JOINT REGIONAL PLANNING PANEL
(Southern Region)

ASSESSMENT REPORT SUMMARY AND RECOMMENDATION COVER SHEET

JRPP No	2015STH002
DA Number	18/2015
Local Government Area	Shellharbour
Proposed Development	Extension of Dunmore Sand Extraction, Emplacement of Potential Acid Sulfate Soils & Rehabilitation
Location	Lot 21 DP 653009, 44 Buckleys Road Dunmore
Applicant/Owner	Shellharbour City Council
Number of Submissions	One
Regional Development Criteria (Schedule 4A of the Act)	Clause 8 Particular Designated Development Development for the purposes of an extraction industry and waste management facilities or works which meet the requirements for designated development under clauses 19 and 32 respectively of Schedule 3 of the *Environmental Planning & Assessment Regulation 2000*.
List of All Relevant s79C(1)(a) Matters	• State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 • State Environmental Planning Policy (Infrastructure) 2007 • State Environmental Planning Policy No. 71 – Coastal Protection • State Environmental Planning Policy No. 55 – Remediation of Land • State Environmental Planning Policy (Rural Lands) 2008 • State Environmental Planning Policy (State and Regional Development) 2011 • State Environmental Planning Policy No. 14 – Coastal Wetlands • Shellharbour Local Environmental Plan 2013 • The likely impacts of the development, including environmental impacts on the natural and built environment and social and economic impacts in the locality. • The suitability of the site for the development. • Any submissions made in accordance with the EPA Act or EPA Regulation. • The public interest.
List all documents submitted with this report for the panel's consideration	• Correspondence received from the NSW Office of Environment & Heritage (31 Jul 2015) • Additional information from applicant in reply to matters raised by Council (2 Jul 2015) • Correspondence from NSW Environmental Protection Agency (19 Jun 2015) • Correspondence from NSW Department of Primary Industries, NSW Office of Water (24 Apr 2015) • Correspondence received from the NSW Office of Environment & Heritage (10 Apr 2015) • Correspondence from NSW Department of Primary Industries, Fisheries NSW (19 Feb 2015) • Correspondence from NSW Transport, Roads & Maritime Services (6 Feb 2015) • Submission (one) received during the exhibition period

	• Environmental Impact Statement submitted with the development application.
Recommendation	That DA No. 18/2015 (JRPP Ref no. 2015STH002) be approved subject to the imposition of conditions contained in Attachment 1.
Report by	Victoria Nicholson, Senior Development Assessment Officer
Report endorsed	Grant Meredith, Group Manager City Development

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PLANNING REPORT

1 Development description

The proposal will involve the continuation of sand extraction operations and rehabilitation of the site after the extraction of the sand resource has been completed. The extraction pit will then be back filled with a combination of potential acid sulfate soil (PASS) and virgin excavated natural material (VENM).

The proposed sand extraction area is located within the Dunmore Recycling and Waste Disposal Depot site (DRWDD) at the north-west corner of the site; refer Attachment 2 – Locality Plan.

A portion of the DRWWD site has, until recently, been used for sand extraction. The Environmental Impact Statement (EIS) states that the current operation allowed for the extraction of sand to a depth of 7m which has now been reached and it is not currently feasible to continue to extract sand from this area. The proposal seeks approval for sand extraction in a new location within the DRWDD site. The proposed development site is immediately west of the existing sand extraction area. The sand will be processed at the existing sand washing facility at the DRWWD site. Figure 1 below shows the proposed development site, and illustrates its proximity to the existing sand extraction and processing areas.

Under Environmental Protection Licence (EPL) No. 5984, Shellharbour City Council (SCC) is permitted to extract upto 100,000m^3 per annum. Sand processing and stockpiling will be undertaken in accordance with the existing DA 55/1995 for the site and EPL No. 5984.

The DRWDD site is licensed to accept PASS material to a maximum depth 1 m below the standing water table.

The proposal can be summarised in the following table:

Extraction volume	142,000m^3 (tonnage equivalent of about 100,000 tonnes)	
Site access	Via the existing facility from Buckleys Road which is accessed via Dunmore Road	
Use of sand resource	As a locally sourced fine to medium sand resource for the local construction industry	
Estimated traffic generation	Operation stage	Nil increase as vehicle trips will replace previously existing extraction activities.
	Rehabilitation stage	An additional 10 heavy vehicle trips compared to current operations
Extraction method	Dredging	
Site rehabilitation	Option 1	Backfilling of excavated area with a combination of 180,000m^3 VENM & PASS to create a stable level surface

		for stockpiling activities of the waste disposal function of DRWDD.
	Option 2	Partial back filling of excavated area with PASS capped with VENM to form a wetland and revegetation with native water plant species
Final rehabilitation	On completion of DRWDD site operations in about 19 years, or when the stockpile site is no longer required.	
Duration of works	Site preparation: 2 - 4 months Sand extraction: 2 - 3 years, depending market demand Site rehabilitation: 18 - 36 months, depending availability of PASS/VENM Final rehabilitation: 2 months	
Proposed operational hours	7.30am-4pm weekdays 8am-4pm weekends and public holidays (closed Christmas Day and Good Friday	

The proposal will involve 3 phases – site preparation, sand extraction and rehabilitation:

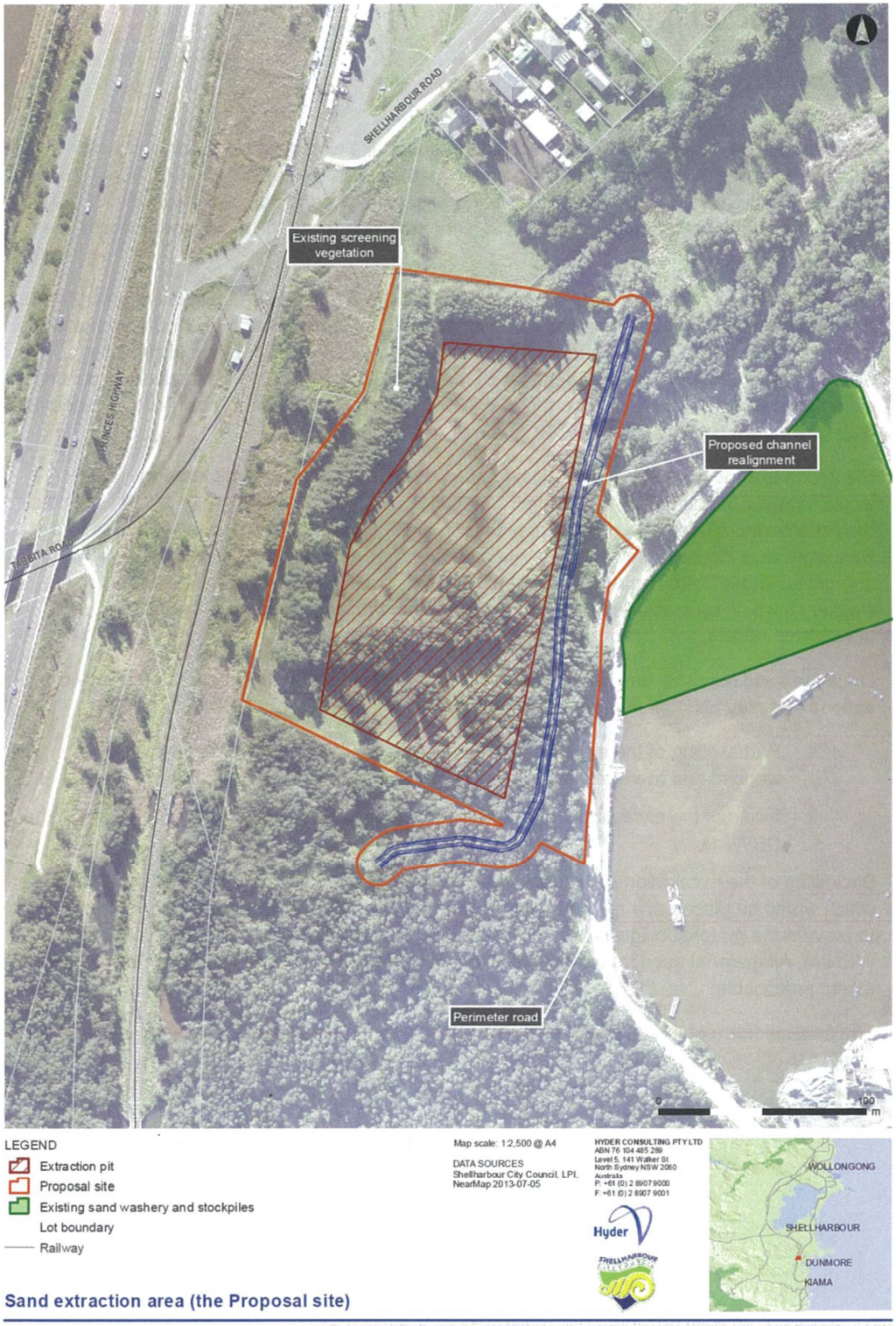
- Site establishment works include:
    - the relocation of a portion of an existing power line that runs through the proposal site to the western edge of the site,
    - installation of sediment and erosion controls, including a diversion bund and overland flow channel around the up side perimeter of the site,
    - new drainage channel around perimeter of extraction area and realignment of the western diversion channel of the DRWDD site which currently passes through the area of the proposed extraction pit; refer to Attachment 4 for additional detail of the channel realignment,
    - new access road over the drainage channel,
    - causeway and culverts over the existing diversion channel between the new extraction pit and existing extraction area,
    - removal of existing vegetation. This includes removal of vegetation listed as endangered under the *Threatened Species Conservation Act 1995* and is discussed further under the heading 'impacts' later in this report,
    - excavation of topsoil and to a depth of 0.4m with material stockpiled to a maximum height of 5m at the DRWDD for re-use at the DRWDD site/levee formation/future rehabilitation works,
    - formation of a vegetated levee bank to RL1.8m at southern perimeter of the extraction pit,
    - excavation of a pit within the extraction area to a depth below the standing water table,
    - once there is sufficient water within the excavation pit, a cutter suction barge will be transported to the pit, and
    - new pipeline between the new sand extraction area beneath the access road for the transfer of sand to the existing sand washery.
- Sand extraction

