Title of Proposal - Isaac Plains East Extension

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Mining

1.2 Provide a detailed description of the proposed action, including all proposed activities.

Stanmore IP Coal Pty Ltd (Stanmore) is a wholly owned subsidiary of Stanmore Coal Ltd and the operator of the Isaac Plains Complex (IPC) mine. The IPC comprises the original Isaac Plains Mine (IPM) and Isaac Plains East (IPE) mining areas. Stanmore is proposing to extend the IPE mining area (referred to as the Extension) beyond the current approved disturbance footprint and increase production capacity at the IPM coal handling and preparation plant (CHPP).

The proposed Extension involves three key changes:
1- Eastward extension of the IPE open cut pits which will increase the duration of mining activities by approximately 4 years;
2- Additional required supporting infrastructure for mining such as haul roads, power lines and water management infrastructure; and
3- Modular upgrade to the CHPP and associated stockpiling areas to increase processing capacity to allow operational flexibility.

The proposed Extension involves approximately 472 ha of additional disturbance areas, an increase to the total production volume and an extends the duration of mining.

The proposed Extension of the IPE open cut pits will provide access to an additional 8.2 Mt of coking coal, used in steel making. Mining will continue to target the Leichhardt coal seam and progress down dip from west to east towards the boundary of the mining leases.
Vegetation and topsoil are stripped from the mine footprint areas prior to the development for immediate reuse or stockpiled for subsequent rehabilitation. Large vegetation is pushed first and windrowed alongside the area where topsoil will be stockpiled. Smaller vegetation and grasses are removed with the topsoil and stockpiled. Where necessary, stockpiles will be ripped and seeded to encourage water infiltration and prevent erosion. Weathered overburden will continue to be removed using dozer push, excavators and haul trucks where possible. Competent waste rock material will be drilled and blasted before being dozer pushed or removed by the dragline, the remaining overburden is pushed to spoil dumps and/or loaded to haul trucks and dumped in-pit into the western extent of the IPE pits, consistent with current IPC methods. The coal seam will be removed by excavators and loaded into haul trucks to be transported to the IPC ROM coal stockpile area for processing. The current EA approves final void areas resulting from IPE open cut pits.

The approved IPE open cut mining operations are scheduled to cease in 2024. The proposed

IPE open cut Extension will allow four years additional production, with a proposed scheduled closure in 2027 to 2028.

The Extension will continue to use the existing infrastructure and services at the IPC to process the additional extracted ROM material. New infrastructure associated with the Extension, includes:
• A powerline corridor with switchyard and powerlines;
• Haul roads and access roads, including to the east of the highwall and connections to the existing IPC road network
• New haul road to connect Pit 5 with Pit 4 extension (south of Smoky Creek), with a crossing of Smoky Creek;
• Operational levees along Smoky Creek and Billy's Gully
• Clean water diversion; and
• Laydown areas, topsoil stockpiles, stormwater drains, pit water pipelines and sediment controls.

Stanmore proposes to increase the CHPP capacity and stockpile area (ROM and product coal) to provide additional capacity for operational flexibility. Components of the Extension proposed to facilitate this include:
• A modular upgrade to the CHPP to increase ROM production capacity by 2 Mtpa; and
• Additional ROM and product coal stockpile area for the coal wash plant.

A new clean water diversion drain will be constructed to the north of the CHPP, which will reduce the amount of runoff potentially coming into contact with the CHPP and stockpile area.

The water management system can be broadly outlined as managing the following components: water supply and demand, water transfer and balance, operation of site dams (including release criteria) and monitoring of receiving water. The Extension will be integrated with current site operations including mine water management, sediment water management and raw water supply.

The mine water catchments will also expand with the IPE extension footprint area. To manage onsite water and flood risks the Extension will involve utilisation of existing voids for mine water storage, a number of new sediment dams, two flood levees and changed clean water diversions.

A key objective of the mine site water management system is to maximise the reuse of mine affected water captured onsite through surface water runoff and groundwater inflows.

Rejects and tailings from coal from the Extension will be managed under the existing, approved Tailings and Rejects In-pit Disposal Management Plan, as required under IPC environmental authority. There is sufficient volume in the tailings and rejects storage cells at IPC within existing voids to manage the volume of rejects from the Extension.

IPC has developed and implemented a Rehabilitation Management Plan (RMP) as required the environmental authority. An updated RMP that includes the Extension has been developed, and describes rehabilitation and closure for the whole of mine life for all activities at IPC, including the Extension. The proposed final landform (inclusive of the Extension) consists of three final voids at IPE and two final voids at IPM, with their associated rehabilitated overburden

emplacement areas.

Refer to Supporting Report Section 2 for additional information on the proposed Extension.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Approximate Granted Mining Leases for Isaac Plains Mine	1	-21.999845796192	148.15264970026
Approximate Granted Mining Leases for Isaac Plains Mine	2	-21.999686634273	148.15264970026
Approximate Granted Mining Leases for Isaac Plains Mine	3	-21.998890821996	148.12449723444
Approximate Granted Mining Leases for Isaac Plains Mine	4	-21.964985073465	148.10595780573
Approximate Granted Mining Leases for Isaac Plains Mine	5	-21.958298477223	148.0927398797
Approximate Granted Mining Leases for Isaac Plains Mine	6	-21.947312671814	148.09222489557
Approximate Granted Mining Leases for Isaac Plains Mine	7	-21.938555262404	148.10698777399
Approximate Granted Mining Leases for Isaac Plains Mine	8	-21.941262155618	148.13033372126
Approximate Granted Mining Leases for Isaac Plains Mine	9	-21.942535969894	148.14664155207
Approximate Granted Mining Leases for Isaac Plains Mine	10	-21.941421383027	148.15470963678
Approximate Granted Mining Leases for Isaac Plains Mine	11	-21.969283433439	148.15676957331
Approximate Granted Mining Leases for Isaac Plains Mine	12	-21.976447077653	148.1560829278
Approximate Granted Mining Leases for Isaac Plains Mine	13	-21.97612870114	148.1583145257

Area	Point	Latitude	Longitude
Isaac Plains Mine Approximate Granted Mining Leases for Isaac Plains Mine	14	-21.994434190721	148.18045884333
Isaac Plains Mine Approximate Granted Mining Leases for Isaac Plains Mine	15	-22.003188155237	148.16466599665
Isaac Plains Mine Approximate Granted Mining Leases for Isaac Plains Mine	16	-21.998731659004	148.15951615534
Isaac Plains Mine Approximate Granted Mining Leases for Isaac Plains Mine	17	-21.996185026851	148.15316468439
Isaac Plains Mine Approximate Granted Mining Leases for Isaac Plains Mine	18	-21.999845796192	148.15264970026

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).

