of coastal hazards impacting the site under the following scenarios:

  - Current sea level.
  - Projected future climate change (including sea level rise).

- The EIS must have regard to and document:

  - Consistency with any certified Coastal Management Program (or Coastal Zone Management Plan).
  - Consistency with the objectives of coastal management areas mapped under the SEPP 71 Coastal Protection.
  - Consistency with any existing entrance management strategies for coastal lagoons.

9. Coastal Wetlands and Littoral Rainforest

The EIS must assess the impacts on coastal wetlands and littoral rainforest areas in accordance with the State Environmental Planning Policy (Coastal Management) 2018.

The EIS must identify measures that will be taken to protect, and where possible enhance, the:

- Biophysical processes of the coastal wetland or littoral rainforest.
- Hydrological process of the coastal wetland or littoral rainforest.
- Ecological integrity of the coastal wetland or littoral rainforest.

10. Historic heritage

The EIS must provide a heritage assessment including but not limited to an assessment of impacts to State and local heritage including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, and trees. Where impacts to State or locally significant heritage items are identified, the assessment shall:

- outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996)

- be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria)

- include a statement of heritage impact for all heritage items (including significance assessment)

- consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant)

- where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.

Attachment 2 – Guidance material

Title	Web address
Relevant legislation	
Biodiversity Conservation Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
Coastal Management Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/20/full
Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Fisheries Management Act 1994	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
Marine Parks Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
National Parks and Wildlife Act 1974	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Wilderness Act 1987	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Aboriginal cultural heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf
Aboriginal Site Recording Form	http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf
Biodiversity	
BioBanking Assessment Methodology 2014 (OEH 2014)	www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm

Title	Web address
BioBanking Assessment Methodology and Credit Calculator Operational Manual.	Pending - To be advised (check website for regular updates)
Assessors' Guide To Using The BioBanking Credit Calculator 2014	Pending - To be advised (check website for regular updates)
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians (DECC, 2009)	www.environment.nsw.gov.au/resources/Threatenedspecies/09213amphibians.pdf
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC 2004)	www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf
OEH Threatened Species website	www.environment.nsw.gov.au/Threatenedspecies/
Atlas of NSW Wildlife	www.environment.nsw.gov.au/wildlifeatlas/about.htm
BioBanking Threatened Species Database	www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm
Vegetation Types databases	www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm
PlantNET	http://plantnet.rbgsyd.nsw.gov.au/floraonline.htm
Online Zoological Collections of Australian Museums	http://australianmuseum.net.au/Australian-Museum-Collection-Search
Threatened Species Assessment Guideline - The Assessment of Significance (DECC 2007)	www.environment.nsw.gov.au/resources/Threatenedspecies/tsaguide07393.pdf
OEH principles for the use of biodiversity offsets in NSW	www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm
Biodiversity Values Map	https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BVMap
Biodiversity Assessment Method (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf
Ancillary rules: Biodiversity conservation actions	http://www.environment.nsw.gov.au/resources/bcact/ancillary-rules-biodiversity-actions-170496.pdf
Ancillary rules: Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	http://www.environment.nsw.gov.au/resources/bcact/ancillary-rules-reasonable-steps-170498.pdf
OEH Threatened Species Profiles	http://www.environment.nsw.gov.au/threatenedspeciesapp/
BioNet Atlas	http://www.environment.nsw.gov.au/wildlifeatlas/about.htm
BioNet Vegetation Classification	http://www.environment.nsw.gov.au/NSWVCA20PRapp/LoginPR.aspx
NSW Guide to Surveying Threatened Plants (OEH, 2016)	http://www.environment.nsw.gov.au/research-and-publications/publications-search/nsw-guide-to-surveying-threatened-plants
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians (DECC, 2009)	www.environment.nsw.gov.au/resources/Threatenedspecies/09213amphibians.pdf