  Once the barge-mounted cutter suction dredge has been established within the sand extraction area, sand extraction will commence. A slurry of sand and water will be pumped through a discharge pipeline to the existing sand washery. Once processed, the sand is

temporarily stockpiled on an established stockpile area, adjacent to the washery. Tail water from the washing operations is pumped back into the existing sand excavation area.

The maximum depth for sand mining within the extraction pit is -14m AHD.

Figure 1 – Proposed sand extraction area (Source: Hyder Pty Ltd, 2 July 2015)



- Site rehabilitation after completion of 1) sand extraction, and 2) site operations.

  The two proposed site rehabilitation options are:

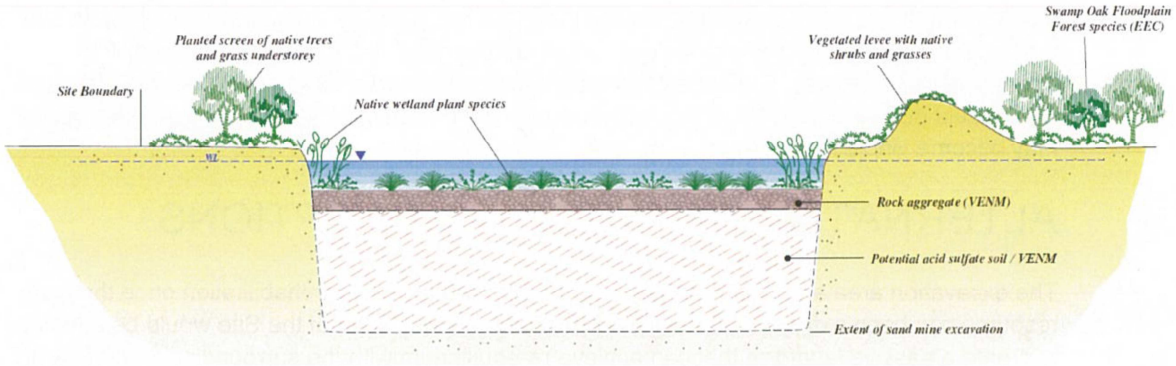
  1. Partial filling of the excavation area with about 150,000m^3 of material to form a wetland. Potential acid sulfate soil (PASS) and virgin excavated natural material (VENM) will be used to backfill the site. This material will be capped with rock aggregate to a level suitable for wetland plant growth, or
  2. Filling the excavation pit to form a level stable landform with a combination of PASS and VENM for use as a stockpile site to support the operations of the DRWDD.

     The extraction pit will be backfilled with about 180,000m^3 occur over a period between 18-36 months, depending on the availability of PASS or VENM. PASS material would constitute a maximum of 20 per cent of total backfill material, equating to 36,000 m^3 of PASS material. A minimum volume of 144,000 m^3 of VENM would be placed on top of the PASS material to fill the excavation area above the water table, with clay capping applied above this.

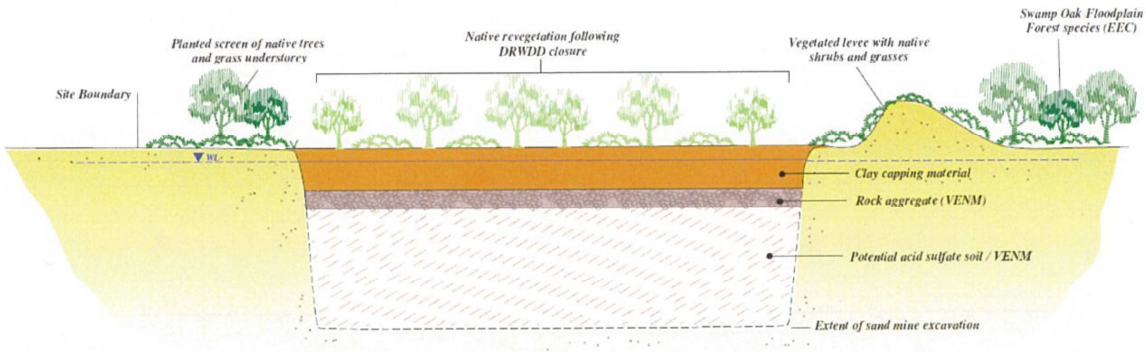
     The resulting level surface will provide a dry storage area for the DRWDD to be used for the storage of rock and material for use in the operation of DRWDD site for daily cover and backfilling until the decommissioning of the DRWDD site in about 2033. Stockpiles will have a height upto 5m.

     The remainder of the site including the levee bank will be revegetated with endemic species.

Figure 2 – Site rehabilitation options (Source: Hyder Pty Ltd, EIS)



Rehabilitation option 1: Wetland



Rehabilitation option 2: Stockpile site

Final rehabilitation of the site will occur when the DRWDD is decommissioned or when the stockpile site is no longer required. The final rehabilitation aims to restore the ecological values of the site. It is proposed that the rehabilitation of this area will form part of the rehabilitation of the whole DRWDD site.

2 Site description & surrounding land uses

The development site is located within the DRWDD site, a waste management depot facility that services the Shellharbour local government area. In addition to waste recycling, processing and disposal operations, a sand extraction quarry has until recently also operated.

The development site is to the west of a sand extraction area. The site comprises of predominantly exotic grasses, is flat, is often waterlogged and is not currently used for any purpose. The western and northern boundaries of the site are planted with thick and high screening vegetation which restricts views into the proposal site.

The development site adjoins:

- immediately to the north of the site a pocket of residential development some 90m – 450m from the site. Further to the north and north west of the site are undeveloped residential zoned lands currently the subject of residential subdivision development applications, the largely developed Shell Cove residential area and the Endeavour Energy works depot,
- to the north east the recreational land uses, Links Shell Cove Golf Course and Killalea State Park,
- to the west, a railway corridor and a main road, being Princes Highway. To the west of Princes Highway are sand and blue metal quarries,
- immediately south of the development site, vegetated land including two endangered ecological communities listed under the *Threatened Species Conservation Act 1995* (TSC Act), these being Coastal Saltmarsh and Swamp Oak Floodplain Forest (SOFF),
- further to the south Rocklow Creek and a wetland listed under *State Environmental Planning Policy No. 14- Coastal Wetlands* (SEPP 14 - Wetlands). The creek drains into the Minnamurra Estuary, and
- to the east a sand extraction, processing and stock pile area, and the waste resource processing and putrescible waste landfill of the DRWDD site.

3 Statutory development assessment framework

3.1 Designated development

Pursuant to s77A of the *Environmental Planning & Assessment Act 1979* (EPAA), the proposal is identified as designated development as defined in Schedule 3 of the *Environmental Planning & Assessment Regulation 2000* (EPAR) being an extractive industry that will obtain or process for sale more than 30,000m^3 of extractive material per year (clause 19 (a)), and being a waste management facilities or works that will dispose of solid waste that comprises of more than 200 tonnes per year of other waste material clause 32 (1)(iv)).

The volume of extracted sand resource will be 142,000m^3 over a 2 year period. The site rehabilitation option involving the emplacement of PASS material in the extraction pit formed will include up to 36,000m^3 of PASS material; 36,000m^3 equates to about 20,000 tonnes.

