



Environmental Authorisation for the Dagsoom Coal Mining Project near Ermelo, Mpumalanga Province

Notification of Intent to Develop

Project Number:

DAG5603

Prepared for:

Dagsoom Coal Mining (Pty) Ltd

May 2019

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1 Introduction

Dagsoom Coal Mining (Pty) Ltd (hereinafter Dagsoom) propose to develop an underground coal mine on the farm Twyfelaar 298 IT near Ermelo in the Mpumalanga Province ("the Project)". Dagsoom intends to apply for a Mining Right in terms of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA) and will require Environmental Authorisation (EA) and an Integrated Water Use Licence (IWUL) in compliance with:

- The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA);
- The NEMA Environmental Impact Assessment (EIA) Regulations, 2017 (Government Notice Regulations [GN R] 982 as amended by GN R 326);
- The National Environmental Management: Waste Act, 2008 (Act No. 56 of 2008) (NEM:WA); and
- The National Water Act, 1998 (Act No. 36 of 1998) (NWA).

To this end, Dagsoom appointed Digby Wells Environmental (hereinafter Digby Wells) to undertake the necessary EIA process, including a Heritage Resources Management (HRM) process in support of the EIA. This Notification of Intent to Develop (NID) serves to meet the regulatory requirements of the aforementioned legislation and Section 38(1) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

2 Project Details

Dagsoom held an approved Prospecting Right¹ for the farm Twyfelaar 298 IT. They propose to develop an underground coal mine using bord and pillar mining methodologies, accessing the coal resource² through a boxcut without any declines.

Dagsoom intend to concentrate all surface infrastructure on the eastern side of the Project area, around the mine access area. Proposed infrastructure includes:

- The underground mine accessed through a boxcut initially and adit later;
- A processing plant;
- An access and haulage road 9.6 m wide and 6 km long;
- Pollution control dam (PCD);
- A raw water pump station and process water pump station;
- Potable water treatment plant and associated tanks;

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¹ The Prospecting Right lapsed on 5 May 2019.

² The coal resource is sub-outcropping on the east and southern side of a hill towards the northern extent of the Project area. Refer to Plan 2 for the proposed infrastructure layout.



- Sewage treatment plant;
- Reverse osmosis plant;
- Workshops and cable workshop;
- Refuel bay;
- Weighbridge and weighbridge control room; and
- Ancillary infrastructure comprising:
 - Two ventilation fans;
 - A raw water pipeline (1.49 km long) and a process water pipeline;
 - Electricity supply line (22 kV), at a maximum length of 2.3 km;
 - Offices, ablutions and two change houses and
 - Access control office.

The relevant location details are presented in Table 1, Plan 1 and Plan 2. Relevant landowner details are included in Table 2.

Table 1: Project Location Details

Name of property/ies	Twyfelaar Coal Mine		
Street address or location (e.g.: Off R44)	North of the stretch of the National Road 2 (N2) between Hartebeestspruit and Sheepmoor.		
Erf or farm number/s	Portions 1 and 7 of the farm Twyfelaar 298 IT Remaining Extent (RE) of farm Klipfontein 283 IT		
Coordinates of approximate	26°42'25.43"S		
centre of project area	30°14'48.35"E		
Town or District	Approximately 8 km west of Sheepmoor		
Responsible Municipality	Msukaligwa Local Municipality (MLM) in Gert Sibande District Municipality (GSDM)		
Extent of property	Approximately 2 438.7 hectares (ha)		
Maximum extent of proposed development	To be determined based on results of prospecting activities. Approximately 250 ha		
Predominant land use/s of surrounding properties	Agriculture, mining, urban environment (small towns)		



