NSW GOVERNMENT
Department of Planning

MAJOR PROJECT ASSESSMENT: Coramba Groundwater Remediation Project – Stage 1

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

August 2009

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EXECUTIVE SUMMARY

In 2002, the Department of the Environment, Climate Change & Water (DECCW) found contaminated groundwater seeping out of 5 Martin Street into a backwater channel of the Orana River.

Due to the high levels of hydrocarbons in the water, DECCW declared the site to be a "Remediation Site" under the *Contaminated Land Management Act 1997* because it posed a risk to human health and the environment.

Coffs Harbour City Council now proposes to remediate the contaminated groundwater on the site. This involves installing plant onsite to intercept and treat the contaminated groundwater.

The proposal has a capital investment value of $175,000, and would employ one worker during the construction and one worker during the operation of remediation works. Remediation works would take 2-3 years before the groundwater seeping in the river is complying with the relevant criteria.

During the exhibition period, the Department received 11 submissions on the project, 5 from public authorities and 6 from the general public. Whilst none of the public authorities objected to the project, some of the public submissions were concerned about the potential odour, noise, public access impacts of the project, and the effectiveness of the proposed remediation strategy.

The Department has assessed the merits of the project in accordance with the relevant requirements of the *Environmental Planning and Assessment Act, 1979*, and is satisfied that the impacts of the project are relatively minor and can be mitigated and/or managed to ensure an acceptable level of environmental performance.

The Department is satisfied that the project would reduce the risk to human health and the environment by minimising exposure of contaminated groundwater. The Department is also satisfied that the project would improve the health of the Orara River, and increase the biodiversity of the riparian corridor and habitat for fauna species.

Consequently, the Department believes the project is in the public interest and should be approved, subject to conditions.

1. BACKGROUND

1.1 Source of Contamination

Coffs Harbour City Council (Council) proposes to remediate hydrocarbon contaminated groundwater at an area near Martin Street at Coramba, in the Coffs Harbour local government area (see Figure 1).