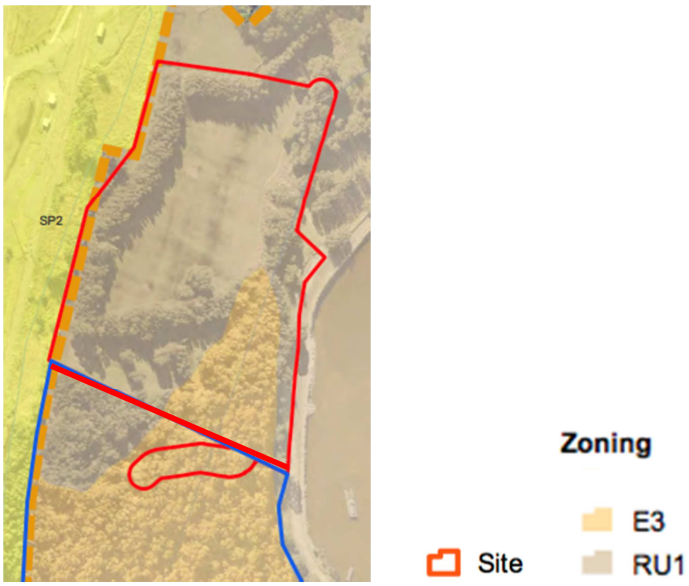
Pursuant to s79 of the EPAA, the development application was placed on public exhibition for a minimum period of 30 days.

An EIS has been prepared in accordance with the EPAA, EPAR and the Director General Requirements No. 699.

3.2 Permissibility

The development site is zoned RU1 Primary Production and E3 Environmental Management under *Shellharbour Local Environmental Plan 2013* (SLEP 2013).

Figure 3 – SLEP 2013 Land use zoning of development site (red outline)



The proposed extractive industry is permissible development with consent,

- on land zoned RU1 pursuant to the Land Use Tables of SLEP 2013, and
- pursuant to clauses 5 and 7 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

  Clause 5 states that the SEPP prevails over another environmental planning instrument in where there is an inconsistency.

  Clause 7 (3) 'Development permissible with consent' states that extractive industries may be carried out with development consent ….. *on which development for the purposes of agriculture or industry may be carried out (with or without development consent)*.

  Extensive agriculture is permitted with consent in the E3 zoned land pursuant to the Land Use Tables of SLEP 2013.

The proposed waste management facility/works is permissible development with consent,

- pursuant to clause 121 subclauses (1) and (3) of *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP):

  (1) Development for the purpose of waste or resource management facilities, other than development referred to in subclause (2), may be carried out by any person with consent on land in a prescribed zone.

  RU1 is a prescribed zone. Subclause (2) does not apply to the proposal.

  (3) Development for the purpose of the recycling of construction and demolition material, or the disposal of virgin excavated natural material (as defined by the Protection of the Environment Operations Act 1997) or clean fill, may be carried out by any person with

consent on land on which development for the purpose of industries, extractive industries or mining may be carried out with consent under any environmental planning instrument.

Soils that have been determined as PASS and satisfy the classification of VENM under the *Protection for Environment Operations 1997* can be classified as VENM.

3.3 Integrated development

Pursuant to s91 of the *Environmental Planning & Assessment Act 1979* (EPAA), the proposal is integrated development as approvals are required for:

- A permit to undertake dredging and reclamation work under the *Fisheries Management Act 1994*, and
- A water access licence and an aquifer interference approval under the *Water Management Act 2000*.

The approval of both NSW Department of Primary Industries, Fisheries NSW and NSW Office of Water for the proposal was sought.

Fisheries NSW advised that a permit for dredging is not required, and no objection to the proposal made subject to conditions being included in any development consent. These conditions relate to the possible risk to nearby wetland habitats as a result of the draw down of groundwater by 3m in the vicinity of the dredging works as indicated in the EIS.

NSW Office of Water will require the applicant to obtain a Water Access Licence for the incidental water extraction, and a Water Supply Works and/or Use approval for the operation.

3.4 Notice of application

Clause 77 of the EPAR requires that written notice of applications for designated development is to be made to public authorities that may have an interest in the development proposal. Written notice was given to Southern Rivers Catchment Authority, NSW Transport Roads and Maritime Services Southern (RMS), Office of Environment and Heritage (OEH) and Wollongong Environment Protection Authority (EPA).

The NSW OEH, RMS and EPA provided assessment advice and recommendations with regard to the possible environmental impacts associated with the proposed works and activities. In relation to the recommendations made, these are discussed further under 'impacts', in addition to forming part of the draft consent conditions of Attachment 1.

3.5 Section 79C assessment

(a) Section 79C (1) (a)(i)(ii)(iii)(iiia)(iv)(v) - environmental planning instruments; any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority, any development control plan, and any planning agreement entered into under Section 93F or any draft planning agreement that a developer has offered to enter into under Section 93F, the Regulations, any coastal zone management plan;

- State Environmental Planning Policy (State and Regional Development) 2011

The provisions of this Policy apply to the development proposal, however only insofar as identifying the proposal as regional development where the consent authority is the Joint Regional Planning Policy.

- State Environmental Planning Policy (Infrastructure) 2007

The ISEPP permits the proposal with development consent pursuant to clauses 121(1) and 121(3).

- State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

The Policy recognises the importance of mineral, petroleum and extractive material resources to the State for the purpose of promoting its social and economic welfare.

The SEPP permits the proposal with development consent pursuant to clauses 5 and 7(3).

Part 3 of the SEPP requires a consent authority to consider a range of matters prior to any consent determination.

These matters include consideration of the compatibility of the extractive industry with other land uses in the vicinity, the significance of any impacts on those uses and ways in which the development may be incompatible. In this regard, the sand extraction component of the proposal is essentially similar to the recently ceased sand extraction activities located on land immediately adjoining the development site and is consistent with the existing land uses within the DRWDD site, and as such will not impact on the preferred uses of the land. Surrounding land uses include residential development on residential zoned land and environmentally sensitive land. The proposal will not be incompatible with these land uses subject to conditions being imposed.

With regard to environmental management of the proposal, conditions will be imposed to ensure any impact on water quality will be minimal. With regard to the proposed removal of vegetation which includes Swamp Oak Floodplain Forest, an endangered ecological community, an offset strategy will be developed to compensate for this loss.

The greenhouse gas emissions assessment completed for the proposal concludes that the establishment and operational phases of the development will not significantly contribute to greenhouse gas emissions.

The matters relating to resource recovery and transportation have been considered and no conditions are required for the proposal.

With regard to rehabilitation matters, the land will be rehabilitated in two stages, the first stage being immediately after the sand resource has been extracted and the final stage when the use of the rehabilitated area is no longer required; this is likely to coincide when the DRWDD facility is decommissioned. Relevant conditions form part of the draft conditions found in Attachment 1.

- State Environmental Planning Policy (Rural Lands) 2008

This policy applies to land within rural zone, rural residential zones or environmental protection zones. The aims of the Policy provide for the management, development and protection of rural lands. To facilitate this process, rural planning principles have been established. In this regard, the proposal will not undermine the Policy aims and can be considered to be consistent with relevant planning principles as the proposal is located within the DRWDD site, is essentially similar to a recently ceased sand extraction activity within the site with the additional activity of PASS emplacement. Management strategies and mitigation measures are considered to reasonably protect the natural resources in vicinity of the site.

- State Environmental Planning Policy No. 71 – Coastal Protection

State Environmental Planning Policy No. 71. (SEPP 71) applies to land and development within the coastal zone as defined by the *Coastal Protection Act 1979*. The site falls within the coastal zone. SEPP 71 aims to protect and manage the natural, cultural, recreational and economic attributes, vegetation and visual amenity of the NSW Coast as it applies to the site. In doing so it requires development to be assessed under a range of considerations.

The site does not have direct frontage to the coast and is not visible to the coast and foreshore areas. The proposed mitigation measures to address ecological impacts is discussed under 'impacts'. The proposal is not considered to undermine the objectives of SEPP 71.

- State Environmental Planning Policy No. 55 – Remediation of Land

The aim of SEPP 55 is to provide for the remediation of contaminated land for the purpose of reducing the risk of harm to human health or environment and requiring that any remediation work meet certain standards and notification requirements.

The EIS reports that there is no evidence of previous disturbance to the site and geotechnical investigations undertaken on the site have not identified any potential contamination. Additionally, the potential for migration of leachate from the landfill on the DRWDD site towards the proposal site is also considered low, as monitoring indicates that chemicals of concern naturally attenuate before leaving the site boundary and groundwater flow is in a southerly to south easterly direction. The contamination risk at the site is considered to be low.

- State Environmental Planning Policy No. 14 – Coastal Wetlands

The policy aims to protect and preserve coastal wetlands. A SEPP 14 wetland, Killalea Lagoon, is located about 2km south if the site. Attachment 5 shows the location of the wetland.

The proposed environmental monitoring and environmental protection licence requirements will allow for any threats to groundwater, estuary health and changes in environmental conditions to be identified. In this regard, the objectives of the SEPP 14 – Coastal Wetlands will be met.

- Shellharbour Local Environmental Plan 2013 (SLEP 2013)

Land Use Table

The development site is zoned RU1 Primary Production and E3 Environmental Management under Shellharbour Local Environmental Plan 2013 (SLEP 2013).