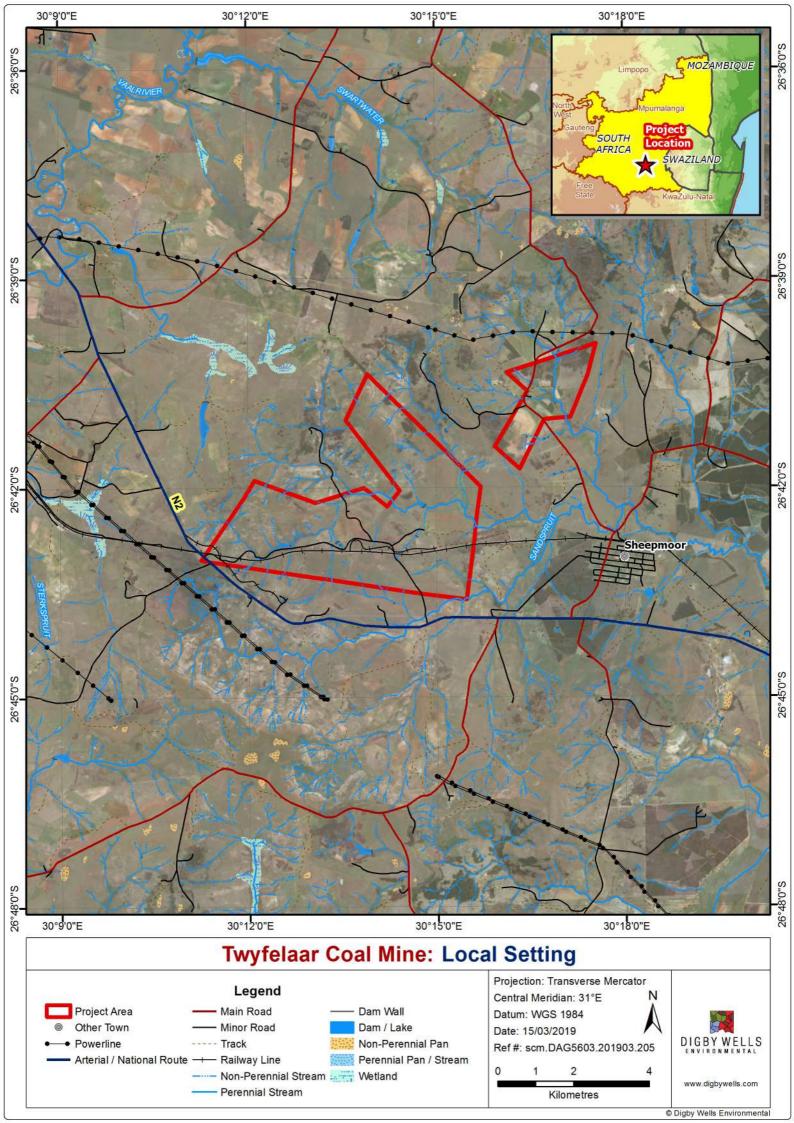
Table 2: Landowner details

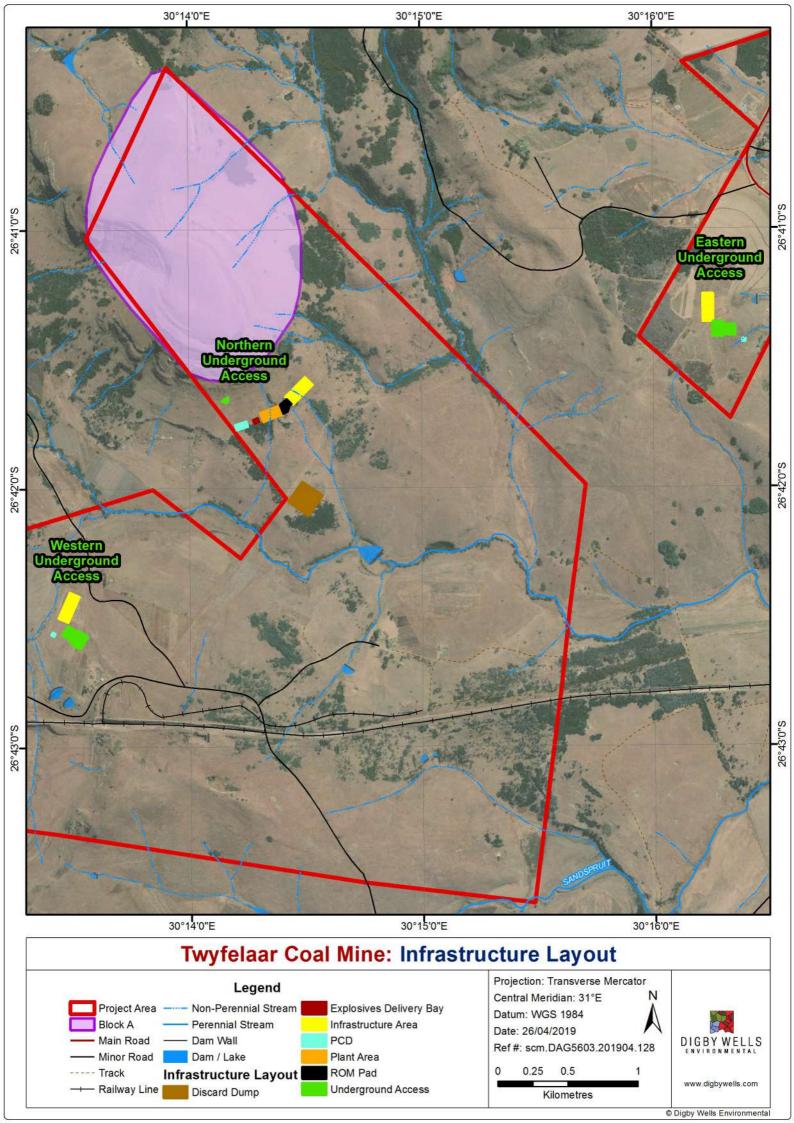
Name	Property	Notified ³
Nicolaas W.J. Vorster (deceased)	RE of the farm Klipfontein 283 IT	Pending
Bambanani-Sakhisizwe Communal Property Association	RE of the farm Twyfelaar 298 IT	Pending
	Portion 1 of the farm Twyfelaar 298 IT	Pending
National Government of the Republic of South Africa	Portion 2 of the farm Twyfelaar 298 IT	Pending
'	Portion 5 of the farm Twyfelaar 298 IT	Pending
Maachuene J. Mphethi	Portion 7 of the farm Twyfelaar 298 IT	Pending
Transnet Ltd	Portion 8 of the farm Twyfelaar 298 IT	Pending
Transite Liu	Portion 9 of the farm Twyfelaar 298 IT	Pending