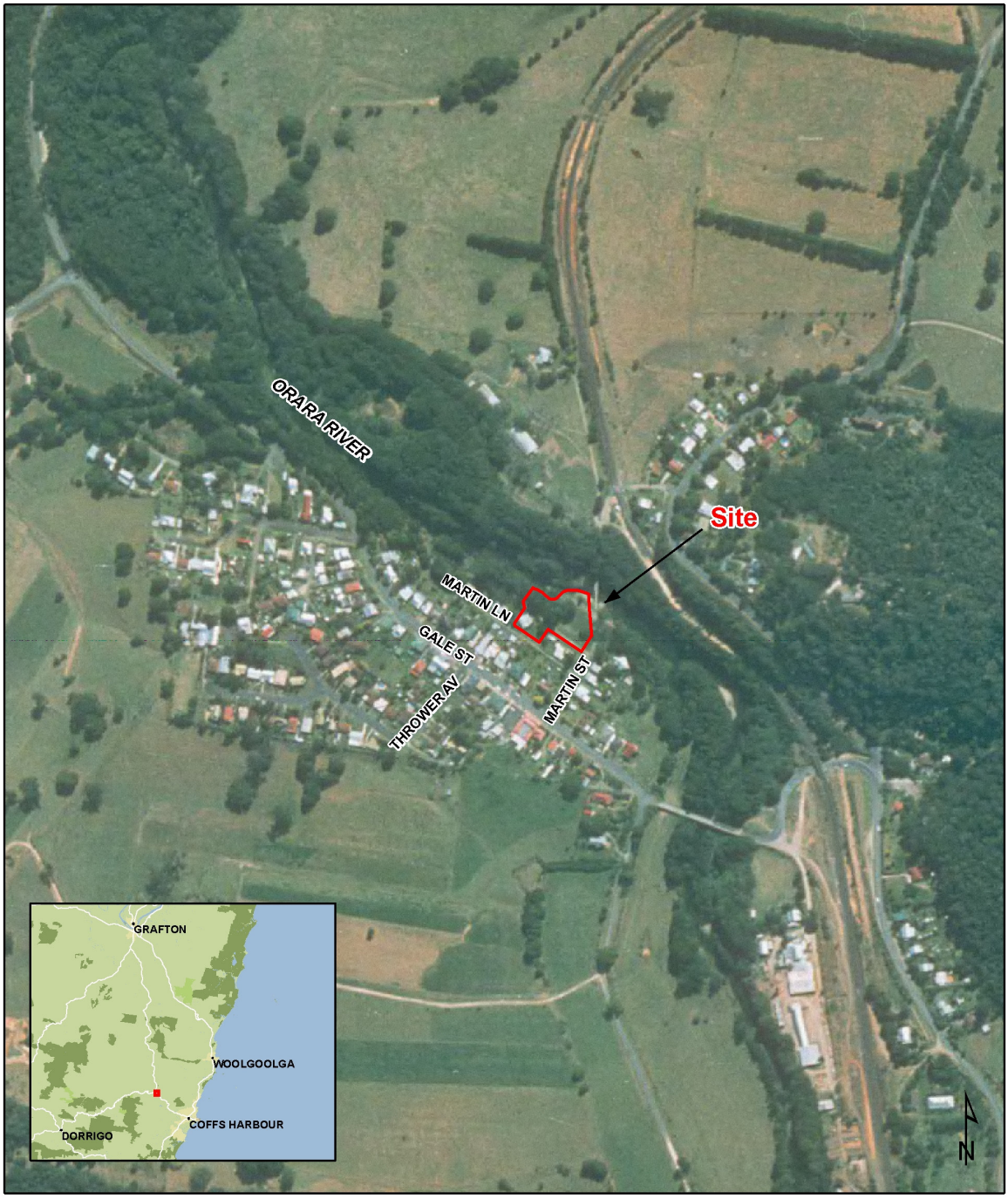

Figure 1 – Regional Location

In 2002, the Department of Environment, Climate Change and Water (DECCW) identified a seepage of hydrocarbon contaminated groundwater at 5 Martin Street, Coramba entering a backwater channel of the Orara River. The source of the hydrocarbon contamination is understood to be from an unleaded petrol leak from a former underground storage tank at an existing Service Station at 33 Gale Street, Coramba. This underground storage tank has since been removed.

The levels of hydrocarbon were determined to pose a risk to human health and the environment, and DECCW consequently declared the site a "Remediation Site" in 2003 under the *Contaminated Land Management Act 1997*. The DECCW assisted the landowners of 5 Martin Street to apply to the NSW Environmental Trust (the Trust) for a grant under the "innocent owners scheme" to fund remediation works necessary to address the risk to human health and the environment.

The innocent owners scheme provided funding for several studies to be undertaken, including:

- a Pre-Remediation Environmental Assessment conducted in 2006 by WSP Environmental Pty Ltd (WSP), to determine the source of contamination, assess the local hydrogeology and contamination migration pathways and to identify the plume of contaminated groundwater;
- a draft Remediation Action Plan (RAP) prepared in 2006 by WSP, to assess the feasibility of various soil and groundwater remediation technologies and outline the most applicable overall remediation strategy to remove risks to human health and the environment; and
- a "Site Audit Report" prepared in 2006 by an accredited site auditor from HLA-Envirosciences Pty Ltd (HLA) to review the RAP and the recommended remediation strategy put forward in the RAP.

Following a public meeting in December 2006, DECCW, the NSW Department of Health, Council and the NSW Department of Premier and Cabinet formed the Coramba Fuel Contamination Interagency Community Working Party (ICWP) with members of the Coramba community to progress the remediation of the groundwater contamination.

After its first meeting in February 2007, the ICWP asked Council to apply, on behalf of the Coramba community, for funding for the remediation work.

Subsequently, Council, on behalf of the Coramba community, applied for the Trust grant for groundwater remediation works, comprising an air sparge system with soil vapour extraction and treatment of the collected contaminated soil vapour (referred to as Stage 1 remediation works). Stage 1 remediation works were recommended by the ICWP, as envisioned in the WSP RAP, and subsequently adopted by Council following consultation with DECCW and community representatives. The need for further remediation works (i.e. Stage 2 remediation works) would be assessed once Stage 1 is implemented and if required would be subject to a separate approval.

1.2 Project Setting

The site is located within the township of Coramba, some 12km north-west of the central business district of Coffs Harbour on the NSW North Coast. Coramba contains approximately 240 dwellings, 4 of which are located adjacent to the project site. A primary school is located approximately 500m to the south-west.

A Service Station, believed to the source of the hydrocarbon contamination is located at 33 Gale Street, some 95m south-west from the site. Whilst the Service Station is still in operation, the underground storage tank that was leaking has since been removed.

The site consists of grassed upper and lower terraces of land at 5 Martin Street, a roadway and open space associated with the Orara River reserve. The surface of the upper terrace is mown grassland whilst the lower terrace is largely gravel/bitumen roadway, with a parking area adjoining the grassland. Adjoining the site to the north-west is riverside vegetation, consisting mostly of camphor laurel and other weeds, with some scattered native species.

The Orara River flows from the south-east towards the north-west around the northern side of the township and along the northern boundary of the site. A foot bridge which crosses the river and provides pedestrian access to the northern part of Coramba is located at the end of Martin Street adjacent to the river.

To understand aspects of the project it is necessary to understand the groundwater system for the area. Groundwater is present within the upper portion of the bedrock and lower portion of the residual clays, and also within the alluvial sediments. Groundwater in the bedrock/residual clay system is present at depths of around 15m at Gale Street and 5m on Martin Street near Martin Lane. Groundwater within the alluvial sediments is at a similar elevation to the river water level. Groundwater flow in both systems is toward the river. The identified groundwater contamination plume extends from the Service Station towards the Orara River, where it has been leaking into the River, since 2002.

2. PROPOSED PROJECT

Following the agreement with the ICWP to apply to the Trust for funding of Stage 1 remediation works, Council submitted an application to the Department for the approval of Stage 1 remediation works under Part 3A of the *Environmental Planning and Assessment Act 1979*.

Council is seeking approval for Stage 1 remediation works which are designed to reduce the risk of harm to human health and the environment by intercepting the contaminated groundwater and removing hydrocarbons before it can reach the Orara River. The Stage 1 remediation system comprises:

1. an air sparge system which is used to inject clean air directly into the saturated subsurface to convert hydrocarbons from liquid state into gaseous state;
2. a soil vapour extraction system which is used to extract gaseous hydrocarbons to the surface;
3. activated carbon filters which are used to remove gaseous hydrocarbons from the extracted air;
4. a 3m high stack which is used to discharge the clean air following treatment via activated carbon filters; and
5. a control compound containing associated infrastructure (see Figures 2 and 3).