The Extension will occur on granted mining leases (MLs) 70342, 700016, 700017, 700018, 700019, approximately 5 - 7 km east of Moranbah, central Queensland, and approximately 160 south west of Mackay.

The lot and plan of properties on which the Extension will occur are Lot 5 GV132 (freehold, used for pastoral purposes), Lot 17 SP261431 (freehold, used for pastoral purposes), Lot 15 SP261431 (freehold, used for pastoral purposes), Lot 4 SP252740 (freehold, used for pastoral purposes) and Broadleas Road Reserve (unformed road reserve).

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

472 ha project area and disturbance area for the Extension.

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title. Isaac Plains Complex, Peak Downs Highway, via Moranbah Qld 4744

1.8 Primary Jurisdiction.

Queensland

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

No

1.10 Is the proposed action subject to local government planning approval?

No

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 07/2020

End date 12/2038

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

An EPBC Act referral was lodged for IPM in May 2005 (EPBC 2005/2070). The referral decision was that the mine was not a controlled action and therefore it did not require approval under the EPBC Act. A Referral was lodged for IPE in 2016 (EPBC 2016/7827). IPE was deemed a controlled action and assessed on preliminary information. An approval was granted on 28 February 2018 for impacts to the following MNES:

Listed threatened species and communities (sections 18 & 18A); and Water resources/trigger (sections 24D & 24E).

The relevant threatened species present are Koala, Greater Glider, Squatter Pigeon and the Ornamental Snake.

The Environmental Protection Act 1999 (EP Act) is the key legislative framework for environmental management and protection in Queensland. The current environmental authority EPML00932713, held by Stanmore, covers the entire IPC. An EA amendment application for the Extension was submitted to the Queensland Department of Environment and Science (DES) in September 2019 in accordance with the requirements of the EP Act. All activities will occur on the existing IPC mining leases (MLs), and hence no new mining leases applications, under the *Mineral Resources Act 1989* (MR Act), are required.

Environmental Offsets Act 2014 (EO Act) - The EO Act, Environmental Offsets Regulation 2014 (EO Regulation) and the Queensland Environmental Offsets Policy (Version 1.7) (QEOP) (DES, 2019) comprise the Queensland Environmental Offsets Framework. According to this framework, it is necessary to provide offsets for any significant, residual impacts on Matters of State Environmental Significance (MSES). However, as stated in the EO Act, an offset for a prescribed environmental matter that has been assessed under the EPBC Act is not subject to offset conditions under the EO Act.

All activities on the existing mining leases are operated under a deemed water licence (IPM ML) or associated water licence (AWL) (IPE MLs), issued by the Department of Natural Resources Mines and Energy (DNRME) for take of associated water resulting from mining. The IPE mining leases, including the Extension area are subject to AWL (number 618429). All requirements of the water licence will be complied with for the Extension including any additional make good obligations and groundwater monitoring requirements identified in the groundwater assessment undertaken for this Referral. Stanmore has make-good agreements in place with all bores owners in potentially affected areas.

The Extension mining area is located in the Isaac Connors Groundwater Management Area (GMA) under Schedule 3 of the Water Plan (Fitzroy Basin) 2011 area.

The Environmental Protection (Water) Policy (EPP Water) provides a framework to protect and/or enhance the suitability of Queensland waters for various beneficial uses. Groundwater resources within the Extension lie within the Isaac River catchment as listed in Schedule 1 of the EPP Water.

The EPP Water provides water quality objectives (WQOs) to support and protect the various environmental values identified for waters within the Isaac River catchment.

Nature Conservation Act 1992 (NC Act) – The Act provides for the conservation of biodiversity and threatened species within Queensland. Specifically, critical habitat areas, management of protected areas, protection of wildlife and lists the protected flora and fauna species (extinct in the wild, endangered, vulnerable, near threatened), international wildlife and prohibited wildlife.

Refer to Supporting Report Section 1.1 for additional information.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

Community consultation and stakeholder engagement forms an integral component of Stanmore’s activities at IPC. The proponent has and will continue to build strong, lasting relationships with stakeholders, with the objective of providing accurate and timely environmental, social and economic Project information.

As the existing operator of the IPC, Stanmore has built solid relationships with the community of Moranbah and the surrounding region. Stanmore regularly engages with the community through its community grants program, sponsorship of community activities and active participation in a broad range of community events.

Communication and consultation methods applied by Stanmore have and will include: face to face meetings phone meetings written notices and communications information on the proponent’s website; and media releases.

The proponent has and will consult with:

relevant State departments;

Commonwealth Department of Environment and Energy (DoEE);

Isaac Regional Council;

all directly affected landholders;

the Barada Barna (relevant Native Title / Indigenous Party);

other resource companies with interests in the Project area.

Refer to Supporting Report Section 1.3 for additional information.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

An EA amendment application for the Extension was submitted to the Queensland DES in September 2019 in accordance with the requirements of the EP Act.

Refer to Supporting Report Section 1.1 for additional information.

1.15 Is this action part of a staged development (or a component of a larger project)?

No

1.16 Is the proposed action related to other actions or proposals in the region?

Yes

1.16.1 Identify the nature/scope and location of the related action (Including under the relevant legislation).

The IPC commenced operation in 2006 and produces export metallurgical (coking) coal. The mine was acquired by Stanmore in late 2015 and recommenced operations in early 2016 after a period of approximately 12 months in care and maintenance. The mine has approval, under the State EA, to extract up to 4 Mtpa of ROM coal. Product coal is loaded onto trains for transport from site via an on-site rail loop and train loading facility. Coal is railed along the Goonyella rail line to the Darlymple Bay Coal Terminal.

The original IPM comprised five open cut pits on ML 70342, which are exhausted or nearing exhaustion, and where mining has ceased. The expired pits are being backfilled or store mine affected water or mining wastes (rejects and tailings) as part of the mine operating management systems. Progressive rehabilitation of completed overburden emplacement areas in undertaken.

An approval was granted in 2018 to extend open cut mining operations into adjoining new mining lease areas to the east, this was known as the IPE Project. The IPE open cut mining commenced and will see the development of up to five open cut pits. Under the current mine

schedule, the IPE open cut pits will operate until 2024.