3 Illustrative Material

The relevant illustrative material is presented as Plan 1 and Plan 2.

³ Digby Wells will notify all landowners of the proposed Project during the Public Participation Process (PPP), which is required in terms of the EIA process. The PPP has not been undertaken to date.







4 Assessment Process

Table 3 summarises the impact assessment processes that are currently being conducted for the proposed Project.

Table 3: Current assessment processes

Legislation (e.g. NEMA, MPRDA, etc.)	Current phase of assessment process (e.g. Scoping, EIA, etc.)	Authorities who has / will receive information	Capacity of Authorities
NEMA	Scoping	DMR	Licencing
NWA Scoping		Department of Water and Sanitation (DWS)	Licencing
MPRDA Scoping		DMR	Licencing
NHRA	Scoping	South African Heritage Resources Agency (SAHRA)	Commenting
NHIVA	Scoping	Mpumalanga Provincial Heritage Resources Authority (MPHRA)	Noting

These assessments are required in terms of legislated and / or regulated activities outlined in Sections 4.1 to 4.3 below.

4.1 NHRA Section 38(1) activities

The proposed development will include the following activities listed in Section 38(1) of the NHRA, which generally require heritage assessments be undertaken.

Table 4: NHRA Section 38 triggers

	NH	RA Section 38 (1) Activities / Triggers	Summary description (e.g. 500 m conveyor belt, open cast pit, etc.)
\boxtimes	а	Any linear development or barrier >300 m	Proposed 22kV powerline, approximately 2.3 km long. Raw water pipeline of approximately 1.49 km. Construction of a haul road of approximately 6 km.
	b	Any bridge or similar structure >50 m	
	С	Any development or activity that will change the character of a site:	



	NH	NHRA Section 38 (1) Activities / Triggers		Summary description (e.g. 500 m conveyor belt, open cast pit, etc.)
	\boxtimes	i	≥5 000m ² in extent	Development of a new mine in excess of 250 ha
		ii	Involving ≥3 existing erven/ subdivisions	
		iii	Involving ≥3 or more erven/ divisions consolidated within past 5 years.	
	d	Rez	zoning of a site ≥10 000m² in extent.	
\boxtimes	е	legi	er triggers, e.g.: in terms of other slation, (i.e.: National Environment nagement Act, etc.)	NEMA, MPRDA

4.2 EIA Regulations Listed Activities

This section details the proposed project activities to be undertaken on site, as well as the Listed Activities in terms of the NEMA EIA Regulations (2014, as amended). Table 5 details the project activities per phase (Construction, Operational and Decommissioning Phases), and Table 6 provides the identified Listed Activities as provided by the NEMA EIA Regulations, 2014 (as amended).

Table 5: Project Activities per Phase

Project Phase	Project Activity				
		Site/vegetation clearance;			
		Access and haul road construction;			
		Infrastructure construction;			
Construction Phase		Development of a box cut;			
		Power line construction;			
		Diesel storage and explosives magazine; and			
		Topsoil stockpiling.			