The proposed sand extraction and PASS disposal is permitted development pursuant to the Land Use Tables of SLEP 2013, the Mining SEPP & ISEPP.

The RU1 and E3 zone objectives as provided in the Land Use Table are:

Zone RU1 Primary Production Objectives

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

Zone E3 Environmental Management Objectives

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.
- To retain and enhance the visual and scenic qualities of the Illawarra Escarpment.

Under clause 2.3(2) of SLEP 2013, the consent authority must have regard to the objectives for development in the zone. The proposal is considered to be consistent with the objectives of the land use zone.

The proposed sand extraction is adjacent to an existing sand extraction facility located within the DWRRD site that has been operational for many decades. As such the proposal will not undermine the first 3 RU1 objectives.

The proposal has the potential to create land use conflict with the adjoining land uses however these can be addressed via conditions to ensure the last (dot point) RU1 objective is not undermined, for example, the establishment of project specific noise limits (PSNL) for sensitive receptors and carrying out noise attenuation measures to ensure these PSNL are not exceeded, and the development and implementation of various environmental management plans to ensure minimal or nil adverse impact, for example, on water quality, air quality and terrestrial biodiversity.

The first objective of the E3 land use zone is relevant to the proposal. The land has special ecological values as it contains endangered ecological vegetation communities. To ensure the ecological values of the land are restored and enhanced, a biodiversity offset strategy is to be developed and will be implemented when works commence. This is discussed further under ‘impacts’.

A number of clauses of SLEP 2013 are applicable to the proposal, as follows:

Clause 5.5 Development in the coastal zone

Refer to SEPP 71 comment above. The site does not have direct frontage to the foreshore and as such will not affect existing public foreshore access or foreshore attributes.

Clause 5.10 Heritage conservation

An Aboriginal heritage due diligence assessment for the proposal was undertaken in accordance with the *Due Diligence Code for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010).

A site inspection was carried out with a representative of the Illawarra Local Aboriginal Land Council and concluded that the site would not have provided ideal conditions for Aboriginal occupation due to its position on a low-lying floodplain. The area of the proposed road access and creek crossing has been significantly disturbed by the installation of an artificial embankment and sub-surface artefacts are unlikely to be present in this area, or elsewhere within the study area. No Aboriginal sites or areas of high archaeological potential were located during the site inspection.

SLEP 2013 does not identify this site as containing any European heritage items or as part of a heritage conservation area. The closest heritage item to the proposal site is Dunmore Station and is located at least 100m from the site. The existing trees along the north and west

boundaries of the site are to be retained and will continue to screen the site, notwithstanding the visual curtilage of the item does not extend to the site.

The proposal is not considered to undermine the objectives of this clause.

Clause 6.1 Acid sulfate soils

The subject site is mapped under the Office of Environment and Heritage's predictive classification scheme as an area containing class 3 acid sulfate soils. Class 3 acid sulfate soils are likely to be encountered 1 metre below natural ground surface.

There is potential for PASS to become disturbed or impacted by altered hydrogeological conditions as a result of the sand extraction operations. In addition, with the backfilling of the excavation pit with PASS material there is a risk that PASS may become acidified and have adverse environmental impacts. The management of PASS at the site will be in accordance with EPL No. 5984. Various management plans will be in place to prevent imported PASS becoming oxidised and include an Acid Sulfate Soil Management Plan that has been prepared for the proposed development and, to be prepared, a Construction Environmental Management Plan and an Operational Environmental Management Plan.

Clause 6.3 Flood planning

The objectives of this clause are as follows:

(a) to minimise the flood risk to life and property associated with the use of land,

(b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,

(c) to avoid significant adverse impacts on flood behaviour and the environment.

The environmental impact assessment completed for the proposal identified the site as affected by the 1% Annual Exceedance Probability (AEP) flood event. The proposed vegetated levee structure will manage flooding and prevent minor floodwaters from Rocklow Creek encroaching into the extraction site. In the event that a major flood event occurred during the proposal's operation, the available storage would be equivalent to the existing condition as the floodwaters would be allowed to overtop the levee and fill the site and therefore there is no change to the existing flood management condition of the site.

Clause 6.5 Terrestrial biodiversity

The land is mapped as having terrestrial biodiversity and the mapping layer reflects the land that is zoned E3 on the site. The objectives of this clause are to maintain terrestrial biodiversity are:

(a) protecting native fauna and flora, and

(b) protecting the ecological processes necessary for their continued existence, and

(c) encouraging the conservation and recovery of native fauna and flora and their habitats.

The impact of the proposal on vegetation is discussed under 'impacts' in the following section of this report. Subject to conditions, the objectives of this clause should not be compromised.

- Other matters

No planning agreement under Section 93F applies to the site or any draft planning agreement. No coastal zone management plan applies to the site.

(b) Section 79C (1)(b) - the likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality;

Biodiversity

The vegetation of the proposed development site has been characterised as highly modified and disturbed. The biodiversity assessment completed for the proposal identified a number of vegetation types, including two endangered ecological communities being Swamp Oak Floodplain Forest (SOFF) in the NSW North Coast, Sydney Basin and South East Corner Bioregions, listed as Endangered under the TSC Act; and Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions (Coastal Saltmarsh), listed as Endangered under the TSC Act. This community is also listed as Subtropical and Temperate Coastal Saltmarsh, a Vulnerable Ecological Community under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The fauna habitat of the development area includes disturbed woodland and grassland, aquatic habitat within drainage lines and swamp habitat to the south.

It is proposed to clear a total of approximately 2.65 hectares of vegetation including disturbed grassland (1.33 hectares), regrowth Swamp Oak Floodplain Forest (0.76 hectares) and revegetation - swamp oaks (0.56 hectares). The removal of this vegetation will also impact on fauna habitat, though no threatened fauna listed under the EPBC Act or TSC Act were recorded in the study area.

The biodiversity impacts associated with the proposal have been investigated and adequately assessed against relevant legislation and industry guidelines. To compensate for the removal of Swamp Oak Floodplain Forest, an endangered ecological community under the TSC Act and potential threatened species habitat, a biodiversity offset strategy has been prepared. The offset strategy has been prepared by an accredited biobanking assessor using the Office of Environment and Heritage's (OEH) Biobanking Assessment Methodology and associated Biobanking Calculator.

The Biodiversity Offset Strategy outlines three offset options to compensate for the loss of biodiversity associated with the proposal as outlined below:

- Offset Measure 1 - Secure additional native vegetation on lands adjacent to the impact area, to be protected through establishment of an offset site under a Biobanking Agreement.

- Offset Measure 2 - Establishment of an offset site under another suitable mechanism that ensures the land is managed for conservation in perpetuity.

- Offset Measure 3 - Use of supplementary measures in lieu of offsets.

The proposed recommendations to compensate for the clearing of native vegetation detailed in the strategy have been assessed and are supported by OEH.

Offset Measure 1 is identified by the proponent as the preferred priority to achieve the objectives of the Biodiversity Offset Strategy, Offset Measures 2 and 3 would only be considered after further consultation with relevant stakeholders.

The proposed biodiversity offset site (i.e. Offset Measure 1), as described in the offset strategy is comprised of an approximately seven hectare area of land in the south-west of the site, located immediately adjacent to the areas to be impacted by the proposal; refer Attachment 5. It is proposed to establish a biobank site on the proposed offset site, to be managed in perpetuity under a Biobanking Agreement. The proponent will be required to undertake the necessary additional environmental assessment work and consultation to prepare a Biodiversity Offset Management Plan for the preferred offset option prior to the issue of a construction certificate. This work will be required to be undertaken by an accredited BioBanking assessor, in

accordance with OEH's Biobanking Assessment Methodology and in consultation with OEH and the property owner.

Water quality impacts

As the proposed development site is located within the Minnamurra catchment and within close proximity to Rocklow Creek that drains to Minnamuarra River, there is potential that the proposal will impact on water quality. Potential surface water and groundwater impacts are associated with both the sand excavation and backfilling stages of the proposal.

The risk assessment detailed within the hydrogeology assessment highlights that there is a high risk to adjoining sensitive ecosystems (i.e. Rocklow Creek and Minnamurra River) associated with the proposal, particularly the reinstatement proposal which involves the placement of substantial quantities of acid sulfate soil material. The assessment further details that through the implementation of suitable acid sulfate soils management provisions that this risk could be reduced from a "high" to "moderate" risk.

To address these risks associated with potential groundwater and surface water impacts, an Acid Sulfate Soils Management Plan has been prepared. The management plan has been prepared in accordance with the Acid Sulfate Soils Assessment Guidelines (NSW Acid Sulfate Soils Management Advisory Committee, 1998) by a suitably qualified environmental scientist and outlines management provisions for all relevant phases of the proposal including the establishment, operational and reinstatement stages. The plan provides detail on the monitoring required to be undertaken to identify any changes to environmental conditions resulting from the project which will inform the implementation of any necessary management actions.

