



Appendix M

| *Mitigation measures
summary table*

Veolia have made a commitment to implement the proposed mitigation measures listed in the table below.

Table M.1 **Mitigation measures**

Impact/risk	ID	Measure	Timing
Air quality and odour management and mitigation measures			
Reporting and record keeping	AQO1	Develop appropriate communications to notify the potentially impacted residences of the project (duration, types of works, etc), relevant contact details for environmental complaints reporting.	Pre-construction
Reporting and record keeping	AQO2	A complaints register should be maintained throughout the construction phase which should include any complaints related to dust. Where a dust complaint is received, the details of the response actions to the complaint should be detailed in the register.	Construction
Reporting and record keeping	AQO3	Record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the register.	Construction
Reporting and record keeping	AQO4	Carry out regular site inspections, record inspection results, and make the logbook available for review as requested.	Construction
Dust	AQO5	Provide an adequate water supply on the construction site for effective dust/particulate matter suppression/mitigation.	Construction
Dust	AQO6	Avoid site runoff of water or mud.	Construction
Dust	AQO7	Temporary cessation of non-essential dust generating activities during high winds	Construction
Materials handling	AQO8	Prevention of truck overloading to reduce spillage during loading/unloading and hauling.	Construction
Materials handling	AQO9	Minimise drop heights from loading or handling equipment.	Construction
Soil stripping	AQO10	Soil stripping will be limited to areas required for extraction/construction of foundations etc.	Construction
Soil stripping	AQO11	Only the minimum area necessary will be disturbed.	Construction
Exposed areas	AQO12	Exposed areas will be stabilised as soon as practicable.	Construction
Dust from vehicles on unpaved roads	AQO13	Watering of main material haulage routes as required.	Construction
Dust from vehicles on unpaved roads	AQO14	Routes to be clearly marked and speed limits enforced.	Construction
Dust from vehicles on unpaved roads	AQO15	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Vehicle fuel combustion emissions	AQO16	Ensure proper maintenance and tuning of all equipment engines.	Construction
Vehicle fuel combustion emissions	AQO17	Ensure vehicles switch off engines when stationary.	Construction
Greenhouse gas and climate change management and mitigation measures			
Climate change	CC1	During detailed design, climate change risk is to be considered during design of structures and stormwater infrastructure;	Detailed design
Climate change plan operations	CC2	The basis of design for the plant will consider the operational aspects related to increased ambient temperatures and heatwave conditions.	Detailed design
Climate change project design	CC3	Project design and landscaping be undertaken in accordance with appropriate standards to manage bushfire risk.	Detailed design
Noise and vibration management and mitigation measures			
Internal design noise levels	NV1	Space averaged internal noise levels to satisfy the assumptions presented in Table 5.5 of the NVIA.	Pre-construction/design/operation
Building construction	NV2	Building construction materials and specification of discharge stack silencers will be in accordance with the assumptions presented in Section 5.2 of the NVIA.	Pre-construction/design
Selection of plant and equipment	NV3	Specification for all plant and equipment to be in accordance with the noise levels presented in Table 5.5 of the NVIA.	Design/operation
Maintenance	NV4	Plant and equipment to be maintained to satisfy the ongoing noise levels referenced in Table 5.5 of the NVIA.	Operation
Noise management levels	NV5	Residents will be notified prior to works commencing. Noise monitoring during the initial stages of construction will be undertaken to determine if actual construction noise levels are above NMLs. If NMLs are exceeded, Veolia will identify feasible and reasonable mitigation measures that reduce construction noise levels to at or below NMLs where practical.	Pre-construction

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Impact/risk	ID	Measure	Timing
Work practices	NV6	Regular reinforcement (such as at toolbox talks) of the need to minimise noise and vibration.	Construction
	NV7	Avoid the use of portable radios (CD player/speakers), public address systems or other methods of site communication that may unnecessarily impact upon nearby residents.	Construction
	NV8	Develop routes for the delivery of materials and parking of vehicles to minimise noise.	Construction