The IPC is supported by shared infrastructure including infrastructure for washing, processing and loading coal. The infrastructure at IPC includes the following:

CHPP with a 4 Mtpa production capacity and ROM coal stockpile area and product coal stockpiles;

Rail loop and train loadout facility;

Mine infrastructure area (MIA) including workshop, warehouse, vehicle washdown, servicing and refuelling facilities;

Administration office area;

Mine water management infrastructure (e.g. dams, pipelines, pumps);

Utility service connections including overhead powerlines and water supply pipelines;

Sewage and potable water treatment facilities; and

Haul roads and access roads.

Refer to Supporting Report Section 2.2 for additional information.

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

• Profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;

• Significant Impact Guidelines 1.1 – Matters of National Environmental Significance;

• Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.

2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
Koala (Phascolarctos cinereus)	In line with the IPE project EPBC Act approval conditions, habitat mapping criteria, any ‘forest, woodland or emerging shrubland, including

Species	Impact
	riparian and non-riparian environments, containing one or more of Angophora, Corymbia, Eucalyptus, Lophostemon and Melaleuca tree species' is considered potential habitat for the Koala (DoEE, 2018a). Therefore, all REs and regenerating, shrubby woodland (that contains emergent food trees) mapped within the Extension area, are considered to provide potential habitat for the Koala. The Extension would result in the removal of approximately 213.5 ha of habitat for the Koala mapped in the Extension area. The 213.5 ha includes 21 ha of vegetation which is not proposed to be cleared, however, it has been included in the Extension's direct impact footprint, to account for any indirect impacts from fragmenting this vegetation. Refer to Supporting Report Section 5.3.3 for additional information.
Greater Glider (Petauroides volans)	Riparian communities are considered to provide suitable habitat for the Greater Glider. These communities are considered to provide the greatest availability of large old hollow-bearing trees and provide the greatest connectivity with larger patches of remnant vegetation in the landscape. Riparian regional ecosystems (REs) 11.3.2, 11.3.4 and 11.3.25 were therefore assessed as habitat. In accordance with the conservation advice for this species and the IPE EPBC approval (EPBC 2016/7827) Greater Glider habitat is defined as forest, woodland or emerging shrubland, including riparian and non-riparian environments, containing one or more of Angophora, Corymbia, Eucalyptus, Lophostemon and Melaleuca tree species. The Extension would result clearing of approximately 213.5 ha of broader habitat (i.e. habitat defined by the conservation advice for this species and the IPE EPBC approval (EPBC 2016/7827)) for the Greater Glider in the IPC area. Of this, only 6 ha is considered to be preferred habitat within riparian areas. The 213.5 ha includes 21 ha of vegetation which is not proposed to be cleared, however, it has been included in the Extension's direct impact footprint, to account for any indirect impacts from fragmenting this vegetation. Refer to Supporting Report Section 5.3.2 for additional

Species	Impact
	information.
Squatter Pigeon (Geophaps scripta scripta)	Suitable habitat for the Squatter Pigeon is defined within the EPBC approval (EPBC 2016/7827) as ‘grassy woodland habitat in REs on land zones 3, 5 or 7, which are either: within 1 km of a permanent water body; or within 1 km of a Queensland Government mapped wetland or a greater than or equal to 3rd order stream’. This includes the majority of REs in the Extension area. The Extension would result in the removal of approximately 87 ha of habitat for the Squatter Pigeon (southern) mapped in the Extension area Refer to Supporting Report Section 5.3.1 for additional information.
Ornamental Snake (Denisonia maculata)	The Ornamental Snake habitat is as follows: • woodland or open forest habitat, which is included within any Queensland RE on Land Zone 4 and supports gilgai (melon-hole) mounds and depressions; or • woodland or open forest habitat, which is included within any Queensland RE on Land Zone 3 or 4, or an area of mapped regrowth on Land Zone 3 or 4, which is within 200 m of a mapped wetland or a greater than or equal to fourth order stream (as mapped by the Queensland Government) and supports an abundance of fallen logs (>30 cm in diameter) of >10 per 100 m x 100 m sample plot. There are no gilgai or wetlands within the IPC area, nor are there any areas of Land Zone 4. Smoky Creek is, however, mapped as a fourth order stream and so has some potential to provide habitat. The vegetation within 200 m of Smoky Creek was therefore assessed against the definition of Ornamental Snake habitat. It was found that habitat along Smoky Creek, supported greater than 10 logs, >30 cm in diameter, per hectare. The vegetation along Smoky Creek, the northern tributary and Billy’s Gully therefore meets this definition of Ornamental Snake habitat. The impacted clearing area within this riparian habitat is 6 ha. Refer to Supporting Report Section 5.3.4 for additional information.

2.4.2 Do you consider this impact to be significant?

Yes

2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?

Yes

2.5.1 Impact table

Species	Impact
Black-faced Monarch (Monarcha melanopsis)	All remnant vegetation (approximately 185.5 ha) in the Extension area potentially provides foraging habitat, to some extent, for this species and are preferred over cleared or heavily disturbed areas due to the structural diversity of habitats in remnant areas. The IPC area is unlikely to provide breeding habitat for this migratory species. The Extension will result in the removal of 185.5 ha of remnant vegetation. Refer to Supporting Report Section 5.4 for additional information.
Rufous Fantail (Rhipidura rufifrons)	All remnant vegetation (approximately 185.5 ha) in the Extension area potentially provides foraging habitat, to some extent, for this species and are preferred over cleared or heavily disturbed areas due to the structural diversity of habitats in remnant areas. The IPC area is unlikely to provide breeding habitat for this migratory species. The Extension will result in the removal of 185.5 ha of remnant vegetation. Refer to Supporting Report Section 5.4 for additional information.
Fork-tailed Swift (Apus pacificus)	All remnant vegetation (approximately 185.5 ha) in the Extension area potentially provides foraging habitat, to some extent, for this species and are preferred over cleared or heavily disturbed areas due to the structural diversity of habitats in remnant areas. However, cleared areas (approximately 258 ha) and non remnant areas (approximately 28.5 ha) in the Extension area may provide foraging habitat for the Fork-tailed Swift as these are predominantly aerial species. The IPC area is unlikely to provide breeding habitat for this migratory species. In the case of the Fork-tail Swift, this species is more likely to overfly and forage above the IPC area rather than use on-ground habitats. The Extension will result in the removal of 185.5 ha of remnant vegetation, 28.5 ha of non-remnant

Species	Impact
	vegetation and 258 ha of cleared areas. Refer to Supporting Report Section 5.4 for additional information.
White-throated Needletail (Hirundapus caudacutus)	All remnant vegetation (approximately 185.5 ha) in the Extension area potentially provides foraging habitat, to some extent, for this species and are preferred over cleared or heavily disturbed areas due to the structural diversity of habitats in remnant areas. However, cleared areas (approximately 258 ha) and non remnant areas (approximately 28.5 ha) in the Extension area may provide foraging habitat for the White-throated Needle-tail as these are predominantly aerial species. The IPC area is unlikely to provide breeding habitat for this migratory species. In the case of the White-throated Needletail, this species is more likely to overfly and forage above the IPC area rather than use on-ground habitats. The Extension will result in the removal of 185.5 ha of remnant vegetation, 28.5 ha of non-remnant vegetation and 258 ha of cleared areas. Refer to Supporting Report Section 5.4 for additional information.