Additional water quality control measures to address sediment and erosion and surface water flows from the proposed development site are to be addressed through the implementation of the construction environmental management plan and operational environmental management plan to be prepared.

Environmental health, management and monitoring

The management provisions outlined within the Acid Sulfate Soils Management Plan in conjunction with the environmental safeguards proposed to be implemented for the life of the project, significantly reduce the environmental risk associated with the proposal. The proposed environmental monitoring and environmental protection licence requirements will allow for any threats to groundwater, estuary health and changes in environmental conditions to be identified. In this regard, the objectives of the specific planning instruments and guidelines relating to the proposal including SEPP 14 – Coastal Wetlands and the NSW Coastal Policy are considered to have been met. The Minnamurra River Coastal Zone Management Plan, 2015 (CZMP) outlines the importance of continuing the environmental monitoring associated with the Dunmore Waste Facility, and is applicable to the proposed development area. The proposal addresses this requirement under the CZMP.

The key documents under this proposal that will guide environmental management through the project incorporate:

- an Acid Sulfate Soils Management Plan which has been prepared,
- a Groundwater Management and Monitoring Plan, and
- a Biodiversity Offset Management Plan and Biobanking Agreement.

A Construction Environmental Management Plan and an Operational Environmental Management Plan will be prepared for the site that integrates and provides specific detail on all of the additional environmental mitigation measures outlined within the EIS (i.e. this will address areas including but not limited to sediment and erosion, noise and vibration, air quality,

contamination and unexpected archaeological finds). These documents will be required to be prepared prior to the commencement of any works and form part of the recommended draft conditions in Attachment 1.

Noise and vibration impact

The Noise and Vibration Impact Assessment supporting the proposal has been prepared in accordance with relevant industry standards and guidelines and is satisfactory. To address the noise impacts associated with the proposal and to achieve the project specific noise levels derived for the site, it is proposed to develop an operational noise management plan (ONMP). This plan will outline suitable acoustic attenuation measures that will allow the project specific noise level limits to be achieved. The requirement for an ONMP forms part of the recommended draft conditions in Attachment 1.

The noise and vibration assessment further indicates that there are no predicted vibration impacts to surrounding residences as a result of the proposal.

Air quality impact

The proposal has the potential to impact on local air quality as a result of the establishment, operational and rehabilitation phases of the development. The Air Quality Impact Assessment that has been completed suitably characterises the potential cumulative air quality impacts (i.e. dust and particulate emissions) and demonstrates that predicted pollutant concentrations will comply with relevant air quality criteria.

A number of mitigation strategies are proposed to minimise the generation of dust on site during site preparation, sand extraction and rehabilitation of which will be incorporated into both the construction and operational environmental management plans.

An odour assessment has not been completed, however will be required prior to the commencement of works. The oxidisation of PASS has the potential to cause offsite odour impacts which if occurs will be required to be appropriately managed. The preparation of an odour assessment forms part of the recommended draft conditions in Attachment 1.

Traffic

Traffic generation activities of the proposal include site preparation and establishment, delivery of sand for sale to local businesses and delivery of PASS and VENM to the site when the excavation pit is backfilled.

The site preparation and establishment stage will see a temporary (2-4 months) and minor increase in traffic generation of about 12 additional heavy vehicle movements per day.

During the operational stage, no increase is anticipated in traffic movement as the proposal will replace the recently ceased extraction activities.

The duration of the rehabilitation stage will vary between 18-36 months and the traffic generated during this time will depend of the availability of backfilling material. A 'worst case' scenario in traffic generation is the emplacement of PASS material over a 3 month period resulting in an additional 10 trips (5 in and 5 out) per hour during this period. More likely, the 36,000m^3 of PASS material would be placed within the excavated area as demand for disposal requires, which is estimated to be over a period of approximately 2 years. This would be consistent with the existing traffic movements to the DRWDD.
During times when only VENM is placed on site, there will not be any additional traffic generated as the traffic movements will remain the same as existing operations.

RMS do not raise any objection to the proposal; any increase in traffic generation is minor and temporary as occurring during only the construction and rehabilitation phases of the

development. The RMS considers that the proposal is unlikely to have any impact on the classified road network.

(c) Section 79C (1)(c) - the suitability of the site for development;

The site is considered suitable as the proposal is permissible development on the land and there will either 1)) not be any impact on the surrounding development (eg traffic), or 2) mitigation measures will be in place to minimise impacts (eg acoustic attenuation), or 3) where there is potential for environmental impacts, these will be avoided by ensuring all stages of the development are undertaken in accordance with various environmental management plans, in addition to the implementation of a biodiversity offset management plan.

(d) Section 79C (1)(d) - any submissions made in accordance with the Act or the Regulations;

The application was advertised and notified in accordance with the statutory requirements.

One (1) submission was received during the exhibition period. Matters raised in the submission are:

- Lack of consultation with an adjoining property owner prior to preparing the development application; this is inconsistent with the SEAR's. As such, concern is raised that Council as proponent and assessing body for the application, will not give due consideration to the matters raised.
- Inadequate traffic impact assessment has been undertaken, namely the re-alignment of Buckleys Road, and underestimation of heavy vehicle impacts as the sand extraction and rehabilitation phases may overlap with materials to be used to back fill the excavated area being stockpiled while excavation works are progressing.

Response

- The EIS states that an information sheet describing the proposal, its location and the key objectives and environmental management strategies was prepared and distributed to residences on Dunmore Road, in November 2014.

  It is considered that the public consultation processes as described in the EIS adequately identified the surrounding land owners most likely to be impacted by the proposal. The objector was notified of the proposal as part of the public notification of the development application.
- The realignment of Buckleys Road does not form part of this development application.
- With regard to traffic generation by the proposal, the proposed increase is considered minor, and at times for limited duration, and will not significantly impact on the road capacity thresholds. Based on this additional traffic and the existing road capacity, Dunmore Road and Buckleys Road would still be operating at an acceptable level of service. The classified road network these two roads connect into is unlikely to be adversely impacted.
- Rehabilitation of the extraction areas will commence after the extraction of the sand resource has been completed. The two stages of the development will not overlap.

No submissions were received from the closest sensitive receptor sites, these being the residential development on Dunmore Road.

(e) Section 79C (1)(e) - the public interest.

The proposal will provide a local source of sand resource for the local construction industry.

The proposed development is consistent with the relevant statutory requirements and planning objectives. Development consent of this proposal will not undermine the public interest subject to appropriate conditions being imposed on any development consent.

4 Recommendation

It is recommended that DA No. 18/2015 (JRPP Ref no. 2015STH002) be approved subject to the draft conditions contained in Attachment 1.

5 Attachments

Attachment 1 – Draft Schedule of Conditions
Attachment 2 – Locality Plan
Attachment 3 – Vegetation clearing
Attachment 4 – Proposed drainage channel realignment
Attachment 5 – Biodiversity offset measures – Option 1

Attachment 1 – Draft Schedule of Conditions

1 Development in Accordance with Plans

The development must be in accordance with the following approved Development Application plans and documents as endorsed by Council's stamp except as modified by conditions of this consent.

Name of Plan	Prepared By	Report No.	Drawing Date
Environmental Impact Statement - Volumes 1 & 2, including Mitigation Measures of Section 11	Hyder Consulting Pty Ltd	-	12.01.2015 (front cover dated December 2014)
Biodiversity Offset Strategy	Hyder Consulting Pty Ltd	AA005925	03.07.2015
Acid Sulfate Soil Management Plan	Environmental Earth Sciences	115047 Version 1	26.06.2015
Noise and Vibration Assessment	Wilkson Murray	13222 Version B	18.12.2014
Biodiversity Assessment	Hyder Consulting Pty Ltd	AA005925	16.12.2014

2 NSW Department of Primary Industries – Fisheries NSW

The development must comply with the advice and conditions of the the Department of Primary Industries – Fisheries NSW, as contained in their letter with reference OUT15/11 dated 19 February 2015, consisting of two (2) pages, and forms part of this Notice of Determination.

The Ground Water Monitoring and Management Plan must be to the satisfaction of Fisheries NSW prior to any works commencing.

3 NSW Department of Primary Industries – NSW Office of Water

The net loss to the aquifer system from the proposed sand mining has been estimated at 15.0 to 17.5 megalitres per annum.

Based on the above, the following will be required under the *Water Management Act 2000*:

- Water Access Licence (WAL) - for the incidental water extraction, and
- Water Supply Works and/or Use approval - for the operation.

To apply for the necessary approvals, the following steps must be completed:

1. Apply for a Zero Share Water Access Licence (WAL) under section 61 (1)(b) of the *Water Management Act 2000*. An application form and guide are attached. The fee for this application fee is $268.70.
2. Apply for a Water Supply Works and/or Use approval under section 92 of the *Water Management Act 2000*. In support of this application, a full hydrogeological report will also be required to be submitted. An "Application for approval for water supply works, and/or water use" is attached. The fee for this application is $1,286.30.
3. Once the Zero Share WAL has been registered and issued by Land & Property Information (LPI), you will need to purchase water from an existing licence holder within the same water source and transfer the required groundwater entitlement (17.5 ML) into the zero share account.
4. The transfer is undertaken through a s71Q (assignment of shares) or a s71M (full transfer) dealing under the *Water Management Act 2000*.