	NV9	Where possible, avoid the use of equipment that generates impulsive noise.	Construction
Plant and equipment	NV10	Where possible, choose quieter plant and equipment based on the optimal power and size to most efficiently perform the required tasks.	Construction
	NV11	Operate plant and equipment in the quietest and most efficient manner.	Construction
	NV12	Regularly inspect and maintain plant and equipment to minimise noise and vibration level increases, to ensure that all noise and vibration reduction devices are operating effectively.	Construction and operation
	NV13	Minimise the number of items of plant and equipment operating simultaneously while still meeting construction and processing requirements.	Construction
	NV14	Switch off idle plant.	Construction and operation
Traffic and transport management and mitigation measures			
Intersection compliance	TRA1	A new site access intersection is proposed for the ARC construction and operations access. The intersection will be constructed to 100 km/hr speed limit (110 km/hr design speed) Austroads standards and will incorporate Type BAR and Type BAL right and left turn treatments.	Pre-construction
Worksite traffic control	TRA2	A draft Construction Traffic Management Plan (CTMP) has been prepared and is included in the TIA in Appendix T. The CTMP will be updated by the construction contractor in consultation with GMC prior to commencement of construction.	Pre-construction
Traffic impacts to local community	TRA3	Regular notifications will be provided to the local community (local residents in Tarago and the surrounding areas) to advise of the current stage of the project construction work and associated daily and peak hourly construction traffic movements to allow local residents to be made aware of typical construction traffic movements throughout the project construction phase.	Construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Access by oversize or over mass vehicles	TRA4	Any requirements for oversize or over mass vehicles to deliver any specific construction components to the site will require the vehicle operator to obtain a permit (from NHVR). This access (if required) will be assessed and confirmed in the CTMP.	Pre-construction
Need for additional road width on Collector Road and Bungendore Road	TRA5	The proposed project construction traffic for the peak stage of construction will result in a reduction in the mid block capacity LOS on both these roads by one LOS category for the duration of the project peak construction stage. As this will be a short duration impact only, no additional road widening measures are recommended to be necessary to address this impact.	Construction
Groundwater management and mitigation measures			
Drawdown greater than predicted (ie greater than 2 m) at third party bores	GW1	Make good arrangements, such as: <ul style="list-style-type: none"> • provision of supplementary water to offset loss in water supply; • provision of a new submersible pump to sustain a lost yield; • lowering pumping infrastructure within the bore to increase available drawdown; or • drilling a new bore for the landowner. 	Operation
Drawdown greater than predicted (ie greater than 2 m) at third party bores	GW2	Incorporate groundwater monitoring in the Willeroo borefield area into the overall water monitoring and management program, either through the use of existing monitoring bores and/or installation of additional monitoring bores.	Pre-construction
Hydraulic loading in ED 1 causing seepage at a faster rate	GW3	Conduct hydraulic loading analysis and review of requirements for groundwater seepage interception system, as part of detailed design of the encapsulation cell.	Post-approval, pre-construction
Hydraulic loading in ED 1 causing seepage at a faster rate	GW4	Review and update of the water monitoring program ensuring adequate monitoring for potential: <ul style="list-style-type: none"> • surface expression of seepage; and • groundwater discharge and/or increase groundwater pressure/level greater than that inferred in this groundwater assessment. Install additional groundwater monitoring bores (nested) down gradient of the ED1 area, towards Crisps Creek. Develop site specific trigger levels, aligned with the environmental and cultural values, including WaterNSW Sydney Drinking Water Catchment requirements.	Post-approval, pre-construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Hydraulic loading in ED 1 causing seepage at a faster rate	GW5	Develop trigger action response plan that includes contingency measures, if required, such as: seepage management system, including seepage interception trench, sump and bores.	Consideration post-approval, as part of detailed design. Pre-construction.