Nine out of 13 air sparge points would be located on a Council owned reserve at the end of Martin Street and would be designed to remediate contaminated groundwater present within the alluvial sediments. The four remaining air sparge points would be located on privately owned land at 5 Martin Street and would be designed to remediate contaminated groundwater present within the upper portion of the bedrock and lower portion of the residual clays (see Figure 2). The control compound containing the supporting infrastructure, mainly comprising air compressor and a blower and an activated carbon treatment system, would be located on the Martin Street road reserve fronting 5 Martin Street.

The major components of the project are summarised in Table 1, illustrated in Figures 2 and 3, and detailed in the Environmental Assessment (EA) for the project (see Appendix E).

Table 1: Major Components of the Project

Component	***Description***
Project Summary	***Stage 1 remediation of a hydrocarbon contaminated groundwater at 5 Martin Street, Coramba using an air sparge system with soil vapour extraction and treatment of collected contaminated soil vapour.***
Major Components of the Remediation Works	• Air sparging – treatment technology that injects air directly into the saturated subsurface to convert volatile contaminants from the dissolved phase to the vapour phase through air stripping. • Soil vapour extraction – treatment technology that uses air and activated carbon filters to biodegrade/remove gaseous contaminants from the extracted air via air sparging.
Project Related Infrastructure	A 3x3x2.5m, colourbond control compound with concrete floor, containing: • custom built computerised control panel to turn the system on and off at regular intervals, typically about 1 to 2 hours on and 1 hour off and to provide a number of operational safety features; • screw style compressor to supply sparges with air; • water vapour knock out drum to remove water vapour from the air stream, including a self-draining valve to release collected water during shut down periods; • regenerative style blower to extract vapour; • 2 activated carbon filters to treat air received from the soil vapour extraction system; • a 3m high stack to discharge the treated airstream; and • temporary power supply from overhead lines located in Martin Street.
Hours of Construction	• 18-25 weeks • 7am to 6pm Monday to Friday and 8am to 1pm on Saturday • No work would be undertaken on Sundays and Public Holidays
Hours of Operation	• Remediation works would take 2-3 years to complete • 24 hours, seven days per week
Capital Cost	$175,000
Employment	1 during construction and 1 during operation of remediation works