Project Phase	Project Activity			
Operational Phase	 Removal of rock (blasting); Stockpile (rock dumps, soils, ROM, discard dump) establishment and operation; Diesel storage and explosives magazine; Operation of the underground workings; Operating processing plant; Operating sewage treatment plant; Water use and storage on-site – during the operation water will be required for various domestic and industrial uses. Dams will be constructed that capture water from the mining area which will be stored and used accordingly; Storage, handling and treatment of hazardous products (including fuel, explosives and oil) and waste; and Maintenance activities – through the operations maintenance will need to be undertaken to ensure that all infrastructure in operating optimally and does not pose a threat to human or environmental health. Maintenance will include haul roads, pipelines, processing plant, machinery, water and stormwater management infrastructure, stockpile areas. 			
Decommissioning Phase	 Demolition and removal of infrastructure – once mining activities have been concluded infrastructure will be demolished in preparation of the final land rehabilitation; Rehabilitation – rehabilitation mainly consists of spreading of the preserved subsoil and topsoil, profiling of the land and revegetation; and Post-closure monitoring and rehabilitation. 			



Table 6: Listed Activities in terms of the NEMA

Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Listing Notice 1				
Site/vegetation clearance				
The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for-	Approximately 20 ha	X- 27	NEMA GN R 983	-
(i) the undertaking of a linear activity; or				
(ii) maintenance purposes undertaken in accordance with a maintenance management plan.				
All infrastructure including ventilation fans, change houses, offices, ablutions, workshops, cable workshop, weighbridge, weighbridge control room and access control office.				
The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for-	Approximately 20 ha	X-27	NEMA GN R 983	-
(i) the undertaking of a linear activity; or				
(ii) maintenance purposes undertaken in accordance with a maintenance management plan				



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Construction of access and haulage road				
The development of a road-				
(i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road- (a) which is identified and included in activity 27 in Listing Notice 2 of 2014;	The construction of an access and haul road with maximum width of 9.6 m and approximately 6 km long	X-24 (ii)	NEMA GN R 983	-
(b) where the entire road falls within an urban area; or				
(c) which is 1 kilometre or shorter.				
Pollution control dam				
The development of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50,000 cubic metres or more, unless such storage falls within the ambit of activity 16 in Listing Notice 2 of 2014.	Three PCDs, about 1.5 ha in total	X- 13	NEMA GN R 983	-



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Raw water pipeline The development of infrastructure exceeding 1000 metres in length for the bulk transportation of water or storm water- (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where- (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve; or (b) where such development will occur within an urban area.	Approximate 1.49 km long and 6 cm in diameter	X-9 (i) and /or (ii)	NEMA GN R 983	-
Process water The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes- (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where- (a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve; or (b) where such development will occur within an urban area.	This will be confirmed during the EIA Process	X-10 (i) and or (ii)	NEMA GN R 983	-



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Operating sewage treatment plant The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes- (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more; excluding where- (a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes inside a road reserve or railway line reserve; or (b) where such development will occur within an urban area.	Approximately 1 ha	X-10	NEMA GN R 983	NEM:WA GN R 92: Category B 4 (10)
Power line construction The development of facilities or infrastructure for the transmission and distribution of electricity- (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more	22kV line, approximately 2.3 km long	X- 11	NEMA GN R 983	-



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Listing Notice 2				
Site/vegetation clearance				
The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for-	confirmed during the	X-15	NEMA GN R 984	-
(i) the undertaking of a linear activity; or	EIA Process			
(ii) maintenance purposes undertaken in accordance with a maintenance management plan				
Mining of coal by underground mining				
Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including- (a) associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource; or (b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing.	To be confirmed following the results of prospecting activities on the farm Klipfontein 283 IT.	X- 17	NEMA GN R 984	-



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Infrastructure construction				
Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including-				
(a) associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource; or	This will be confirmed during the	X- 17	NEMA GN R 984	-
(b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing;	EIA Process			
but excluding the secondary processing of a mineral resource, including the smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.				
Diesel storage and explosive magazine The development of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.	Approximately 1 ha	X- 4	NEMA GN R 984	NEM:WA GN R 921: Category B 4 (1) and Category B 4 (10)
Water Use Licence The development of facilities or infrastructure for any process or activity which requires a permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent	All water management infrastructure on site. Extent to be determined.	X- 6	NEMA GN R 984	NEM:WA GN R 921: Category B 4 (11)