Generation of acid mine drainage from rock stockpiles	GW6	The design and management of the stockpiles to ensure PAF materials are exposed for short periods of time before being encapsulated with compacted NAF material. Stockpiles will be covered with uncontaminated topsoil and lime (or other alkaline materials) will be added to prevent the formation of acid mine drainage.	Construction
Seepage of APCr leachate from the leachate evaporation dam, encapsulation cell and/or the IBA maturation pad	GW7	The encapsulation cell and leachate ponds will be fully lined, with a leachate barrier and leak detection system. The IBA maturation pad will comprise a hard-stand base, and a leachate collection system. Groundwater monitoring bores will be used as an early indication of seepage. Ongoing site inspection will be undertaken to verify there are no breaches of the leakage management system. Any ongoing risks will be assessed as part of closure planning to determine site closure remediation strategies and (if required) monitoring bores.	Construction and operation
Seepage from water storages (PCD and stormwater pond)	GW8	Water storage areas will be lined to limit loss of water. The dams will be routinely monitored for surface expression of seepage, including existing bores in the PCD area not currently monitored.	Construction and operation
Runoff from areas within the project development (including roads, plant, other buildings and hazard goods storage areas) picking up contaminant solutes and entering the groundwater system	GW9	The project development will include runoff containment systems and other features to restrict surface water runoff within the project disturbance area. Where possible runoff from clean water areas will be captured and re-used. There will be dedicated and bunded storage areas for fuel and reagents.	Construction and operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Surface water management and mitigation measures			
Impacts to water quality during construction	SW1	<p>Construction water management plan. This plan will:</p> <ul style="list-style-type: none"> • provide and erosion and sediment control plan for construction of the access road (which is outside of the PCD catchment); • describe how water will be managed to achieve compliance with consent and EPL conditions; and • establish surface water quantity and quality monitoring requirements. 	Construction
Impacts to water quality during operation	SW2	<p>Operational water management plan. This plan will:</p> <ul style="list-style-type: none"> • describe how water will be managed to achieve compliance with consent and EPL conditions; and • establish surface water quantity and quality monitoring requirements. <p>The operational water management plan may be integrated with the existing water management plan for the Eco Precinct. Additional management plans will be required for the encapsulation cell.</p>	Operation
Stormwater measures – source controls	SW3	<ul style="list-style-type: none"> • All waste will be handled within the ARC building, which is a fully enclosed structure. • Energy recovery by-products (IBA and APCr) will be initially handled within the ARC building before being transported to the IBA area and encapsulation cell using methods that do not pose a stormwater contamination risk. • All hazardous chemicals and hydrocarbon products will be stored in bunded areas in accordance with relevant Australian Standard AS1940:2004 and other relevant guidelines. • All washdown water will be managed by the process water system. • All pervious areas will be vegetated to minimise soil erosion. 	Operation
Stormwater management - Stormwater conveyance and flooding	SW4	<ul style="list-style-type: none"> • Stormwater runoff will be managed via a combination of surface and piped drainage systems. These systems will be designed to have a non-erosive hydraulic capacity equivalent to the 5% AEP event. • Overland flow paths will be established to have a 1% AEP capacity. • The stormwater system and overall ARC will be designed to prevent stormwater ingress into the ARC building for the 1% AEP event. 	Operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Fire water retention and containment	SW5	<ul style="list-style-type: none"> The ARC Pond will be designed to contain any firewater runoff and leaks and spills that may occur within the ARC stormwater system. The Design achieves this objective as the maximum firewater volume was established to be approximately one-third of the ARC Pond volume. 	Operation
Access road stormwater system (discharges to Crisps Creek catchment, upstream of the Collector Road culvert)	SW6	<ul style="list-style-type: none"> All runoff will be treated in vegetated roadside swales. 	Operation
ARC stormwater system (overflows to the PCD catchment)	SW7	<ul style="list-style-type: none"> Source controls to minimise stormwater contamination risks. Various stormwater controls including rainwater tanks, vegetated swales and gross pollutant traps. Stormwater harvesting system that captures stormwater runoff for use in the process water system. It is noted that the system established by the Design has a capacity that is approximately three times greater than the capacity required to capture the 5 day 90th percentile rainfall event. 	Operation
IBA area stormwater system (zero discharges)	SW8	<ul style="list-style-type: none"> A stormwater capture and harvesting system that has capacity to capture all runoff during a 1% AEP event. 	Operation