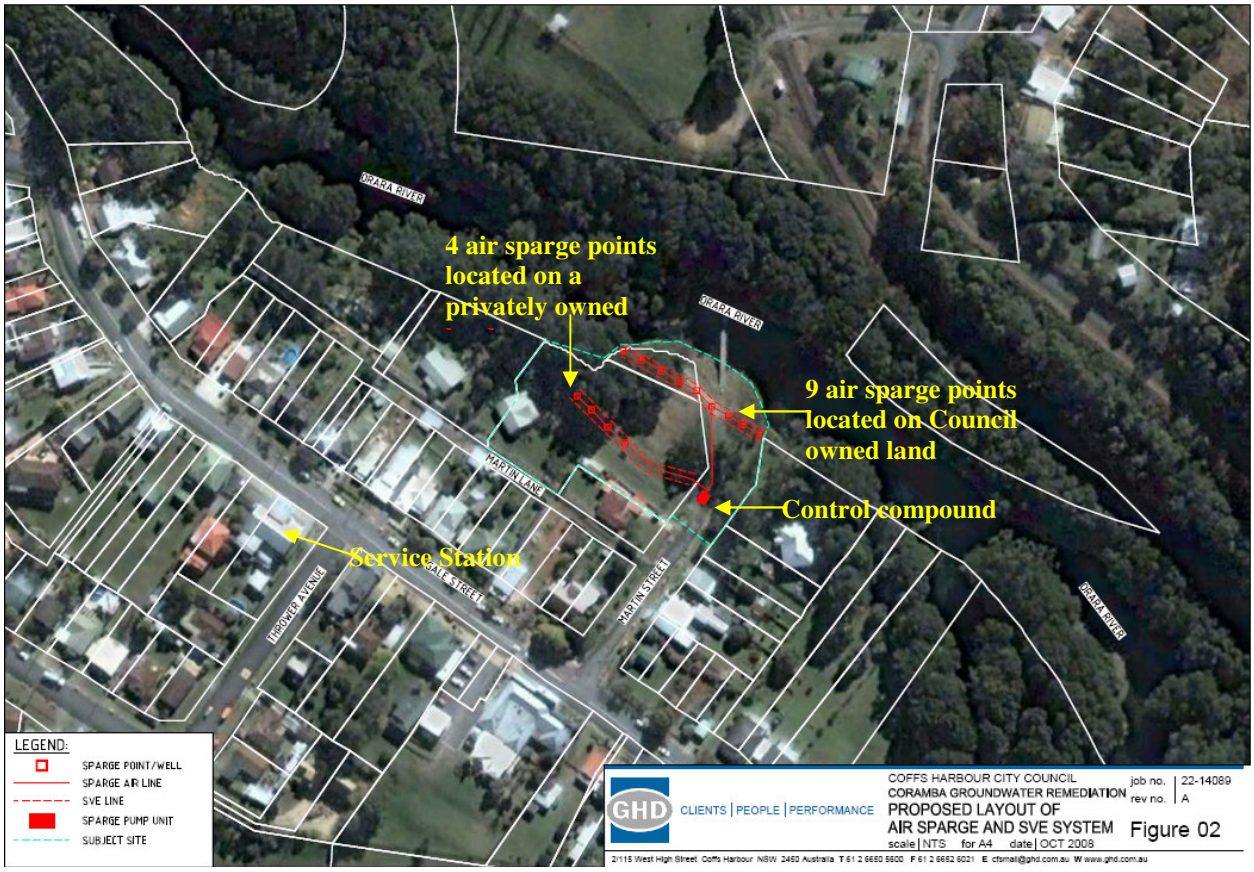

Figure 2 – Project Layout

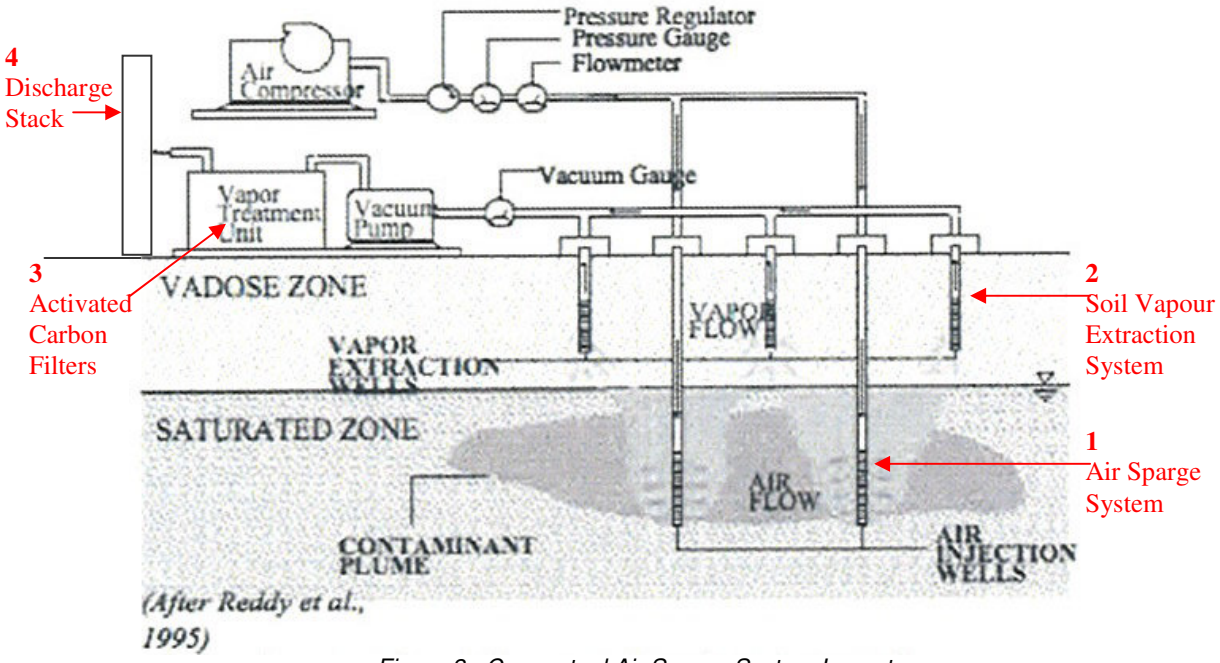

Figure 3 –Conceptual Air Sparge System Layout

3. STATUTORY CONTEXT

3.1 Major Project

The proposal is classified as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), because it is development for the purpose of remediation of land that is category 1

remediation work on a remediation site, and therefore triggers the criteria in Clause 28(1) of Schedule 1 of *State Environmental Planning Policy (Major Projects) 2005*.

Consequently, the Minister for Planning is the approval authority for the project.

3.2 Permissibility

The site is partially zoned 7A Environmental Protection (Habitat and Catchment) under the *Coffs Harbour Local Environmental Plan 2000*, and the proposed remediation works are permissible with consent in this zone.

The site is also partially zoned 2(a) Low Density Residential zone under the *Coffs Harbour Local Environmental Plan 2000.* Development for the purpose of remediation is prohibited within this zone.

Notwithstanding the provisions of the local environmental plan, *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) stipulates that remediation works are permissible on the land, "despite any provision to the contrary in an environmental planning instrument, except as provided by clause 19(3)". Clause 19(3) is not relevant in this instance as the proposed remediation works are part of a project that is defined as "category 1 remediation works". The proposal is therefore permissible on the site.

Consequently, the Minister may approve the project.

3.3 Exhibition and Notification

Under Section 75H(3) of the EP&A Act, the Director-General is required to make the Environmental Assessment (EA) of a project publicly available for at least 30 days.
After accepting the EA for the project, the Department:

- made it publicly available from 26 February 2009 until 30 March 2009:
  - on the Department's website; and
  - at the Department's Information Centre, Coffs Harbour City Council's Offices and the Nature Conservation Council Offices;
- notified landowners in the vicinity of the site about the exhibition period by letter;
- notified relevant State government authorities and Coffs Harbour City Council by letter; and
- advertised the exhibition in the Coffs Harbour Advocate.