Title	Web address
Threatened Species Assessment Guideline - The Assessment of Significance (DECC 2007)	www.environment.nsw.gov.au/resources/Threatenedspecies/tsaguide07393.pdf - to be replaced with new 5-part-test guidelines when available.
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation
OEH estate	
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
List of aquatic reserves	www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats/mpa
List of marine parks	www.mpa.nsw.gov.au/contact.html
Water and soils	
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions	http://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales (DEC 2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf
Acid sulfate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	http://data.nsw.gov.au/data/
Acid Sulfate Soils Manual (Stone *et al*. 1998)	http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern *et al*. 2004)	http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding	
Floodplain Development Manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
Floodplain Risk Management Guidelines	http://www.environment.nsw.gov.au/topics/water/coasts-and-floodplains/floodplains/floodplain-guidelines
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/

Title	Web address
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Coastal erosion	
Reforms to coastal erosion management	http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm
Guidelines for Preparing Coastal Zone Management Plans	http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf
Historic heritage	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf
Statements of Heritage Impact 2002 (HO & DUAP)	http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	http://www.environment.nsw.gov.au/Heritage/publications/
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

Department of Industry

Our ref V17/176#25 & OUT19/3479

John Booth
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

John.Booth@planning.nsw.gov.au

Dear John

Re: Request for input into the approved Secretary's Environmental Assessment Requirements (SEARs) extension for a Resource Recovery Facility at John Renshaw Drive, Buttai

Thank you for your email of 27 February 2019 seeking the Department of Industry – Lands & Water's (DoI – Lands & Water) comments on the proponents request for extension to the previously issued SEARs.

DoI – Lands & Water has reviewed the supporting documentation and provides the following comments for the Secretary's Environmental Assessment Requirements (SEARs). Further details can be found in Attachment A.

It is recommended that the EIS be required to include, if relevant:

- Annual volumes of surface water and groundwater proposed to be taken by the activity (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.
- Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).
- The identification of an adequate and secure water supply for the life of the project. Confirmation that water can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.

- An assessment of impediment to surface or groundwater flow, and potential flood impacts.
- Full technical details and data of all surface and groundwater modelling.
- Proposed surface and groundwater monitoring activities and methodologies.
- Proposed management and disposal of produced or incidental water
- Details of the final landform of the site, including final void management (where relevant) and rehabilitation measures.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.
- A statement of where each element of the SEARs is addressed in the EIS (i.e. in the form of a table).

Please contact Ellie Randall, Water Regulation Officer (Wollongong) on (02) 4224 9745 or ellie.randall@nrar.nsw.gov.au if you have further enquiries regarding this matter.

Yours sincerely

Alison Collaros
Manger Licensing and Approvals (East)
Natural Resources Access Regulator
Department of Industry –Water

15 March 2019

ATTACHMENT A

DoI – Lands & Water General Assessment Requirements for linear infrastructure projects

The following detailed assessment requirements are provided to assist in adequately addressing the assessment requirements for this proposal.

For further information, visit the DoI – Lands & Water website,
https://www.industry.nsw.gov.au/water/licensing-trade/approvals

Key Relevant Legislative Instruments

This section provides a basic summary to aid proponents in the development of an Environmental Impact Statement (EIS), and should not be considered a complete list or comprehensive summary of relevant legislative instruments that may apply to the regulation of water resources for a project.

The EIS should take into account the objects and regulatory requirements of the *Water Act 1912* (WA 1912) and *Water Management Act 2000* (WMA 2000), and associated regulations and instruments, as applicable.

Water Management Act 2000 (WMA 2000)
Key points:

- Volumetric licensing in areas covered by water sharing plans
- Works within 40m of waterfront land
- SSD & SSI projects are exempt from requiring water supply work approvals and controlled activity approvals as a result of the *Environmental Planning & Assessment Act 1979 (EP&A Act)*.
- No exemptions for volumetric licensing apply as a result of the *EP&A Act*.
- Basic landholder rights, including harvestable rights dams
- Aquifer interference activity approval and flood management work approval provisions have not yet commenced and are regulated by the *Water Act 1912*
- Maximum penalties of $2.2 million plus $264,000 for each day an offence continues apply under the *WMA 2000*

Water Act 1912 (WA 1912)
Key points:

- Volumetric licensing in areas where no water sharing plan applies
- Monitoring bores
- Aquifer interference activities that are not regulated as a water supply work under the *WMA 2000*.
- Flood management works
- No exemptions apply to licences or permits under the *WA 1912* as a result of the *EP&A Act*.
- Regulation of water bore driller licensing.