Contamination management and mitigation measures			
Disturbance of existing contamination	CON1	A remedial strategy will be implemented for the ARC development footprint prior to construction under the existing consents (DA 31-02-99 and MP10_0012, as modified). This will include implementation of a RAP and obtaining a Site Audit Statement prior to construction.	Pre-construction
Disturbance of existing contamination	CON2	During construction, residual risks from contaminated material that remains at the development footprint (for example, material that has been capped beneath the ground surface in accordance with a remedial strategy), will be managed via a construction environmental management plan to manage interactions between the project any remaining contamination. This will include an unexpected finds protocol.	Construction

Table M.1 **Mitigation measures**

Impact/risk	ID	Measure	Timing
Disturbance of existing contamination	CON3	The Landfill Closure and Rehabilitation Management Plan will be updated to reflect the proposed rehabilitation activities within the development footprint for the project. This will include documenting the presence of contaminated materials below hard stand or capped surfaces, detailing procedures for future ground disturbance works that minimise the potential for harm to human health and the environment.	Operation
Bushfire management and mitigation measures			
Asset protection zones (APZs)	BF1	<p>APZs are established for the project to achieve BAL 12.5.</p> <p>The following APZ objectives have been met:</p> <ul style="list-style-type: none"> • APZs are provided commensurate with the construction of the buildings. • A defensible space is provided. • Vegetation is managed within APZs, in accordance with the requirements of Appendix 4 of PBP. • The APZs is managed in perpetuity. <p>APZ maintenance is practical, soil stability is not comprised and the potential for crown fires is minimised.</p>	Construction and operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Access for firefighting operations	BF2	<p>Primary and secondary access is maintained, upgraded and/or constructed to comply where possible with performance criteria and/or acceptable solution requirements of PBP 2019 including:</p> <ul style="list-style-type: none"> • Fire fighting vehicles should be provided with safe, all-weather access to structures and hazard vegetation. • The capacity of access roads should be adequate for fire fighting vehicles. The capacity of road surfaces and any bridges/ causeways should be sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes), bridges and causeways must clearly indicate load rating. • There must be appropriate access to water supply. Hydrants should be provided in accordance with relevant clauses (if any) of AS2419.1:2017. • Firefighting vehicles must be able to access the building/s and exit the property safely including: <ul style="list-style-type: none"> – The internal road network provides numerous alternative access routes for all buildings. – Access roads have a minimum 4 m carriageway width. – Access roads have passing bays every 200 m that are 20 m long by 2 m wide, making a minimum trafficable width of 6 m at the passing bay. – A minimum vertical clearance of 4 m is maintained to any overhanging obstructions, including tree branches. – Internal roads are through-roads, and large hard-stand areas provide suitable turning areas exceeding the requirements of Appendix 3 of PBP. – Curves have a minimum inner radius of 6m and are minimal in number to allow for rapid access and egress. – The minimum distance between inner and outer curves is 6 m. – The crossfall is not more than 10 degrees. – Maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed road. 	Construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Water supplies	BF3	<p>Water supply requirements for firefighting, including the provision of hydrants and hose reels, are designed, and constructed in accordance with the relevant Standards and PBP 2019 including:</p> <ul style="list-style-type: none"> • Adequate water supply must be provided for firefighting purposes ie reticulated water is to be provided to the project where available. • Water supplies must be located at regular intervals, and the water supply must be accessible and reliable for firefighting operations. Fire hydrant spacing, design and sizing must comply with the relevant clauses of AS 2419.1:2017. Hydrants must not be located within any road carriageway. • Fire hydrant flows and pressures must comply with the relevant clauses of AS 2419.1:2017. • The integrity of the water supply must be maintained. All above-ground water service pipes must be metal, including and up to any taps. Above ground water storage tank must be of concrete or metal. 	Construction