This satisfies the requirements in Section 75H(3) of the EP&A Act.

3.4 Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is to include a copy of or reference to the provisions of any:

- *State Environmental Planning Policy* (SEPP) that substantially govern the carrying out of the project; and
- environmental planning instrument that would (but for Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project.

The Department has considered the proposal against the provisions of relevant environmental planning instruments (see Appendix F). The Department is satisfied that none of these instruments substantially govern the project, and that the project can be conducted in a manner that is consistent with the aims, objectives and provisions of these instruments.

3.5 Objects of the Environmental Planning and Assessment Act 1979

The Minister's consideration and determination of the application must be consistent with the relevant provisions of the EP&A Act, including the objects set out in the Act's section 5. The objects of most relevance to the Minister's decision on whether or not to approve the proposed project are found in section 5(a)(i), (ii), (iv), (vi) and (vii). They are:

> *The objects of this Act are:*
> *(a) to encourage:*
> *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
> *(ii) the promotion and co-ordination of the orderly and economic use and development of land,*

(iv) the provision of land for public purposes,
(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
(vii) ecologically sustainable development".

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the application.

The assessment integrates all significant economic and environmental considerations and seeks to avoid any potential serious or irreversible damage to the environment.

Coffs Harbour City Council has also considered a number of alternatives to the proposed project (including the alternative of not proceeding), and considered the project in the light of the principles of ESD.

The Department is satisfied that the project is consistent with the objects of the EP&A Act.

3.6 Statement of Compliance

Under Section 75I of the EP&A Act, the Director-General's report is required to include a statement relating to compliance with the environmental assessment requirements for the project.

The Department is satisfied that the environmental assessment requirements have been complied with.

4. ISSUES RAISED IN SUBMISSIONS

During the exhibition period, the Department received a total of 11 submissions on the project:

- 5 from public authorities (Council, the Department of Environment and Climate Change ((DECC) now part of the Department of Environment, Climate Change and Water (DECCW)), the Roads and Traffic Authority (RTA), the Department of Water and Energy ((DWE)now part of the DECCW) and the North Coast Area Health Service (NCAHS)); and
- 6 submissions from the general public.

A summary of the issues raised is provided below and a full copy included in Appendix D.

4.1 Public Authorities

The former DECC (now DECCW) does not object to the proposal, however it requested further information regarding stack emission rates and the design and operation of the proposed activated carbon beds. DECCW has subsequently provided recommended conditions of approval.

The former DWE (now DECCW) provided comments and recommended conditions of approval regarding the licencing, monitoring and riparian works requirements.

The NCAHS raised concerns regarding air, noise and natural attenuation monitoring requirements, community consultation, triggers for the end of the remediation works and the statement of commitments.

Council requested that a Construction Traffic Management Plan be prepared and that the flora species list for the site revegetation be amended to include the sub-tropical coastal floodplain forest endangered ecological communities.

The RTA did not object or provide any comments on the project.

4.2 General Public

Out of 6 submissions from the local residents, 2 objected, 2 raised issues of concern and 2 supported the project. The objections and concerns raised were mainly in relation to odour, noise, public access and the proposed remediation strategy. The proposal was supported on the grounds that it has been delayed long enough and should be implemented as a matter of urgency to address the risk to human health and the environment.

4.3 Response to Submissions

Council has provided responses to the issues raised in submissions (see Appendix C), as well as revised Statement of Commitments for the project. These have been made publicly available on the Department's website.

The Department has considered the issues raised and the Proponent's response in its assessment of the project and has incorporated appropriate conditions of approval to manage any residual concerns.

5. ASSESSMENT

5.1 Remediation Strategy

The *Contaminated Land Management Act 1997* (CLM Act), which is administered by the DECCW and local Councils, provides a regime for investigation and where necessary remediation of land affected by contamination that poses a risk of harm to human health or the environment.

In 2002, the DECCW identified a seepage of hydrocarbon contaminated groundwater at 5 Martin Street, Coramba entering a backwater channel of the Orara River. The levels of hydrocarbon were determined to pose a risk to human health and the environment, and DECCW consequently declared the site a "Remediation Site" in 2003 under the CLM Act.

Following the investigation undertaken by WSP Environmental Pty Ltd (WSP) in 2006 to determine the source and the extent of groundwater contamination, WSP prepared a Remediation Action Plan (RAP) in accordance with the CLM Act. The RAP identified several soil and groundwater remediation technologies. However, a staged approach to remediation has been recommended by the ICWP and subsequently adopted by Council, following consultation with DECCW and community representatives.

The installation of an air sparge and soil vapour extraction and treatment system in the upper and lower alluvial terraces, adjacent to the Orara River has been selected as the preferred remediation strategy having considered the cost, technology, contamination type and media being remediated.

The RAP, including the preferred remediation strategy has been reviewed by an independent site auditor who recommended that pilot testing of the preferred remediation option be undertaken to confirm its suitability prior to its full implementation. The auditor recognised the need to initiate the remediation of the site as contamination has been observed seeping into the river, and recommended that remediation works be implemented in stages, whereby the air sparge and soil vapour extraction and treatment system is initially conducted in the alluvial sediments and if the results are favourable, remediation works could then be expanded for the bedrock/residual clay system.