2.5.2 Do you consider this impact to be significant?

No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

No

2.7 Is the proposed action to be taken on or near Commonwealth land?

No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

No

2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

Yes

2.9.1 Impact table

Water Resource	Impact
Surface Water - Hydrology	The Extension results in a reduction in 0.3% of Isaac River catchment or < 4% of local drainage catchments to IPC during mining. Impacts to flow will be negligible. Post mining the whole of IPC (of which the Extension is a apportion) would result in a reduction in 0.5% of Isaac River catchment to IPC. There is negligible change in flows from the small residual void catchment compared to total catchment area. The Extension will result in minor change in flood area, extent and velocity of local watercourses (Smoky Creek and Billy's Gully). These are mostly contained within the MLs or within the watercourses. Very minor increases to extent and depth beyond ML boundaries over agricultural lands, and does not pose risks to receptors or 3rd party infrastructure. No change to flood depths and velocities in Isaac River. Mine pits will be protected from flooding by a levee designed for the Q1000 flood event. The post mining landform does not result in any residual void areas within the Q10000 flood event. Modelling shows that current allocation of external water supplies will not be exceeded under any modelled climatic conditions, including very dry conditions. Refer to Supporting Report Sections 6.1, 6.2, 6.9 for additional information.
Surface Water - Quality	There is an existing, approved water management systems in place at IPC, into which the Extension will be integrated. Controlled releases of mine affected water undertaken in accordance with EA flow and quality criteria designed to protect environmental values and water quality objectives. Water balance modelling shows a very low probability of uncontrolled mine affected water releases - a 1% chance of discharging to receiving waters in very wet climatic conditions. Modelling demonstrates receiving water quality is within the receiving water contaminant trigger level. Sediment dams designed in accordance with recognised engineering standards. Releases from sediment dams in accordance with erosion and sediment control plan (ESCP) - Sediment affected water

Water Resource	Impact
	releases modelled to be within receiving water contaminant trigger level. Modelling for all residual void water levels demonstrates that residual void water levels will stabilise well below the surface overtopping level, therefor no releases of residual void water to surface waters. Haul road construction of water course crossings will be undertaken in the dry season (i.e. no flows). Low flow culverts with scour protection to minimize obstruction of waterway flow and control erosion. Construction in accordance with recognised standards and guidelines to minimise potential for sedimentation and allow for low flows. Fuel and chemical spill control procedures in place at IPC and will be implemented for the Extension. Locations of fuel and chemical storages are designed in accordance with relevant Australian Standards, bunded and with runoff control structures. Refer to Supporting Report Sections 6.1, 6.2, 6.9 for additional information.
Groundwater - Hydrology	Numerical groundwater modelling predicts that there will not be a reduction in water levels at landholder supply bores. The separating depth between the bed of creeks and the groundwater table means that there is no direct interconnection between the groundwater table and surface water flows in this area. Drawdown on the groundwater table will not impact the overlying surface drainage features. Drawdown of aquifers resulting in a reduction of groundwater availability, potentially impacting GDEs, if present. However there are no GDEs or springs identified within the zone of depressurisation, and there is no Alluvium present, being the most likely aquifer for GDEs. There are no significant stygofauna identified in the IPC area. Refer to Supporting Report Sections 6.3 to 6.9 for additional information.
Groundwater - Quality	Fuel and chemical spill control procedures in place at IPC and will be implemented for the Extension. Locations of fuel and chemical storages are designed in accordance with relevant Australian Standards, bunded and with runoff control structures. Modelling for all residual void water levels demonstrates that residual void water levels will stabilise below the groundwater recharge level and hence

Water Resource	Impact
	residual void water will not enter regional groundwater.

2.9.2 Do you consider this impact to be significant?

No

2.10 Is the proposed action a nuclear action?

No

2.11 Is the proposed action to be taken by the Commonwealth agency?

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

2.13 Is the proposed action likely to have ANY direct or indirect impact on any part of the environment in the Commonwealth marine area?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

IPC is located in the Brigalow Belt Bioregion. A total of 332 flora species were recorded during the field surveys for the IPE Project. The species inventory included (11% to 14%) exotic species, seven of which are listed as restricted pests under the Biosecurity Act. High average species diversity was recorded in the mixed eucalypt riparian woodland vegetation community (RE 11.3.25), the Clarkson's Bloodwood woodland community (RE 11.5.12), and the Poplar Box woodland community (RE 11.5.3). Moderate to high levels of species diversity (i.e. >70 species) were recorded in the Narrow-leaved Red Ironbark woodland (RE 11.5.9), Lancewood woodland (RE 11.7.2) and Mountain Coolabah woodland (RE 11.8.5) communities.

Ground-truthed vegetation mapping has been completed across IPE area, including the Extension area, for previous environmental assessments, and as required under conditions of approval.

Ten regional ecosystems (REs) were identified during previous field surveys within IPE. The ecological surveys recorded mostly Eucalyptus and Corymbia woodland species, regenerating shrubby woodland which supports emergent eucalypt species, and significant cleared and disturbed areas that do not support native vegetation communities. However, the vegetation immediately fringing Smoky Creek and its northern tributary has been retained with the majority of remnant communities being River Red Gum (Eucalyptus camaldulensis) woodland fringing creeks. Some sections of the riparian vegetation along both watercourses support a moderately to markedly fragmented vegetative cover that may not meet remnant criteria.

The Extension will result in clearing of approximately 185.5 ha of remnant vegetation and 28.5 ha of non-remnant vegetation. Of the remnant vegetation to be cleared, approximately 4.5 ha of RE 11.9.7a has a State regional ecosystem Of Concern conservation status with the remainder having least concern conservation status.

No threatened flora species listed under the EPBC Act or the NC Act were identified during surveys.