Water Management (General) Regulation 2011
Key points:

- Provides various exemptions for volumetric licensing and activity approvals

- Provides further detail on requirements for dealings and applications.

Water Sharing Plans – these are considered regulations under the *WMA 2000*

Access Licence Dealing Principles Order 2004

Harvestable Rights Orders

Water Sharing Plans

It is important that the proponent understands and describes the ground and surface water sharing plans, water sources, and management zones that apply to the project. The relevant water sharing plans can be determined spatially at www.ourwater.nsw.gov.au. Multiple water sharing plans may apply and these must all be described.

The *Water Act 1912* applies to all water sources not yet covered by a commenced water sharing plan.

The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the Water Sharing Plan including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection (including groundwater dependent ecosystems), water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water to be taken from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP, including:
    - Sufficient market depth to acquire the necessary entitlements for each water source.
    - Ability to carry out a "dealing" to transfer the water to relevant location under the rules of the WSP.
    - Daily and long-term access rules.
    - Account management and carryover provisions.
- Provide a detailed and consolidated site water balance.
- Further detail on licensing requirements is provided below.

Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- NSW Guidelines for Controlled Activities on Waterfront Land (NOW, 2012)
- NSW Aquifer Interference Policy (NOW, 2012)
- Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW, 2012)

- Australian Groundwater Modelling Guidelines (NWC, 2012)
- NSW State Rivers and Estuary Policy (1993)
- NSW Wetlands Policy (2010)
- NSW State Groundwater Policy Framework Document (1997)
- NSW State Groundwater Quality Protection Policy (1998)
- NSW State Groundwater Dependent Ecosystems Policy (2002)
- NSW Water Extraction Monitoring Policy (2007)

DoI Lands & Water policies can be accessed at the following links:
https://www.industry.nsw.gov.au/water/what-we-do/legislation-policies
https://www.industry.nsw.gov.au/water/licensing-trade/approvals/controlled-activities

An assessment framework for the NSW Aquifer Interference Policy can be found online at: https://www.industry.nsw.gov.au/water/licensing-trade/approvals/major-projects

Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site – such as evaporative loss from open voids or inflows).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.
- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages
- Details on the location, purpose, size and capacity of any new proposed dams/storages.
- Applicability of any exemptions under the *Water Management (General) Regulation 2011* to the project.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10% of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be

licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

For more information on Harvestable Right dams, including a calculator, visit: https://www.waternsw.com.au/customer-service/water-licensing/basic-water-rights/harvestable-rights-dams/maximum-harvestable-right-calculator

Dam Safety

Where new or modified dams are proposed, or where new development will occur below an existing dam, the NSW Dams Safety Committee should be consulted in relation to any safety issues that may arise. Conditions of approval may be recommended to ensure safety in relation to any new or existing dams.

See www.damsafety.nsw.gov.au for further information.

Surface Water Assessment

The predictive assessment of the impact of the proposed project on surface water sources should include the following:

- Identification of all surface water features including watercourses, wetlands and floodplains transected by or adjacent to the proposed project.
- Identification of all surface water sources as described by the relevant water sharing plan.
- Detailed description of dependent ecosystems and existing surface water users within the area, including basic landholder rights to water and adjacent/downstream licensed water users.
- Description of all works and surface infrastructure that will intercept, store, convey, or otherwise interact with surface water resources.
- Assessment of predicted impacts on the following:
    - flow of surface water, sediment movement, channel stability, and hydraulic regime,
    - water quality,
    - flood regime,
    - dependent ecosystems,
    - existing surface water users, and
    - planned environmental water and water sharing arrangements prescribed in the relevant water sharing plans.

Groundwater Assessment

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- The known or predicted highest groundwater table at the site.
- Works likely to intercept, connect with or infiltrate the groundwater sources.