Council subsequently commissioned WSP to undertake pilot testing of the air sparge and soil vapour extraction and treatment system in order to verify its suitability and to develop design parameters for the full scale remediation system. Pilot testing was undertaken in March 2008 and included installation of three air sparges and three soil vapur extraction points as well as a number of additional monitoring wells around the air sparge and soils vapour extraction points. Two air sparges and soil vapour extraction points were located on a Council owned reserve at the end of Martin Street and one air sparge and the soil vapour extraction point was located on privately owned land at 5 Martin Street, adjacent to the Orara River.

The results of the pilot testing confirmed that the proposed remediation strategy is the most economical and most appropriate technology to remediate the contaminated groundwater to acceptable levels. Based on this pilot study the proposed remediation system has been designed to intercept contaminated groundwater before it enters the river and at the same time reduce hydrocarbon vapour being released to the atmosphere. The proposed alignment has been positioned to capture the zone of greatest groundwater impact (i.e. most contaminated) as identified in historical groundwater monitoring events.

Whilst the identified contaminated groundwater plume extends from the Service Station, at 33 Gale Street, Coramba, with the highest concentrations of hydrocarbons reaching down towards the Orara River, the full extent of the plume has not been delineated (i.e. north-west, west and south of the Service Station). However, both the Department and DECCW consider that the full delineation of the contaminated groundwater plume would prove of little benefit, primarily because the groundwater flows towards the river and Stage 1 remediation works are designed to intercept the groundwater where it is most contaminated before it enters the river.

The EA has also indicated that, given the current knowledge of the level of contamination and the groundwater flow rate, it would take 2-3 years of treatment before the groundwater seeping in the river is complying with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC/ARMCANZ, 2000) and the *Australian Drinking Water Guidelines* (NHMRC/NRMMC, 2004).

However, the Department considers that there is some uncertainty regarding the duration of the remediation works, given that the full extent of the contaminated groundwater plume is unknown. As a result the Department has recommended that Council be required to continue with remediation works until DECCW and the site auditor are satisfied that the contaminated groundwater no longer poses a risk to human health and the environment. In addition, the Department has recommended that Council be required to undertake groundwater monitoring to ensure the on-going effectiveness of the groundwater treatment process and to develop contingency measures should this monitoring show that the project is inadequate in reducing the risk to human health and the environment.

Whilst some submissions raised concerns with the proposed remediation strategy, both the Department and DECCW consider that the proposed remediation strategy is appropriate and would minimise risks to human health and the environment by minimising exposure of contaminated groundwater.

The Department is satisfied that with the recommended conditions of approval, any potential impacts on human health and the environment would be adequately managed.

The Department also considers that there are a range of viable contingency measures that could be implemented to improve the Stage 1 remediation system if subsequent monitoring shows that the system is inadequate in reducing the risk to human health and the environment. These contingency measures include Stage 2 remediation works which may involve installing an interception trench and/or pumping bores, which are designed to intercept and collect contaminated groundwater, which is then pumped to the surface and treated.

5.2 Other Issues

The Department has assessed the merits of the project, and is satisfied that any other impacts of the project are relatively minor and can be suitably managed to ensure an acceptable level of environmental performance. A summary of the Department's assessment of other issues is presented in Table 2.

Table 2: Assessment of Other Issues

Aspect	***Consideration***	***Recommended Conditions***
Soil and Water	• To minimise erosion and sedimentation impacts during construction, Council has committed to implement standard soil and erosion measures. • To minimise flooding issues during operation, Council has located the site compound (housing a blower and a compressor) above the 100-year flood level and designed the soil vapour extraction system (located within a 2-year flood event) to cease operation (via a knock-out drum) during the 2-year flooding events. • The Department considers the soil and water impacts of the project to be negligible. • The project would improve the water quality in the Orara River by removing the contaminated groundwater currently seeping into the river.	• Recommended conditions of consent require Council to: ➢ implement erosion and sediment controls; ➢ store all chemicals, fuels and oils in accordance with the relevant Australian Standards and DECCW's guidelines; and ➢ implement a Groundwater Monitoring and Treatment Program to monitor the effectiveness of the remediation.
Air Quality	• The AUSPLUME air quality modelling indicated that DECCW's criteria for volatile total petroleum hydrocarbons, BTEX (Benzene, Toluene, Ethyl benzene and Xylene), and Polycyclic Aromatic Hydrocarbons emissions would be met at the nearest sensitive receivers. • In addition, extracted soil vapour would be treated with two activated carbon beds, which are assumed to have 95% removal efficiency, before being discharged via a 3m stack. • DECCW has indicated that the assessment has satisfactorily addressed any environmental impacts. • The Department considers that construction and operation air quality impacts are minimal and has implemented DECCW's recommendations into the recommended conditions of approval to ensure any potential/residual impacts are adequately managed.	• Recommended conditions of consent require Council to: ➢ minimise dust generated by the project; ➢ comply with project specific air emissions limits; and ➢ undertake air quality monitoring to evaluate compliance with the air emissions limits.
Odour	• Odour emissions associated with the exposure of contaminated soil during construction would be covered and/or treated with a surfactant.	• Recommended conditions of consent require Council to: ➢ prevent offensive odour