Database searches encompassing the IPC (i.e. at least 25 km radius from the project site boundary) identified various listed threatened, migratory and special least concern fauna species as potentially occurring within the IPC. Ecological surveys identfied that 4 species listed under the EPBC Act and NC Act as vulnerable, and one special least concern species listed under the NC Act, are present or likely to be present within the IPC area. These are the Koala, Greater Glider, Squatter Pigeon, Ornamental Snake and Short-beaked Echidna. Habitat assessments identified suitable habitat present within the IPC for these four threatened fauna species and one special least concern fauna species.

Aquatic ecology assessments found the aquatic values across the Smoky Creek and Billy's Gully are relatively poor with a low diversity of macroinvertebrate taxa inhabiting Creeks. There are no MNES aquatic species likely to be present in the IPC area.

Refer to Supporting Report Sections 4.6, 5.1, 5.2, 5.3, 5.6, 5.7 for additional information.

3.2 Describe the hydrology relevant to the project area (including water flows).

Surface Water

The IPC is in the Isaac River catchment, a sub-catchment of the upper Fitzroy Basin, the largest River basin draining the east coast of Australia, and comprises a number of sub-catchments. The IPC is near the headwaters of the Isaac-Connors sub-catchment. The greater Isaac-Connors sub-catchment area is approximately 22,364 km2 (to the Mackenzie River confluence), out of a total Fitzroy River catchment of 142,665 km2. That is, it represents around 15% of the overall Fitzroy River catchment. The catchment area of the Isaac River to the Extension area is around 1,922 km2. This represents around 1.3% of the overall Fitzroy River catchment and 8.6 % of the Isaac-Connors sub-catchment. The Extension area is approximately 5 km2 and represents 0.003% and 0.02% of the overall Fitzroy River and Isaac-Connors catchment areas, respectively.

The landscape in the vicinity of the IPC is characterised by three broad valleys that slope gently from elevated terrain in the north-east to the low-lying Isaac River floodplain in the south-west. These valleys are separated by hills and subtle ridgelines that form the local catchment boundaries of Smoky Creek, its unnamed tributary (herein called 'Smoky Creek Northern Tributary') and Billy's Gully. These watercourses enter the Isaac River approximately 10 km south-west of the IPC.

The IPC is traversed by Smoky Creek, its northern tributary and several minor drainage lines; and, Billy's Gully. Smoky Creek and its northern tributary converge to the west of the Extension area. Surface water flow within Smoky Creek is towards the southwest and joins the Isaac River approximately 7 km downstream of the IPC.

The Isaac River, Smoky Creek, Billy's Gully and their tributaries are ephemeral and characterised by short duration surface water flows that are typically restricted to periods during and immediately after rainfall events. The IPC areas are drained by Smoky Creek (catchment area of 164.9 km2) and Billy's Gully (catchment area of 67.5 km2) which discharge to the Isaac River downstream of the IPC mining lease boundary.

The landscape in the vicinity of the IPC is characterised by three broad valleys that slope gently from elevated terrain in the north-east to the low-lying Isaac River floodplain in the south-west. These valleys are separated by hills and subtle ridgelines that form the local catchment boundaries of Smoky Creek, its unnamed tributary (herein called 'Smoky Creek Northern Tributary') and Billy's Gully. These watercourses enter the Isaac River approximately 10 km south-west of the IPC.

Groundwater

The relevant hydrogeological units of the Extension area and its surrounds broadly comprise:

A shallow, highly weathered veneer of low permeability Tertiary sediments;

Tertiary basalt comprising highly weathered, low permeability basaltic clay and a relatively permeably basalt aquifer;

Low permeability Rewan Group sediments; and

Permian sediments comprising low permeability sediments and relatively permeable coal seams.

The main groundwater-bearing formations are the fresh Tertiary basalt and the coal seams of the Permian sediments. These formations have been significantly depressurised and impacted by mining and gas production activities at nearby operations. The Rewan Group is a low permeability formation that is a regionally recognised aquitard. The Tertiary sediments do not form a permanent, saturated aquifer, and persistent groundwater occurs only where these sediments extend below the regional water table. A targeted field investigation confirmed that no alluvium is associated with Smoky Creek or its tributaries in the vicinity of the IPC.

The groundwater table is currently located approximately 15 m below the bed of Smoky Creek in the north of the IPC, and approximately 10 m below the bed of Billy's Gully to the south. Groundwater is typically located several metres below the bed of these watercourses and drainage features and is therefore disconnected from surface water flows.

All formations within the Extension and its surrounds have a relatively low hydraulic conductivity.

Groundwater quality within the Extension and its surrounds ranges from moderately saline to brine. Local groundwater is therefore generally unsuitable for potable, irrigation or stock watering uses. Salinity is a key constraint to the usability of groundwater resources for productive applications such as potable supply, irrigation, stock watering and industrial applications.

Refer to Supporting Report Sections 4.1, 6.1, 6.3 for additional information.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

The majority of the Extension area is covered by the Grey Sodosol and Rudosol Sodosol complex soil types. Grey and Black Vertosols are present in low-lying areas in the northern part of the IPC. Brown Dermosols are also found in the northern part of the IPC. Brown Sodosols are found in association with creeks traversing the IPC. The prominent rise within the centre of the IPE comprises thin, stony Rusdosols and duplex Sodosols.

The vegetation characteristics are described above (Referral form part 3.1).

Refer to Supporting Report Sections 4.3, 4.4, 4.5, 4.6, 5.1, 5.2 for additional information.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

There are no outstanding natural features and / or important or unique values relevant to the Extension area.

Refer to Supporting Report Section 4.1 for additional information.

3.5 Describe the status of native vegetation relevant to the project area.

The Extension will result in clearing of approximately 185.5 ha of remnant vegetation and 28.5 ha of non-remnant vegetation. Of the remnant vegetation to be cleared, approximately 4.5 ha of RE 11.9.7a has a State regional ecosystem Of Concern conservation status with the remainder having least concern conservation status.

Table 4?1 of the Supporting Report details the RE types and area directly impacted by the Extension.

Surveys have not identified any ecosystems that meet the relevant criteria as a threatened ecological community (TEC) under the EPBC Act.

No threatened flora species listed under the EPBC Act or the NC Act were identified during surveys.

Refer to Supporting Report Section 4.6, 5.1, 5.2 for additional information.

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The topography in the proposed Extension area of the IPE open cut pits rises to the east with a 60m high hill located in the central region with the crest of the hill located approximately 150m to the east of ML 700017 boundary. The current surface elevation at the approved IPE pit eastern extents is approximately 260 mAHD. The Extension will mine the surface elevation of the eastern pit extent up to 290 mAHD. The remainder of the IPC mining area slopes to the west with relatively flat terrain and surface gradients are typically approximately 1 to 2%. A typical elevation for IPC is approximately 235 m AHD.