The required licences must be applied for, and obtained, prior to any works commencing.

4 Biodiversity

The impacts associated with the clearing of native vegetation must be addressed in accordance with one of the recommendations contained within Table 8 of the Biodiversity Offset Strategy Report No. AA005925 (Hyder, 3 July 2015). Prior to any works commencing, an offset mechanism must be prepared by an accredited BioBanking assessor in accordance with the Office of Environment and Heritage's (OEH) Biobanking Assessment Methodology and in consultation with OEH and the property land owner.

The adopted biodiversity offset measure must be implemented when the site preparation and establishment works for the sand extraction proposal commence.

5 Odour

An odour assessment report must be prepared by a suitably qualified professional prior to the commencement of any works. The assessment is to identify and characterise any potential odour impacts, including from the oxidisation of potential acid sulfate soils. The odour assessment report must outline any necessary odour management provisions and when these mitigation measures are to be implemented.

6 Construction Environmental Management Plan

A construction environmental management plan (CEMP) must be prepared by a suitably qualified environmental scientist/engineer prior to the commencement of any works. The CEMP must be prepared in accordance with any relevant industry guidelines or standards that apply to specific areas of management to be addressed under the CEMP. The plan must clearly detail how all relevant environmental management and monitoring procedures and safeguards outlined within the Environmental Impact Statement (Hyder, 2015) will be implemented and monitored for adequacy and maintained for the duration of the development. The CEMP must be implemented for the life of the development.

7 Operational Environmental Management Plan

An Operational Environmental Management Plan (OEMP) must be prepared by a suitably qualified environmental scientist/engineer prior to the commencement of any works. The OEMP must be prepared in accordance with any relevant industry guidelines or standards that apply to specific areas of management to be addressed under the OEMP. The plan must clearly detail how all relevant environmental management and monitoring procedures and safeguards outlined

within the Environmental Impact Statement (Hyder, January 2015) will be implemented and monitored for adequacy and maintained for the duration of operational activity. The OEMP must be implemented for the duration of the operation.

8 Noise

A. Operational Noise Management Plan

An Operational Noise Management Plan (ONMP) must be prepared prepared by a suitably qualified acoustic consultant prior to any works commencing. The ONMP is to be prepared in accordance with all relevant industry standards and guidelines.

All potential noise impacts are to be identified and it is to be demonstrated how the project specific noise levels specified in the table below will be met through the implementation of suitable acoustic attenuation measures.

The mitigation measures to be included in the ONMP must include all recommendations detailed in the Noise and Vibration Assessment (Wilkinson/Murray, December 2014) including at receiver treatment, limiting operaitonal hours to those agreed to with residents, engineered at source noise mitigation on project plant/vehciles. The ONMP must also include a complaint response procedure developed in consultation with identified affected residences.

PrNoise in dBA(A)

		Noise Limits dB(A)
Locality	Location	Day
		$L_{Aeq\ (15\ minute)}$
R1, R2, R3, R7 & R8	1, 21 & 51 Dunmore Road, Dunmore and isolated residences on Swamp and James Road	45 dB(A)
R4	21 Buckleys Road Shell Cove	42 dB(A)
R5	North East receivers along Augusta Parkway Shell Cove	41 dB(A)
R6	Killalea State Camp Site	50 dB(A) $L_{Aeq,\ 1hr}$ when in use

The ONMP must be implemented for the life of the development.

B. Traffic Noise Management Strategy

A Traffic Noise Management Strategy (TNMS) for the purpose of managing noise associated with the construction, operational and rehabilitation stages must be developed by an appropriately qualified consultant prior to any works commencing. The TNMS shall ensure that feasible and reasonable noise management strategies for the vehicle movements associated with the facility are identified and applied, and includes but not necessarily limited to the following:

- driver training to ensure that noisy practices such as the use of compression engine brakes are not unnecessarily used near sensitive receptors,
- best noise practice in the selection and maintenance of vehicle fleets,

- due consideration of installing broadband reversing alarms on all mobile plant (including transport vehicles) instead of tonal alarms,
- movement scheduling where practicable to reduce impacts during sensitive times of the day, for example before 10am on weekends,
- communication and management strategies for non-licensee/proponent owned and operated vehicles to ensure the provision of TNMS are implemented,
- a system of audited management practices that identifies non-conformances, initiates and monitors corrective and preventative action (including breaches of noise minimisation procedures) and assesses the implementation and improvement of the TNMS, and
- specific procedures to minimise impacts at identified sensitive areas, and clauses in conditions of employment, or in contracts, of drivers that require adherence to the noise minimisation procedures.

9 Visual Impact

Any acoustic mitigation measure so as to achieve the project specific noise levels detailed in the above table that will be visible to a public place or residence must be suitably screened to restrict views into the development site. Screening measures must be carried out immediately after the noise mitigation works are installed.

Separate approval may be required for a structure where development consent is required, for example, an acoustic wall.

10 Groundwater Monitoring and Management Plan

A Groundwater Monitoring and Management Plan (GMMP) must be prepared by a suitably qualified environmental scientist prior to the commencement of any works. The GMMP is to clearly outline the objectives of the monitoring program, identify all risks and potential impacts to groundwater resources and detail how such impacts will be appropriately monitored and managed. The plan shall incorporate all relevant environmental management information contained within the Environmental Impact Statement (Hyder, January 2015), and recommendations contained in the Hydrogeological Assessment (Earth Environmental Sciences, September 2014).

The GMMP must be implemented for the operational life of the development.

11 Survey

Prior to the commencement of works, a survey plan of the boundaries of the sand extraction area shall be prepared by a registered surveyor.

These boundaries are to be clearly marked at all times in a permanent manner that allows operating personnel, staff and inspecting officers to clearly identify those limits.

12 Vegetation – Levee Bank & Drainage Channel

The levee bank, bed of the realigned channel and the riparian corridor of the realigned channel must be planted out with local endemic species. Evidence of stock provenance shall be provided.

13 Protection of Trees on Site

The existing screening vegetation along the western and northern boundaries that provide a visual buffer of the site from public places and from residences on Dunmore Road are to be retained. Prior to any works commencing, the trees must be enclosed with temporary protective fencing to prevent any excavation activities, storage or the disposal of materials within the fenced area. The protective fence must:

a. be located a minimum of 2.5m from the base of the tree,

b. have a minimum height of 1.5m, and

c. be clearly marked at all times with the use of high visibility plastic hazard tape.

The tree protection fencing must be maintained intact throughout the site preparation and establishment period of the development.

14 Operating Hours

The operational hours of the sand extraction proposal are:

- 7.30am-4pm weekdays
- 8am-4pm weekends

No works on public holidays.

15 Soil and Water Management Plan (SWMP)

Prior to works commencing, a Soil and Water Management Plan must be prepared by a suitably qualified consultant. The SWMP must clearly identify site features, constraints and soil types together with the nature of the proposed land disturbing activities and also specifies the type and location of erosion and sediment control measures. In addition rehabilitation techniques that are necessary to deal with such activities should be referred to.

The SWMP must take into account the requirements of Landcom's publication *Managing Urban Stormwater - Soils and Construction (2004)* thus ensuring the following objectives are achieved, namely:

a. minimise the area of soils exposed at any one time,

b. conserve topsoil for reuse on site,

c. identify and protect proposed stockpile locations,

d. preserve existing vegetation and identify revegetation techniques and materials,

e. control surface water flows through the development site on a manner that:

   i. diverts clean run-off around disturbed areas

   ii. minimises slope gradient and flow distance within disturbed areas

   iii. ensures surface run-off occurs at non-erodible velocities

   iv. ensures disturbed areas are promptly rehabilitated.

f. trap sediment on site to prevent off site damage. Hay bales are not to be used as sediment control devices. To ensure regular monitoring and maintenance of erosion and sediment control measures and rehabilitation works until the site is stabilized (includes landscaping),

g. specifies measures to control dust generated as a result of activities on site,

h. temporary sediment ponds must be fenced where the batter slope exceeds 1 vertical to 5 horizontal,

i. design scour protection for the 10 year ARI event at all inlet and outlet structures, and

j. including measures to prevent the tracking of sediment off the site.

The measures required in the Soil and Water Management Plan must be implemented prior to the commencement of works.

The soil and water management controls must be maintained at all times during each stage of the development and checked for adequacy daily. The controls must not be removed until the development is completed and the disturbed areas have been stabilised.

16 Site Rehabilitation Plan – Option 1 - Wetland

Where the site rehabilitation option 1 – wetland is adopted, a wetland management plan must be prepared for the site by a suitably qualified professional to Council's satisfaction. This plan must be submitted to Council for assessment at least 3 months prior to this option being adopted.