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Sewage treatment plant The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of 15 000 cubic metres or more.	Approximately 1 ha	X-25	NEMA GN R 984	-
Waste Activities				
Diesel storage and explosive magazine The storage of hazardous waste in lagoons	Approximately 1 ha	Category B 4 (1)	NEM:WA GN R 921	-
Refuel bays The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage.	Approximately 1 ha	Category B 4(1)	NEM:WA GN R 921	-
Sewage treatment plant, pollution control dam The construction of a facility for a waste management activity listed in Category B of this Schedule	Approximately 2 ha	Category B 4 (10)	NEM:WA GN R 921	-
Stockpiling (rock dumps) The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	Approximately 3 ha	Category B 4 (11)	NEM:WA GN R 921	-



Name of Activity	Areal extent of the activity	Listed Activity	Applicable Listing Notice	Waste Management Authorisation
Rock removal (blasting), Stockpiling (rock dumps, soils, ROM, discard dump, pipelines)				
Mining, exploration or production operation, resulting in the development of residue stockpiles and residue deposits"		Category B;		
Prospecting, mining, exploration or production operation, resulting in development of residue stockpiles and residue deposits. The management and control of these wastes must take place in accordance with the regulations for management and control of residue deposits and residue stockpiles or an integrated environmental authorization as provided for in terms of NEMA.	Approximately 6 ha	Listing 7, 10, 11	NEM:WA GN R 921	-



4.3 Identified and known heritage resources and potential impacts

Certain categories of heritage resource, if existing and identified, generally require heritage assessments to be completed before any development may take place. These categories may be formally or generally protected in terms of the NHRA. Table 7 presents an overview of such heritage resources identified within the Project area.

Table 7: Identified heritage resources in terms of Section 3 of the NHRA

	Section	Description
		Places, buildings, structures and equipment of cultural significance
	3(2)(a)	Description of resource: The historical built environment constitutes a significant portion of the cultural landscape; however, no such heritage resources have been identified within the Project area.
		Potential impact: None.
	- (-) (1)	Places to which oral traditions are attached or which are associated with living heritage
	3(2)(b)	Description of resource: None identified
		Potential impact: None
		Historical settlements and townscapes
	3(2)(c)	Description of resource: None identified
		Potential impact: None
	3(2)(d)	Landscapes and natural features of cultural significance
		Description of resource: None identified
		Potential impact: None
	3(2)(e)	Geological resources of scientific or cultural importance
		Description of resource: The Project area is underlain by geological strata of very-high palaeontological sensitivity.
		Potential impact: The Project may directly impact fossil heritage. This will be assessed in more detail.
\boxtimes		Archaeology and/or palaeontology (Including archaeological sites and material, fossils, rock art, battlefields & wrecks)
	3(2)(f)	Description of resource: Archaeological resources constitute a minor portion of the cultural landscape. No such heritage resources have been identified within the Project area.
		Potential impact: None





	Section	Description
		Graves and burial grounds (e.g. ancestral graves, graves of victims of conflict, historical graves & cemeteries)
	3(2)(g)	Description of resource: Burial grounds and graves constitute a significant portion of the cultural landscape; however, no such heritage resources have been identified within the Project area.
		Potential impact: None.
	3(2)(h)	Other human remains
		Description of resource: None identified
		Potential impact: None
	3(2)(i)	Sites of significance relating to the history of slavery in South Africa
		Description of resource: None identified
		Potential impact: None
		Movable objects
	3(2)(j)	Description of resource: None identified
		Potential impact: None



5 Recommendation

Table 8 presents a summary and motivation of the specialist recommendations.

Table 8: Specialist heritage recommendations

Is a Heritage Impact Assessment required?					□No				
If NC	If NO, provide motivation:								
Not a	Not applicable, further assessment is recommended.								
If YE	S, provide suggested components that	t may	be required or undertaken	during HIA					
\boxtimes	Archaeology		Architecture						
\boxtimes	Built Environment		Burial Grounds and Graves						
\boxtimes	Palaeontology		Public Participation						
	Townscapes		Visual Impact						
	Other:								
Recommendation made by:									
Nam	Name: Shannon Hardwick Name: Justin du Piesanie								
-	Capacity:JuniorHeritageResourcesCapacity:DivisionalManager:SocialandManagement ConsultantHeritage Services								