Refer to Supporting Report Section 4.1

3.7 Describe the current condition of the environment relevant to the project area.

The local landscape is dominated by grazing land, remnant vegetation and a number of open cut and underground mining operations and northern part of the mining leases (not proposed for mining activities) is traversed by linear infrastructure.

The land within IPC is a grazing property and has been extensively cleared for cattle grazing,

with minor remnant vegetation areas of poplar box woodlands, riparian vegetation associated with Smoky Creek, its northern tributary and Billy's Gully, and scattered patches of open and regenerating woodland vegetation. The land within IPC is predominantly used for coal mining with some grazing occurring on the eastern area until the open cut progresses into this area.

Seven declared weed species and five feral animal species were recorded during field surveys.

The Isaac River catchment has seen significant changes in land use over the past 50 years. Widespread land clearing for agriculture and coal mine development have occurred throughout the catchment. There is currently minimal third-party use of surface water from the Isaac River tributaries that drain the mining leases and there are no licensed surface water users along the waterways that traverse IPC.

There are 2 landholder bores within 5 km of the Extension area, with one bore not used and the other bore used for stock watering. Stanmore has make-good agreements in place with the owners of these bores.

Refer to Supporting Report Sections 4, 5.1, 5.6, 5.7, 6.1, 6.3, 6.4 for additional information.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

There are no Commonwealth Heritage Places or other places recognised as having heritage values, relevant to this action.

3.9 Describe any Indigenous heritage values relevant to the project area.

A Cultural Heritage Management Agreement (CHMA) was signed on 21 August 2018, by the proponent and the registered Aboriginal Parties (the Barada Barna People) covering all of the proposed Extension area. Management of Aboriginal cultural heritage would continue to be conducted in accordance with the CHMA.

Refer to Supporting Report Section 4.2.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

There are five privately owned freehold properties, one unformed, landlocked local road reserve (Broadlea Road Reserve) and three easements in the north that contain powerlines and a water pipeline. The proponent has in place compensation agreements with the landowners, and agreements with the easement holders, for gaining access to the land for the IPC, including the Extension.

Refer to Supporting Report Section 2.1 for additional information.

3.11 Describe any existing or any proposed uses relevant to the project area.

The land within IPC comprises grazing properties and has been extensively cleared for cattle grazing, with minor remnant vegetation areas. Coal mining occurs with the IPC area.

In order to reduce the amount of disturbed land at any one time, rehabilitation will be progressively undertaken on areas that cease to be used for mining or mining-related activities as soon as practicable after becoming available. The proposed final land use following rehabilitation is grazing, as per the current land use, with the exception of the residual void areas.

Refer to Supporting Report Sections 2.1, 2.6 for additional information.

Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

Water Management

The water management system can be broadly outlined as managing the following components: water supply and demand, water transfer and balance, operation of site dams (including release criteria) and monitoring of receiving water. The Extension will be integrated with current site operations including mine water management, sediment water management and raw water supply.

To manage onsite water and flood risks the Extension will involve utilisation of existing voids for mine water storage, a number of new sediment dams, two flood levees and changed clean water diversions.

A key objective of the mine site water management system is to maximise the reuse of mine affected water captured onsite through surface water runoff and groundwater inflows.

Mine affected water will be used as a priority in meeting makeup demand in the CHPP and for road watering.

Mine affected water from the active mining pits will be pumped to the N1 Pit (a former mine pit at IPM) for storage and later reuse for dust suppression and at the CHPP. Dust suppression water supplies are taken from S2 Sediment Dam.

The proposed sediment dams have been sized in accordance with the Best Practice Erosion and Sediment Control Guidelines (IECA, 2008). Water collected in the sediment dams will be managed in accordance with the erosion and sediment control plan (ESCP) and used for dust suppression or will release to receiving watercourses after a period of settling out of sediments, in accordance with the design specifications.

A series of clean water diversion drains are proposed to capture and divert catchment runoff water around the mining areas.

The proposed flood protection levees will be regulated structures designed with a crest level above the 0.1% annual exceedance probability (AEP) (Q1000 year) design event, in

accordance with the Manual for assessing consequence categories and hydraulic performance of structures (DES, 2016a). In accordance with EA requirements for regulated structures, the levees will be certified by a suitably qualified person (e.g. Registered Professional Engineer of Queensland) prior to design and construction.

Levees would be decommissioned and incorporated into the final landform following operations. There are no residual void areas within the Q1000 year flood zone. There will be a stable approved final landform design post mine life, including scour protection from flooding.

The results of the water balance modelling show that the currently approved water licence allocation of 920 ML/a is more than adequate under all historical climate sequences without requiring additional external water supplies

The combined forecast inventory for the N1 pit, being the key mine affected water storage over the period covering operations and post mine rehabilitation. This shows that N1 pit has sufficient capacity to store mine water for all climatic conditions from the entire IPC, including the Extension. The final void water balance modelling results show that all five of the final voids at IPM and IPE will not overflow and will remain as groundwater sinks over the long term.

The water management system is designed to only allow controlled releases to the receiving environment via the RP1 release point (located at RD1 dam). Controlled releases of mine affected water will be made in accordance with current, approved IPC EA release criteria, which only allow releases under certain flow and release quality conditions. The Extension will not result in a change in the EA approved mine affected water release criteria. The EA release criteria have been designed to protect environmental values and water quality objectives for receiving waters in accordance with established State approvals' processes.

In addition the EA requires monitoring of release contaminant trigger investigation levels for various metals, hydrocarbons and nutrients. Where downstream results exceed upstream results that an investigation must be carried out into the potential for environmental harm. The Extension will not result in a change in the EA approved release contaminant trigger investigation levels.

Construction of haul road crossings of creeks will managed by undertaking construction of crossings during periods when the creeks are dry, implementing appropriate erosion and sediment control works to prevent downstream sedimentation, undertaking works in accordance with the Riverine Protection Permit Exemption Requirements (DNRME, 2018) or under an approved permit, stabilising and/or revegetating of the final batters and embankments to minimise erosion. The proponent will minimise impact on fish passage through design, where possible, in accordance with the DAF Accepted development requirements for waterway barrier works (DAF, 2018). All crossings and levees decommissioned and rehabilitated post mine life, thereby removing infrastructure affecting flood flows.

Spill control procedures for fuels and chemicals are in place at IPC and will be implemented for the Extension. Locations of fuel and chemical storages designed in accordance with relevant Australian Standards, bunded and with runoff control structures.