Electricity services	BF4	<p>Electricity supply and distribution is provided in accordance with the requirements of PBP 2019 and the relevant standards including:</p> <ul style="list-style-type: none"> • Location of electricity services limits the possibility of ignition of surrounding bushland or the fabric of buildings. Where practicable, electrical transmission lines should be underground. Where overhead electrical transmission lines are proposed: <ul style="list-style-type: none"> – lines must be installed with short pole spacing (30 m), unless crossing gullies, gorges or riparian areas; and – no part of a tree should be closer to a power line than the distance set out in ISSC3 (2016) Guideline for Managing Vegetation Near Power Lines. 	Construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Gas services	BF5	<ul style="list-style-type: none"> Location and design of gas services must not lead to ignition of surrounding bushland or the fabric of buildings, such as: <ul style="list-style-type: none"> Reticulated or bottled gas bottles must be installed and maintained in accordance with AS/NZS 1596 (2014), the requirements of relevant authorities and metal piping is to be used. All fixed gas cylinders are to be kept clear of flammable materials to a distance of 10 m and shielded on the hazard side. Connections to and from gas cylinders should be metal. Polymer sheathed flexible gas supply lines are not used. Above ground gas service pipes should be metal, including and up to any outlets. 	Construction
Construction standards	BF6	<ul style="list-style-type: none"> The proposed building should withstand bush fire attack in the form of embers, radiant heat and flame contact. BAL has been determined in accordance with Table A1.12.5 of PBP; and construction provided in accordance with the National Construction Code (NCC) (NCC, 2019) and as modified by Section 7.5 of PBP. Proposed fences and gates are designed to minimise the spread of bush fire and should be constructed of non-combustible material. Proposed Class 10a buildings (garage, car port, shed or the like) should be designed to minimise the spread of bush fire. Class 10a buildings are either located >6 m from other buildings (in which case no other bushfire protection measures are required) or, if located within 6 m of other buildings, are provided with APZs and constructed to the appropriate BAL. 	Construction
Landscaping	BF7	<ul style="list-style-type: none"> Landscaping should be designed and managed to minimise flame contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions. Compliance with the NSW RFS 'Asset protection zone standards' (see Appendix 1 of the BFPA); a clear area of low-cut lawn or pavement should be maintained adjacent to the building/s; fencing should be constructed in accordance with Section 7.6 of PBP; and trees and shrubs should be located so that: <ul style="list-style-type: none"> the branches will not overhang the roof; the tree canopy is not continuous; and any proposed windbreak is located on the elevation from which fires are likely to approach. 	Construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Issues specific to buildings of Class 5 to 8 under the NCC	BF8	<ul style="list-style-type: none"> • Should provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation. • Should provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation. • Should provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. • Storage and handling of hazardous materials must be in accordance with: <ul style="list-style-type: none"> – AS1940:2017 The storage and handling of flammable and combustible liquids. • The recommendations of the preliminary hazards analysis (Appendix EE). 	Construction
Issues specific to hazardous industry	BF9	<ul style="list-style-type: none"> • Must address the appropriate protection measures to be provided commensurate with the bush fire hazards and associated risks. Care should also be taken to ensure that such facilities do not impact on existing developments. Solutions include: <ul style="list-style-type: none"> – Implement the recommendations of the preliminary hazards analysis (Appendix EE). • Provision of access, water, electricity and gas supply in accordance with Sections 3.2, 3.3, 3.4 and 3.5 of the BFPA. 	Construction
Bushfire Emergency Management and Evacuation Plan	BF10	<ul style="list-style-type: none"> • A Bush Fire Emergency Management and Evacuation Plan should be prepared by the operator consistent with the NSW RFS publication: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan, and AS3745:2010. • The plan should include responsibilities associated with and details of: <ul style="list-style-type: none"> – site specific hazards and risk; – procedures to maintain bushfire awareness; – bushfire mitigation measures; – fire preparedness actions; – fire response actions including responses to emergency alerts issued by emergency services; and – bushfire recovery requirements. 	Pre-construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Biodiversity management and mitigation measures			
Clearing of native vegetation	BIO1	Create healthy vegetation buffer between edge of wetland/woodland areas and the access road by, replacing removed native vegetation with a planted corridor along each side of the access road. Do not use adjacent areas for stockpiling.	During and after construction
Clearing/trampling of native vegetation adjacent to the development footprint	BIO2	To minimise areas of impacted or damaged vegetation, exclude activities from areas outside of the development footprint that contain native vegetation during construction through temporary fencing of footprint during construction.	During construction
Dust impact on native fauna during construction	BIO3	To ensure no significant dust affects fauna or flora, keep dust minimised through work site misting (water truck).	During construction and detailed design