17 Final Site Rehabilitation Plan

A final site rehabilitation plan must be submitted to, and approved by, Shellharbour City Council prior to the commencement of rehabilitation works. Council's approval of this Plan is to be sought at least 3 months prior to when the stockpile site will no longer be required to ensure there is minimal delay in carrying out the final site rehabilitation works. Council's requirements for the Plan are to be sought prior to the preparation of the Plan. Any maintenance period should be a minimum of 36 months.

The final site rehabilitation plan shall:

a. be site specific,

b. identify the proposed end use and landform of the land use once rehabilitated,

c. consider any relevant management requirements and provisions of the DRWDD site rehabilitation plan, and

d. consider the Biodiversity Offset Management Plan to be prepared for the development site.

If the final rehabilitated landscape is proposed to incorporate any wetland or waterway environments, a wetland management plan must be prepared for the site.

- The Wetland Management Plan must be prepared by a suitably qualified professional to Councils satisfaction and implemented for a period of 3 years after Practical Completion of the wetlands.

- Annual reports documenting implementation measures and containing all monitoring results are to be submitted to Council during this phase. Council may request site visits as required.

- Approaching hand over, a site meeting with Council must be arranged by the proponent. The objective of the meeting will be to identify any outstanding actions that require rectification by the proponent before hand over.

The final site rehabilitation plan must be implanted to the satisfaction of Council.

18 NSW Department of Primary Industries – Fisheries NSW

NSW GOVERNMENT | Department of Primary Industries

Our Ref: OUT15/11
Your Ref: DA No 18/2015

19 February 2015

Victoria Nicholson
Senior Development Assessment Officer
Shellharbour City Council
Locked Bag 155
SHELLHARBOUR CITY CENTRE NSW 2529

Dear Ms Nicholson

Re: Designated IDA 18/2015 Extension of Dunmore Sand Extraction, Potential Acid Sulphate Soil Disposal and Rehabilitation Works Lot 21 DP635009 – 44 Buckleys Road Dunmore

I refer to your letter dated 23 January 2015 (INW15/4588) and accompanying information seeking comments from Fisheries NSW, a division of NSW Department of Primary Industries, on the above proposal.

Fisheries NSW is responsible for ensuring that fish stocks are conserved and that there is "no net loss" of key fish habitats upon which they depend. To achieve this, the Department ensures that developments and land use planning complies with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act respectively) and the associated *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999)*. In addition the Department is responsible for ensuring the sustainable management of commercial and recreational fishing and aquaculture within NSW.

Fisheries NSW has reviewed the proposal prepared for Shellharbour City Council (SCC) by Hyder Consulting dated December 2014 and supporting documentation. We understand that there will be no direct impact upon important fish habitats including seagrass, mangrove and saltmarsh communities.

The subject site is situated adjacent to Rocklow Creek and SEPP 14 Wetland No. 374a, draining to the Minnamurra Estuary. The potential impacts on these waterways resulting from the discharge of sediment laden waters, particularly during high rainfall events, as well as groundwater drawdown and creek realignment is of interest to this Department.

The REF has identified that the site area is 'subject to frequent flooding' and that the proposal represents a 'high risk of impact to the quality and quantity of surface and ground water'. The proposal includes provisions for surface water quality monitoring (Volume 2, Appendix C, Part 6, p7) to be conducted on a quarterly basis. It is Fisheries NSW policy that all developments should aim to achieve no net impacts on receiving waterways. The proposed water quality monitoring and management measures regime will not provide adequate information to verify that there is no

Fisheries NSW
PO Box 97 Huskisson, 2540
ABN 72 189 919 072

significant impact upon adjacent waterways because high rainfall events are not likely to coincide with the sampling dates.

The EIS suggests that groundwater will be drawn down by 3m in the vicinity of the dredging works. The Department is concerned that this may pose a risk to nearby wetland habitats.

Based on the information provided, Fisheries NSW does not object to the extension of the Sand Extraction works, subject to the following conditions being included in any approval of the planning proposal:

1. All works conform to and are consistent with the Environmental Impact Statement (EIS) by Hyder Consulting dated December 2014;
2. A surface water quality management and monitoring plan is to be developed and submitted to Fisheries NSW for approval prior to any works taking place. The plan must include sampling and testing regimes for the construction and operational phases and include provisions for sampling of water quality during discharge events;
3. A copy of the draft Ground Water Monitoring and Management Plan is to be submitted to Fisheries NSW for comment prior to any works taking place;
4. The draft design plans for the realignment of the western diversion channel including stormwater dissipation devices and water quality improvement devices are to be submitted to Fisheries NSW for approval prior to any works taking place.
5. Environmental safeguards (e.g. silt curtains, sediment fences, booms etc.) are to be installed and maintained throughout the proposal in accordance with "*Managing Urban Stormwater: Soils and Construction*" (4th Edition Landcom, 2004, aka the Blue Book) to ensure that there is no escape of turbid plumes into the adjacent aquatic environment;
6. Spill kits suitable for the containment of fuel and oil spills must be kept on site;
7. Fisheries NSW (1800 043 536) is to be immediately notified of any fish kills in the vicinity of the works. In such cases, all works other than emergency response procedures are to cease until the issue is rectified and written approval to proceed is provided by Fisheries NSW.
8. Independent audits of the operation of the dredging operation are to be conducted after 12 months and thereafter at 3 yearly intervals. Audits are to be conducted by suitably qualified practitioners. A copy of each audit report is to be provided to Fisheries NSW within 3 months.

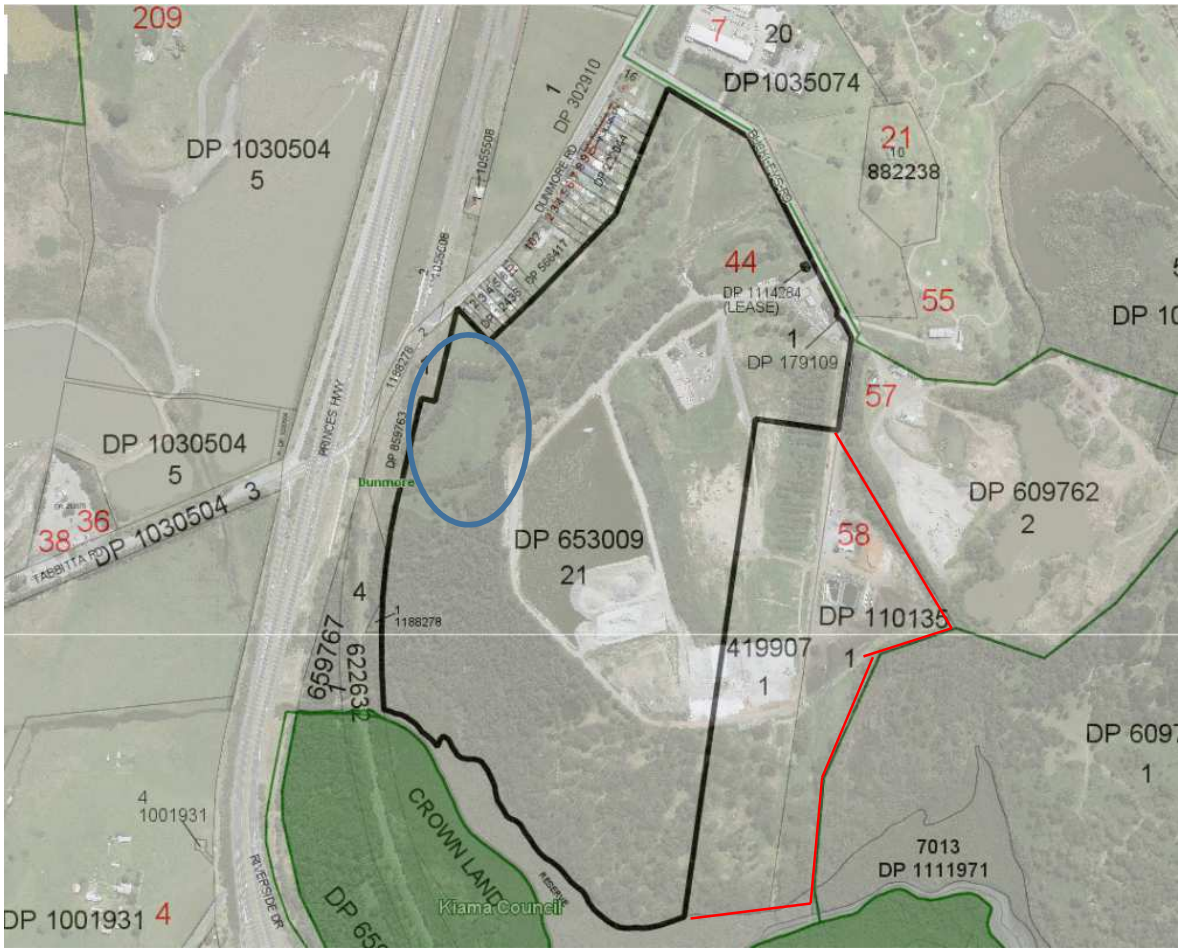
If you require any further information, please do not hesitate to contact me on (02) 4428 3406.