IPC operates a network of upstream and downstream monitoring locations in the Isaac River, Smoky Creek and Billy's Gully (refer to Figure 6?1). These are monitored in accordance with

the EA approved monitoring requirements for water quality and water levels. IPC also monitors water quality in onsite water storages. The upstream monitoring stations in Smoky Creek and Billy's Gully are in operation, and will be added to the EA conditions as part of the EA amendment for the Extension.

The Extension is not modelled to result in drawdown of landholder bores. The proponent currently holds make good agreements for all landholder bores potentially impacted by IPC operations, as part of the approval of the associated water licence (AWL) for the existing mining activities at IPC.

IPC operates a groundwater monitoring program in accordance with the approved EA and AWL conditions. This includes the requirement for a Groundwater Monitoring and Management Plan (GMMP), which has been implemented across the IPC. To ensure ongoing monitoring of groundwater conditions in key formations, five new monitoring bores are proposed along the eastern margin of the IPC tenement. Groundwater levels and quality will be recorded on a quarterly basis, and investigations must be undertaken (in accordance with EA conditions) where bore levels or quality do not meet specified triggers or threshold levels.

The surface water and groundwater technical studies (Appendix 2 and Appendix 3, respectively) have defined and predicted the impacts from the Extension. The output from these assessments were then assessed against the criteria for significant residual impacts in the Significant impact guidelines 1.3: Coal seam gas and large coal mining developments – impacts on water resources (DoE, 2013) (the Guidelines) using a consequence and likelihood matrix to rate each impact's significance.

Refer to Supporting Report Section 6.9 for an assessment of the likelihood of significant impacts to water resources. This identified that the Extension would not result in a significant impact to the hydrology or water quality of surface water and groundwater resources.

Refer to Supporting Report Sections 2.4, 6.2, 6.6, 6.8, 6.9 for additional information.

Tailings and Rejects

The Tailings and Rejects In-pit Disposal Management Plan required under EA conditions sets out the detail of the reject management system implemented for the IPC. Rejects and tailings from the Extension will also be managed under this Plan. There is sufficient volume in the tailings and rejects storage cells to manage the volume of rejects from the Extension. Geochemical assessments have found that rejects (current and potential) are expected to generate pH-neutral to alkaline, low-salinity leachate when emplaced within the pit.

Refer to Supporting Report Section 2.5 for additional information.

Rehabilitation and Decommissioning

IPC has developed and implemented a Rehabilitation Management Plan (RMP) as required under the EA. An updated RMP that includes the Extension has been developed. The updated RMP describes rehabilitation and closure for the whole of mine life for all activities at IPC, including the Extension. The revised Rehabilitation Management Plan contains proposed milestones and milestone criteria for progressive rehabilitation, in accordance recent State legislative changes stemming from the Mineral and Energy Resources (Financial Provisioning) Act 2018 (MERFP Act).

IPC has developed and implemented and Rehabilitation Monitoring Program, as required under EA conditions. This established rehabilitation reference sites against which the success of rehabilitation can be compared on a regular basis.

Refer to Supporting Report Section 2.6 for additional information.

Fauna and Flora

Stanmore have an approved Species Management Program (SMP) for impacts to animal breeding places as required under Queensland's Nature Conservation (Wildlife Management) Regulation 2006 (Wildlife Regulation). This SMP covers species for which a breeding place is reasonably likely to be encountered during the proposed Extension works and includes fauna species listed as EVNT under the NC Act including the Koala, Greater Glider, Squatter Pigeon and Ornamental Snake as well as Special least concern species and least concern colonial avian breeders and Least concern colonial breeders (e.g. Short-beaked Echidna and bats). The SMP outlines management measures that will be employed during the pre-construction (clearing and site preparation), construction and operation stages of the Project to minimise direct or indirect impacts to native fauna and fauna breeding places. Each mitigation measure is also referenced to the species and/or fauna group most likely to require the management measure.

In addition, Stanmore has a Commonwealth approved Species Management Plan (SM Plan) (approved October 2018) for clearing associated with IPE. The SM Plan applies to the Koala, Greater Glider, Squatter Pigeon and Ornamental Snake, and will be adopted for the Extension. The SM Plan describes measures to manage and monitor impacts on these listed threatened species during vegetation clearance and mining activities.

The proposed disturbance footprint has been configured in a manner that avoids impacts to remnant vegetation, and significant fauna habitat as far as practical.

Clearing will be undertaken gradually over a period of approximately four years as the IPE open cut pit is progressed and disturbed areas will be rehabilitated once mining has been completed.

IPC has existing procedures in place for weed and feral animal control, and these will be applied to the Extension

The Extension mine plan limits clearing in the riparian corridor for the haul road crossings and

allows the riparian vegetation habitat corridors to essentially remain intact.

The receiving environment of Smoky Creek and Billy's Gully are monitored annually under the receiving environment monitoring program (REMP), required under the EA, to determine any potential impacts from historic releases and current operations to the environmental values of the receiving environment through the assessment of habitat condition, water and sediment quality and macroinvertebrate communities.

Refer to Supporting Report Sections 5.5, 5.6, 5.7, 5.8 for additional information.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

Assessments of significance of impacts have been conducted for each protected species likely or known to occur in the IPC, and within the Extension. The assessments consider both the direct and indirect impacts of the Extension and were undertaken in accordance with the EPBC Act Policy Statement 1.1 Significant Impact Guidelines (DotE, 2013) or the Queensland Significant Residual Impact Guidelines (EHP, 2014). Assessments concluded that there will be significant residual impact for the Koala, Squatter Pigeon and Greater Glider for direct clearing of their mapped habitat. No significant impacts were determined for the Ornamental Snake or migratory species. Offsets are proposed for the Koala, Squatter Pigeon and Greater Glider.

Water management and mine site rehabilitation and closure are described above. The mine site will be rehabilitated so that it is safe, stable, non-polluting and achieves and grazing final land use on all areas, except residual voids.

Refer to Supporting Report Sections 2.6, 5.8, 6.9 for additional information.

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

Listed threatened species and communities - Yes

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

The Extension is assessed as having a significant impact on listed threatened species.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

Yes.

Neither Stanmore Coal Ltd, or its wholly owned subsidiary Stanmore IP Coal Pty Ltd (the proponent) has been the subject of any environmental legal proceedings that have resulted in fines or prosecution.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

There are no past or present proceedings.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.

The proponent operates under the Environment and Sustainable Development Policy of its holding company, provided as Attachment 1.

The proponent has an integrated Environmental Management System across all operations/activities for the Isaac Plains Complex to track that all environmental management commitments and strategies are implemented, monitored and reviewed to continually improve environmental performance at the operations.