Erosion impacts on local wetland and waterways	BIO4	Minimise any sedimentation of waterways by controlling stormwater and surface water flows during construction; and designing stormwater flows to minimise sedimentation and flash-flooding of wetland.	Detailed design
Causing significant changes to water levels of water bodies	BIO5	Minimise significant changes to water levels in water bodies and maintain the current hydrology regime by controlling stormwater and surface water flows during construction.	During and after construction
Fauna strike by vehicles or plant	BIO6	Limit number of animals struck by vehicles and plant, by imposing speed limits on access roads and limiting night works on the access road. Conduct pre-clearance surveys and clearing supervision.	During and after construction
Introduction or increase presence of biosecurity issues eg exotic flora, fauna, pathogens.	BIO7	Complete site hygiene measures for vehicles and staff to ensure no biosecurity issues are introduced or encourage into the study area. Use uncontaminated fill and landscaping products.	During and after construction
Direct impacts on marginal foraging habitat for the Yellow-spotted Bell Frog and Green and Golden Bell Frog	BIO8	Incorporate frog habitat features into landscape design in areas of the subject site and adjacent areas that are bare of native vegetation from the access road to the north-west near PCT 1256 (Tableland Swamp Meadow). Habitat features should include ephemeral pond depressions, shelter habitat elements (eg large woody debris from clearing area) and tussock grass, sedge and rush plantings.	During and after construction
Residual vegetation and habitat impact	BIO9	Offsets will be provided in accordance with the biodiversity offset scheme as outlined in Section 7.6 of the BDAR (Appendix Y) or Section 8.10.3v.	During and after construction

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Aboriginal heritage management and mitigation measures			
Ground disturbance	ACH1	The ACHMP must be developed by a heritage specialist in consultation with the Aboriginal stakeholders and consent authority to provide the post-approval framework for managing Aboriginal heritage within the development footprint. A copy of the ACHA should be lodged with AHIMS and provided to each of the RAPs.	Construction and operation
Rehabilitation	ACH2	Reinforcement of cultural landscape consideration throughout the project and detail the rehabilitation of the development footprint. This should be undertaken in consultation with the RAPs.	Construction and operation
Historic heritage management and mitigation measures			
Unexpected finds and skeletal remains	HER1	The Construction Environmental Management Plan (CEMP) to include an unexpected finds protocol that also addresses the unexpected discovery of skeletal remains.	Construction and operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Unexpected finds protocol	HER2	<p>If unexpected finds of a historical nature are discovered during any work, work must cease within 5 m of the find and the following steps taken:</p> <ul style="list-style-type: none"> • follow an unexpected finds protocol not limited to: <ul style="list-style-type: none"> – no further harm to the object; – secure the area to avoid further harm to the object; and – contact an archaeologist for further advice. <p>In the event that known or suspected human remains (generally in skeletal form) are encountered during the activity, the following procedure will be followed immediately upon discovery:</p> <ul style="list-style-type: none"> • all work in the immediate vicinity will cease and the find will be immediately reported to the work supervisor who will advise the Environment Manager or other nominated senior staff member; • the Environment Manager or other nominated senior staff member will promptly notify the police (as required for all human remains discoveries); • the Environment Manager or other nominated senior staff member will contact Heritage NSW for advice on identification of the human remains; • if it is determined that the human remains are Aboriginal ancestral remains, the Local Aboriginal Land Council (LALC), and other registered Aboriginal parties will be contacted, and consultative arrangements will be made to discuss ongoing care of the remains; and • if it is determined that the human remains are not Aboriginal ancestral remains, further investigation will be conducted to determine if the remains represent an historical grave or if police involvement is required. 	Construction and operation
Potential survey marker	HER3	<p>The potential survey marker should be avoided. If impacts cannot be avoided, an archival recording should be undertaken prior to removal. Consultation should be undertaken with the NSW Registrar General to ensure it is not a statutory survey marker.</p>	Construction and operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Visual management and mitigation measures			
Visual impacts	LVIA1	<p>During construction:</p> <ul style="list-style-type: none"> • minimise tree removal and/or protection of existing trees to be retained; • avoid temporary light spill beyond the construction site where temporary lighting is required; • rehabilitate disturbed areas; and • consider appropriate selection of plant material and size to replace existing plants to be removed or to create new plantings around the ARC building. 	Construction