- Any proposed groundwater extraction, including purpose, location and construction details of all proposed bores and expected annual extraction volumes.
- Bore construction information is to be supplied to DoI Lands & Water by submitting a "Form A" template. DoI Lands & Water will supply "GW" registration numbers (and licence/approval numbers if required) which must be used as consistent and unique bore identifiers for all future reporting.
- A description of the watertable and groundwater pressure configuration, flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of groundwater quality, its beneficial use classification and prediction of any impacts on groundwater quality.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.

Where potential impact/s are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

The EIS must consider the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
  - the effect of the proposal on the recharge to groundwater systems;
  - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
  - the effect on the function of GDEs (habitat, groundwater levels, connectivity).
- Provide safeguard measures for any GDEs.

Watercourses, Wetlands and Riparian Land

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
  - wetlands/swamps, watercourses and top of bank;
  - riparian corridor widths to be established along the creeks;
  - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
  - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
  - proposed location of any asset protection zones.
- Photographs of the watercourses/wetlands and a map showing the point from which the photos were taken.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A detailed description of all potential impacts on the wetlands, including potential impacts to the wetlands hydrologic regime; groundwater recharge; habitat and any species that depend on the wetlands.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.

Landform rehabilitation

Where significant modification to landform is proposed, the EIS must include:

- Justification of the proposed final landform with regard to its impact on local and regional surface and groundwater systems;

- A detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- Outline of proposed construction and restoration of topography and surface drainage features if affected by the project; and
- An outline of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation.

Consultation and general enquiries

General licensing enquiries can be made to Advisory Services: nrar.enquiries@nrar.nsw.gov.au, +61 9338 6600.

Assessment or state significant development enquiries, or requests for review or consultation should be directed to the Strategic Stakeholder Liaison Unit, water.referrals@nrar.nsw.gov.au.

A consultation guideline and further information is available online at: https://www.industry.nsw.gov.au/water/licensing-trade/approvals

John Booth

From: LEONARD Kate <Kate.LEONARD@rms.nsw.gov.au>
Sent: Monday, 4 March 2019 10:43 AM
To: John Booth
Subject: RE: SEAR's 1137 - Resource Recovery Facility at John Renshaw Drive, Buttai (Lots 75 & 76 DP 755260) Extension
Attachments: RMS Response to CR2017_001005 dated 3_04_2017.pdf; RE: 4308 - Proposed Buttai Resource Recovery Facility

Hi John,

Please be advised that Roads and Maritime advice dated 03 April 2017 (attached) remains current.

Roads and Maritime were also contacted by Umwelt on 11 September 2018 requesting further input in to the preparation of the EIS. The response dated 12 September 2018 is also attached.

Regards,
Kate

Kate Leonard
Development Assessment Officer
Land Use Assessment Hunter
Customer Services Hunter | Regional & Freight
T 02 4908 7688
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www.rms.nsw.gov.au
Every journey matters

Roads and Maritime Services
Level 8, 266 King St, Newcastle NSW 2300
Locked Bag 2030, Newcastle NSW 2300

From: John Booth [mailto:John.Booth@planning.nsw.gov.au]
Sent: Wednesday, 27 February 2019 5:21 PM
To: Planning Matters Mailbox; Development hunter; Adam Oehlman; environmental.assessments@waternsw.com.au
Subject: SEAR's 1137 - Resource Recovery Facility at John Renshaw Drive, Buttai (Lots 75 & 76 DP 755260) Extension

Good Afternoon All,

Please find attached information relating to SEAR's 1137 for a Resource Recovery Facility at John Renshaw Drive, Buttai (Lots 75 & 76 DP 755260), previously issued on 6 April 2017.

The applicant is seeking an extension to the previously issued SEAR's to allow for the preparation of an EIS and subsequent DA to be lodged with Council post the date of 6 April 2019 (when the SEAR's will expire). Thus could you please review the attached documentation submitted by the applicant, as well as the previously issued SEAR's and advise if you are satisfied with the advice that has previously been issued or if you would like to make additional comments to be included within the SEAR's application.