Yours sincerely

Jillian Reynolds
Regional Assessment Officer – South Coast
Aquatic Ecosystems

END OF RECOMMENDED CONDITIONS

Attachment 2 – Locality Plan



Approximate location of development site

Dunmore Recycling and Waste Disposal Depot Site (DRWDD)
Comprises of 3 lots – Lot 21 in DP 653009, Lot 1 in DP 419907, Lot 1 in DP 110135.

Attachment 3 – Vegetation communities to be cleared

Sand Extraction and Rehabilitation Biodiversity Assessment

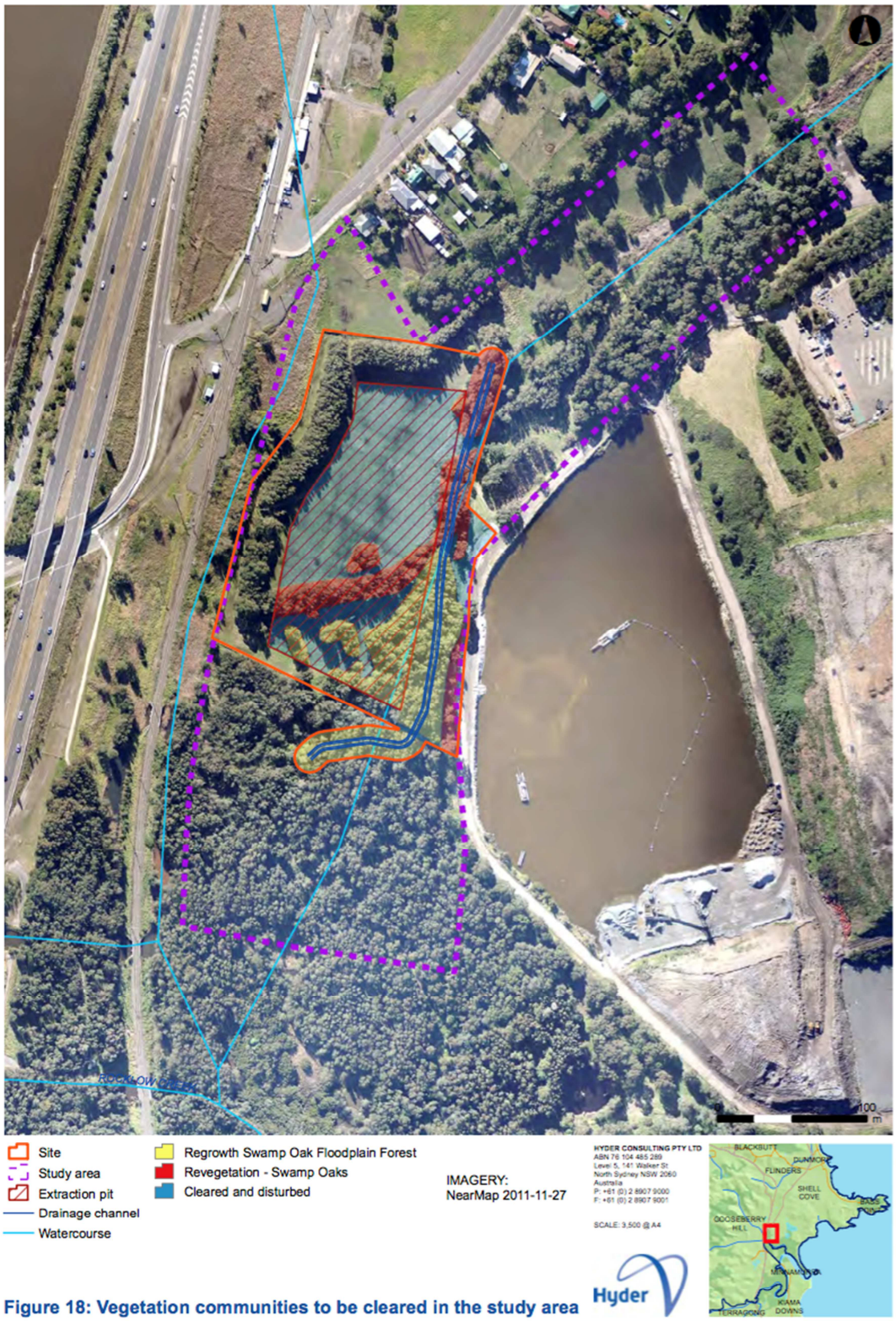
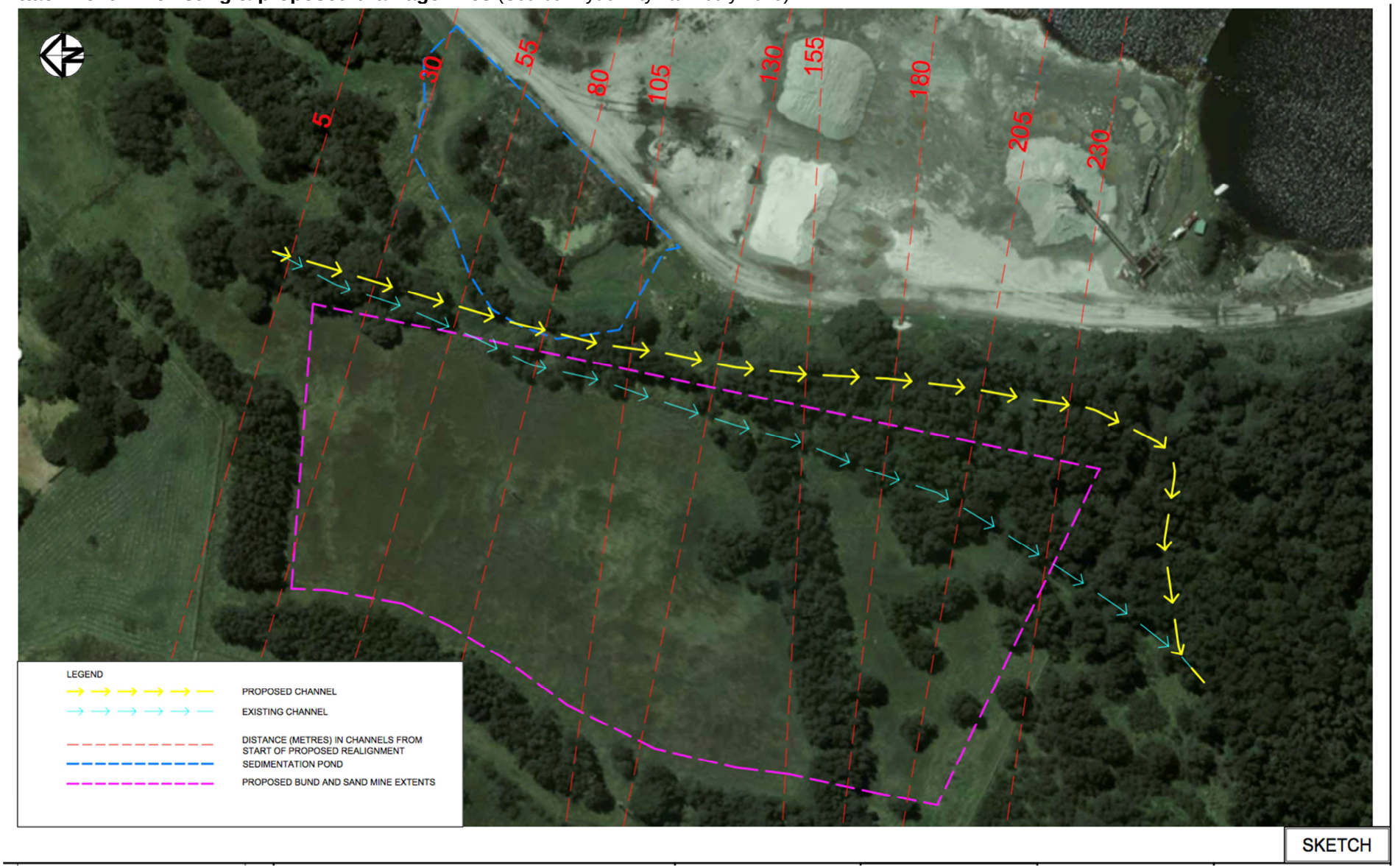


Figure 18: Vegetation communities to be cleared in the study area

Date: 17/12/2014 Path: P:\AA005925\IL-GIS\A_Current\B_Maps\Specialist_Reports\Ecological_Assessment\PASS_Figures\AA005925_Ec_F018_VegComms_impacts_areas_r2v1.mxd
Created by : DD
QA by : AW

Attachment 4 – existing & proposed drainage lines (Source: Hyder Pty Ltd 2 July 2015)



Attachment 5 – Biodiversity offset measure – option 1