Visual impacts	LVIA2	<p>During operation:</p> <ul style="list-style-type: none"> • light installation to be designed and placed in accordance with AS 4282-2019, to minimise obtrusive effects; • ongoing maintenance and repair of constructed elements; • replacement of damaged or missing constructed elements; and • long-term maintenance (and replacement as necessary) of tree planting within the Eco Precinct to maintain visual filtering and screening of external views. 	Operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Social management and mitigation measures			
Way of life – capacity and availability of short-stay accommodation	SOC1	Veolia will work with construction contractors to prepare an accommodation strategy for the construction workforce which will set out the approach to accommodating the construction workforce. It will consider a combination of rental housing, short-stay accommodation in the Goulburn region, and additional accommodation (if necessary) in nearby regional centres or cities, such as Bungendore or Canberra.	Pre-construction
Community – community connectedness, resilience and community investment	SOC2	<p>It is recommended that investment and community development be prioritised in the local area and tailored to the social needs of the community. Through the CLC, there is potential to disseminate information on the project including benefits and shared value initiatives to address community needs and further promote business opportunities.</p> <p>Veolia will seek to refresh the structure, organisation and objectives of the CLC with the goal of meeting these plans.</p> <p>Veolia has invested heavily in the Mulwaree Trust to assist community focused projects. This tool for interconnectedness and social resilience will continue during and after the construction of the ARC. Education of the project will continue post approval to ensure the Woodlawn ARC and the Woodlawn Eco Precinct form a showpiece of sustainable development in the region. This will include site tours and education events to increase community understanding.</p>	Pre-construction
Community – community character	SOC3	Veolia will implement a project specific communications program which will, amongst other things, communicate the project benefits in terms of sustainable energy production and sustainable waste management.	Pre-construction
Community – lack of trust and negative perceptions of Veolia	SOC4	<p>It is recommended that Veolia further invests in addressing current concerns raised by nearby neighbours, specifically odour, to demonstrate that these concerns are being actively addressed. This could involve communication of what Veolia is currently doing to address odour, including provision of regular air quality monitoring, reporting of odour management, and communicating outcomes to the community and the NSW Government.</p> <p>Veolia will, as part of its project specific communications plan (referred to above), include a series of ongoing consultation procedures covering both the construction and operational phases of the project. These will include interactive engagement processes and will be integrated with Veolia's existing community and stakeholder engagement strategy.</p>	Construction and operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Decision-making systems – approvals process for State significant development	SOC5	Veolia will continue to communicate to the community the regulatory assessment and decision making process as part of its ongoing community engagement strategy.	Construction and operation
Health and wellbeing – odour	SOC6	<p>Veolia will implement odour mitigation measures as proposed in the AQIA (Appendix O), and as set out by Veolia in communications with the community.</p> <p>Veolia will continue their odour management action plan and grievance mechanisms, with consideration given to increasing consultation, data collection and monitoring outside of the project site within the local community, with outcomes clearly and regularly communicated to the community.</p>	Construction and operation
Health and wellbeing – stack emissions and air quality	SOC7	Veolia will communicate with local community members about project-related emissions to promote transparency and ensure residents are kept informed about stack emissions and air quality. Veolia will comply with the requirements of the EfW Policy Statement to make emissions monitoring data available to the EPA in a real time graphical publication. Veolia will make validated emission monitoring data available publicly within 24hrs following the end of a weekday and the following weekday after weekends and public holidays.	Construction and operation
Health and wellbeing – public safety related to primary haulage route on local roads	SOC8	<p>A detailed Construction Traffic Management Plan will be developed by the construction contractor in consultation with Goulburn Mulwaree Council prior to the commencement of construction works and will be made publicly available (Appendix T).</p> <p>Veolia will continue participating in its contributions agreements with the local councils as well as liaise with and advocate to the local Councils for road maintenance and improvements. Additionally the transport code of conduct in place should be reviewed and applied to the project to ensure public safety impacts related to the project's primary haulage routes are mitigated.</p>	Construction