Aspect	Consideration	Recommended Conditions
	• Whilst the general public has raised concerns with odour emissions associated with the hydrocarbon contamination in the area, this project is designed to intercept contaminated groundwater before it can enter the river, and in doing so would assist in the reduction of odours associated with hydrocarbon vapour release to the atmosphere. In addition, any residual odour emissions associated with the treatment system are expected to be minimal due to a high level of treatment (i.e. 95% removal efficiency). • The Department considers that present odour impacts would be reduced due to the proposal and that the proposed remediation technology would not result in any additional odour emissions.	emissions; and ➢ ensure that an odour suppressant is available on site during the works, for use if required.
Noise	• Construction noise may exceed the DECCW's construction noise goals at nearby receivers. However, construction works would be short in nature and to further minimise impacts, Council has committed to undertake works during daytime hours only, with no works to be undertaken on Sundays or Public Holidays. • The assessment also indicated that operational noise associated with the operation of an air blower and a compressor (located inside the equipment compound) would meet the relevant DECCW's operational noise criteria (i.e. 35dB(A)). • The Department has in consultation with DECCW recommended conditions requiring Council to verify compliance with the noise limits during commissioning of the project and to develop further mitigation measures in case of non-compliance.	• Recommended conditions of consent require Council to: ➢ comply with construction hours specified in the consent; ➢ comply with project specific noise limits; and ➢ undertake noise monitoring during commissioning to verify compliance with the noise limits.
Traffic	• The site is accessed via Martin Street. • Construction works would generate 3-5 vehicle trips in total, ranging from a 4 wheel drive to a large rigid truck and a semi-trailer. • Operation would result in infrequent access to the site by 4 wheel drives for maintenance purposes. • The surrounding road network has sufficient capacity to accommodate the traffic generated by the project. • Access to the foot bridge which crosses the river and provides pedestrian access to the northern part of Coramba would be maintained during construction and operation of the project. • The Department considers that construction and operation traffic impacts are minimal.	• A condition of consent requires Council to ensure that no trucks queue or park on the public road network.
Biodiversity / Final Landform	• The site is generally cleared and has been historically and currently used for residential and public use. • Whilst the proposed works would require some vegetation clearing, no native vegetation would be cleared and no significant habitat for any native fauna, including the Koala would be impacted by the project. • To minimise any impacts on fauna, Council has developed, as part of the EA, a Vegetation Management Plan that would be implemented to revegetate the site with locally endemic tree and shrub species, including the sub-tropical coastal floodplain forest endangered ecological communities (EEC) consistent with the EEC on the adjacent land, which would result in an increase in the biodiversity of the riparian corridor and potential habitat for fauna species. • The Department considers the proposed works would not only enable the replacement of noxious weeds with native species but would also improve the health of river through improving quality of the groundwater seeping into the river.	• A condition of consent requires Council to revise the Vegetation Management Plan submitted with the EA, in accordance with the response to submissions report.
Visual	• The proposed remediation works will result in some visual impacts during construction, however, impacts would be short term and disturbed areas would be revegetated with locally endemic tree and shrub species. • Whilst the air sparging and soil vapour extraction systems would be installed below ground, a 3x3x2.5m, colourbond	• Recommended conditions of consent require Council to comply with the Australian Standard for *Control of Obtrusive Effects of Outdoor Lighting*, and ensure that lighting associated

Aspect	Consideration	Recommended Conditions
	control compound, including a 3m high stack to discharge the treated airstream would be located on the Martin Street road reserve fronting 5 Martin Street. • The assessment indicated that this is the most suitable location due to access to power, proximity to the sparge system, distance from the river (to minimise flood damage risk) and proximity to adjacent properties. • Nevertheless, to further minimise visual impacts, Council has committed to use quality materials to build the compound and to paint it in appropriate colours to complement its location adjacent to the existing dwellings in Martin Street. • The Department considers that visual impacts are minimal and manageable.	with the project is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.
Waste	• Most of general construction waste, including small quantities of excavated soil and rock, cleared vegetation, concrete, packaging materials, steel and timber surplus and general garbage would be recycled on or off-site, however should any of the excavated soil be contaminated it would be disposed of at licensed facility. • Operational waste, mainly comprising activated carbon filters and water from the knock-out drum would be appropriately disposed off site. • The Department considers that construction and operation waste impacts are minimal and manageable.	• Recommended conditions of consent require Council to: ➢ implement measures to minimise the waste generated by the project; and ➢ classify all waste in accordance with the DECCW's relevant guidelines and dispose of to a facility that may lawfully accept the waste.
Heritage	• The project is located on land which adjoins a heritage conservation area (noted as the "Coramba Heritage Conservation Area" in Schedule 6, of the Coffs Harbour LEP 2000). However, given that the nature and extent of the proposed works are relatively minor and that the location of the works is isolated, the impact on the cultural heritage value of the area is considered low. • There are no known heritage listed items present on site. • The Department considers that heritage impacts are minimal and manageable.	• A recommended condition of consent requiring Council to cease work in the immediate areas of uncovered Aboriginal or historical objects, notify appropriate authorities and seek advice from an appropriately qualified professional.

6. RECOMMENDED CONDITIONS OF APPROVAL

The Department has prepared recommended conditions of approval for the project which are summarised in Appendix A and attached in Appendix B.

These conditions are required to:
- prevent, minimise, and/or offset adverse impacts of the project;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Council does not object to the imposition of the recommended conditions.