Livelihood – training, apprenticeship, and employment opportunities	SOC9	Veolia, and its construction contractors will establish apprenticeships and training programs that are tailored to the local and regional community and promote skilled employment pathways for the project. Benefits associated with livelihood related to training, apprenticeship and employment opportunities can be further enhanced through the implementation of vocational education and training (VET) programs delivered in regional schools.	Construction and operation

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Livelihood – local procurement	SOC10	Wherever possible, practical and cost competitive, Veolia and the contractors will prioritise the use of local suppliers of goods and services. Further it is recommended that Veolia encourages the project workforce, particularly during the construction phase, to support and contribute to the local and regional community through local spending.	Construction
Livelihood – employment opportunities	SOC11	Veolia will maintain their local hiring practice, as adopted for the Eco Precinct, for this project and continue their partnerships with local and regional employment and education providers. Veolia will explore opportunities to transition trainees/apprentices to permanent work where possible. There is an opportunity to leverage partnerships with educational institutions to encourage student placements, internships, and work experience opportunities which could lead to permanent employment.	Construction
Way of life – fears concerning energy recovery facility technology	SOC12	Veolia will continue to actively engage with the community to communicate about its technology, processes, progress on the project, and monitoring results at the project and at other energy recovery facilities.	Construction and operation
Economic management and mitigation measures			
Employment	ECON1	Employment of regional residents preferentially where they have the required skills and experience and are able to demonstrate a cultural fit with the organisation.	Construction and operation
Flow-on impacts	ECON2	Participating, as appropriate, in business group meetings, events or programs in the regional community.	Construction and operation
Non-labour inputs	ECON3	Locally source non-labour inputs to production where local producers can be cost and quality competitive, to support local industries.	Construction and operation
Hazards management and mitigation measures			
Offsite safety incidents	HAZ1	The final layout and design for the ARC will meet the safety and separation distance requirements of AS 5026: <i>The storage and handling of Class 4 dangerous goods</i> , AS 1940: <i>The storage and handling of flammable and combustible liquids</i> , and AS 3780: <i>The storage and handling of corrosive substances</i> .	Design
Offsite safety incidents	HAZ2	For FGT, account for potential activated carbon fire and explosion incidents impact when finalising the site layout (and potential impact to the electrical workshop, switch room and boiler) and silo location.	Design

Table M.1 Mitigation measures

Impact/risk	ID	Measure	Timing
Offsite safety incidents	HAZ3	Confirm there is a sufficient number and redundancy of remote emergency isolation and shutdown stations in the boiler and flue gas treatment area.	Design
Offsite safety incidents	HAZ4	For the diesel storage area, account for potential diesel bund fires and impact when finalising the site layout and location of the diesel storage.	Design
Waste management and mitigation measures			
Handling of IBA	WM1	The IBA area will include a stormwater management system to collect runoff which may contain potential contaminants.	Operation
Handling of IBA	WM2	IBA will be subject to further testing and analysis during commissioning to assess its suitability and to ensure it is fit-for-purpose and poses minimal risk of harm to the environment in order to meet the requirements for consideration of a resource recovery exemption by the EPA.	Commissioning
Handling of APCr	WM3	Preliminary waste characterisation and treatment trial of APCr produced at the ARC will be undertaken during the commissioning phase, in order to confirm the waste characterisation, appropriate treatment rates and effectiveness of the proposed treatment option, as part of the process to obtain the specific immobilisation approval.	Commissioning
Encapsulation cell design	WM4	The encapsulation cell will be designed in accordance with the Landfill Guidelines to ensure that contaminants within the stabilised APCr are contained.	Detailed design
Regulatory approvals	WM5	Prior to issue of the specific immobilisation approval (and full-scale commencement of the treatment process), the APCr material will be stored temporarily in the encapsulation cell, where any leachate generated can be contained and managed. Following issue of the specific immobilisation approval the material will be removed, treated and emplaced permanently within the encapsulation cell.	Commissioning
Beneficial re-use of by-products	WM6	Options for management of the IBAA and stabilised APCr will be reviewed every five years to assess market demands and identify opportunities for re-use.	Operation
Effluent generated by ARC amenities	WM7	A wastewater management system will be designed and operated in accordance with the methods described in <i>Designing and Installing On-Site Wastewater Systems</i> (WaterNSW 2019).	Detailed design