7. CONCLUSION

The Department has assessed the merits of the project having regard to the objects of the EP&A Act, and the principles of ecologically sustainable development, and where necessary conditions of approval were recommended to address any residual concerns.

With the implementation of the recommended conditions of approval, the Department is satisfied that the impacts of the project can be mitigated and/or managed to ensure an acceptable level of environmental performance.

The Department is satisfied that the project would reduce the risk to human health and the environment by minimising exposure of contaminated groundwater. The Department is also satisfied that the project would

improve the health of the Orara River and increase the biodiversity of the riparian corridor and habitat for fauna species.

Consequently, the Department believes that the project is in the public interest, and should be approved subject to conditions.

8. RECOMMENDATION

It is RECOMMENDED that the Director-General:

- consider the findings and recommendations of this report;
- approve the project subject to conditions; and
- sign the instrument of approval (see Appendix B).

Kitto 25/8/09

David Kitto
Director

23.8.09

Chris Wilson
Executive Director

Richard Pearson
Deputy Director-General

SHaddad

Sam Haddad
Director-General

28/8/2009

APPENDIX A – SUMMARY OF CONDITIONS OF APPROVAL

Aspect	*Condition*	*Requirement*
Schedule 2: Administrative Conditions		
Obligation to minimise harm to the environment	1	Requires implementation of reasonable and feasible measures to prevent and/or minimise any harm to the environment.
Terms of approval	2-4	Requires carrying out of the project in accordance with project documentation.
Limits of approval	5	Requires an approval from DECCW and Site Auditor prior to carrying out of the project
	6	Requires an approval from DECCW prior to intercepting of the groundwater.
	7	Requires an approval from DECCW and Site Auditor prior to ceasing of the project.
Structural adequacy	8	Structural adequacy of buildings and structures
Demolition	9	Demolition requirements
Protection of public infrastructure	10	Public infrastructure protection requirements
Operation of Plant and Equipment	11	Operation of plant and equipment requirements
Management Plans/Monitoring Programs	12	Progressive submission of any environmental management plan or monitoring program
Schedule 2: Specific Environmental Conditions		
Soil and water	13-16	Requires compliance with Sections 124, 125, 126 and 128 of the *Protection of the Environment Operations Act 1997* and bunding requirements and requires preparation of a Groundwater Monitoring and Treatment Program.
Air quality	17-22	Requires dust minimisation, compliance with air emissions limits, Section 129 of the *Protection of the Environment Operations Act 1997* and use of odour suppressant, if necessary and requires preparation of an Air Quality Monitoring Plan.
Transport	23	Prohibits vehicles queuing on public roads.
Noise	24-27	Provides working hours for construction, noise limits for operation and monitoring of compliance.
Cultural heritage	28	Cultural heritage management requirements
Biodiversity	29	Requires revision of a Vegetation Management Plan, developed as part of the EA
Waste	30	Requires classification of all waste generated on site in accordance with the DECCW's *Waste Classification Guidelines,* and disposal at a facility that may lawfully accept the waste.
Environmental Management Strategy	31	Requires preparation and implementation of an Environmental Management Strategy
Incident Reporting	32-33	Requirement to report incidents
Appendix		
Statement of Commitments	1	Statement of Commitments

APPENDIX B – CONDITIONS OF APPROVAL

APPENDIX C – RESPONSE TO SUBMISSIONS

APPENDIX D – SUBMISSIONS

APPENDIX E – ENVIRONMENTAL ASSESSMENT

APPENDIX F – CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

Section 75I of the *Environmental Planning and Assessment Act 1979* requires that reference be made to the provisions of any environmental planning instrument that would (but for Part 3A of the Act) substantially govern the carrying out of the project. Consideration of the project in the context of the objectives and provisions of the relevant environmental planning instruments is provided below.

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. The proposed project is defined as "category 1 remediation works" under SEPP 55 and involves remediation of hydrocarbon contaminated groundwater. The Department considers that the proposal consistent with the aims of the SEPP 55 as it would reduce risk of harm to human health and the environment by minimising exposure of contaminated groundwater.

North Coast Regional Environmental Plan 1988

The site is located in the area to which the *North Coast Regional Environmental Plan 1988* (REP) applies. The REP specifies regional policies to control development in the region to ensure natural environment is protected while encouraging an efficient and attractive built environment and guiding development into a productive yet environmentally sound future. The Department is satisfied the proposal is consistent with the aims and objectives of the REP. The proposal would improve the health of the Orara River as hydrocarbon contaminated groundwater would be intercepted and treated before it can reach the river. The proposal would also enable the replacement of noxious weeds with locally endemic tree and shrub species consistent with the Ecologically Endangered Communities on the adjacent land, which would result in an increase in the biodiversity of the riparian corridor and potential habitat for fauna species within a rural residential matrix.

Coffs Harbour Local Environmental Plan 2000

Coffs Harbour Local Environmental Plan 2000 (LEP) provides development controls for development in the Coffs Harbour local government area. The proposed site is partially zoned 7A Environmental Protection (Habitat and Catchment) and partially zoned 2(a) Low Density Residential. The proposed remediation works are identified as "environmental protection works" under both zones. The proposal would improve the health of the Orara River and would result in an increase in the biodiversity of the riparian corridor and potential habitat for fauna species within a rural residential matrix. The Department is satisfied with the consideration of LEP in the EA.