The proponent has a team of appropriately qualified environmental personnel to ensure compliance with approval conditions, legislation and environmental planning frameworks.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

Yes

6.4.1 EPBC Act No and/or Name of Proposal.

EPBC 2016/7827, approved with condition 28/02/2018 (extension of mine site on the Isaac Plains East (IPE) mining leases. Approval variation granted 06/08/2018.

EPBC 2005/2020, not a controlled action (original mine site).

EPBC 2006/3043, not a controlled action (a project that did not proceed).

EPBC 2006/2845, proposal withdrawn.

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Appendix 2 - Surface Water Assessment, provided with the Referral, contains a reference list in Section 12. Information used in Appendix 2 - Surface Water Assessment is also based on the collection of data from the IPC site, including water levels, water quality and topographical information. The assessment of impacts to water resources relies on modelling informed by field data and publicly available data. This includes modelling of: • hydrology and hydraulics (flooding) • water balance and management	Field surveys and measurements have been collected recently (i.e. in the past 12 – 18 months) and are reliable, having been collected by experienced professionals in the relevant disciplines. Field surveys and measurements provide information at a point in time, and are therefore supplemented by surveys or measurements at other times to reduce uncertainty. Information from field surveys and measurements is therefore highly reliable. Water models have been developed by experienced professionals in the relevant disciplines, and the technical report (Appendix 2 – Surface Water Assessment) describes the reliability and certainty provided by these models. All models have been calibrated to available data collected from field measurements and / or publicly available data, including reliable government data sources (e.g. Bureau of Meteorology or State Department surface and groundwater records), and are therefore reliable.	Field surveys and measurements provide information at a point in time, and are therefore supplemented by surveys or measurements at other times to reduce uncertainty. Information from field surveys and measurements is therefore highly certain. All models have inherent uncertainty; however, the technical assessment concludes that the levels of uncertainty in the models are acceptable.
Appendix 3 – Groundwater Assessment, provided with the Referral, contains a reference list in Section 10. Information	Field surveys and measurements have been collected recently (i.e. in the past 12 – 18 months) and are	Field surveys and measurements provide information at a point in time, and are therefore

Reference Source	Reliability	Uncertainties
used in Appendix 3 – Groundwater Assessment is also based on the collection of data from the IPC site, including bore water levels, bore water quality and topographical information. The assessment of impacts to groundwater resources relies on modelling informed by field data and publicly available data. This includes modelling of: • groundwater / hydrogeology	reliable, having been collected by experienced professionals in the relevant disciplines. Field surveys and measurements provide information at a point in time, and are therefore supplemented by surveys or measurements at other times to reduce uncertainty. Information from field surveys and measurements is therefore highly reliable. Groundwater models have been developed by experienced professionals in the relevant disciplines, and the technical report (Appendix 3 – Groundwater Assessment) describes the reliability and certainty provided by these models. All models have been calibrated to available data collected from field measurements and / or publicly available data, including reliable government data sources (e.g. Bureau of Meteorology or State Department surface and groundwater records), and are therefore reliable.	supplemented by surveys or measurements at other times to reduce uncertainty. Information from field surveys and measurements is therefore highly certain. All models have inherent uncertainty; however, the technical assessment concludes that the levels of uncertainty in the models are acceptable.
Ecological information has been based on previous field surveys within IPC for terrestrial ecology, aquatic ecology, groundwater dependent ecosystems and stygofauna. These are listed as: 1. Isaac Plains Project Environmental Impact Statement, Flora and Fauna Assessment (Ecotone, 2005). 2. Integrated Isaac Plains Project Environmental Impact Statement, Flora and Fauna Assessment (Ecotone, 2006). 3. Aquatic Ecology Report for the IPE Project by C&R Consulting dated August 2016. Aquatic ecology field surveys conducted at the end	These assessments have been undertaken in obtaining previous State and Commonwealth approvals for IPC activities, or in complying with conditions of approval for IPC operations. The assessments are therefore reliable.	These assessments have been undertaken in obtaining previous State and Commonwealth approvals for IPC activities, or in complying with conditions of approval for IPC operations, or in providing more recent information to supplement historical information. The assessments are therefore considered to be certain.

Reference Source	Reliability	Uncertainties
of the 2015-2016 wet season less than one month after significant rain had fallen within the region. A total of twelve sampling sites were assessed across the IPC including four in Smoky Creek, two in the northern tributary, five in Billy's Gully and one within the onsite farm dam (C&R Consulting, 2016). 4. Baseline Riparian Monitoring for IPC by Ecological Survey and Management Pty Ltd dated July 2018. Baseline monitoring of riparian habitat for the four listed species, to identify potential impacts to habitat condition as a result IPC activity, particularly potential post-mining draw down. The riparian monitoring area field methods involved two components o validating and mapping remnant vegetation and habitat areas by undertaking a number of vegetation assessment sites throughout the riparian monitoring area, including 11 secondary, 37 tertiary sites, 39 quaternary sites and 29 supplementary photo points. It is worth noting that 8 tertiary sites, 11 quaternary sites and 5 supplementary photo points were conducted outside but in close proximity o establishing assessment units in which a suitable number of habitat quality plots are installed, and which can then be used to undertake habitat quality scoring (Ecological Survey and Management, 2018). 5. Receiving Environment Monitoring Program (REMP) Assessment Reports for 2018		

Reference Source	Reliability	Uncertainties
and 2017 by C&R Consulting. These assess the habitat condition, water and sediment quality and macroinvertebrate communities to determine any potential impacts from historic releases and current operations to the environmental values of the receiving environment, in accordance with EA conditions (C&R Consulting, 2017; C&R Consulting, 2018b). 6. Terrestrial Ecology Reports for the IPE Project by Ecological Survey and Management Pty Ltd in 2016. Field surveys were conducted in the 2016 wet season and 2015 dry season and included: • A total of 95 vegetation assessment sites were surveyed throughout the IPC to thoroughly assess Queensland Government mapped remnant vegetation. The validation of vegetation communities within the survey area in accordance with Methodology for Survey and Mapping of Regional Ecosystems and Communities in Queensland, Version 3.2 and 4.0 (Neldner et., al. 2012); • Targeted searches for potential threatened flora and fauna species; and • Habitat mapping for potentially present threatened fauna species (Ecological Survey and Management, 2016). 7. Offsets Management Plan approved by DoEE for the IPE project (Base Consulting, 2018). This sets out the strategy for offsetting residual impacts to MSES as well as MNES from the IPE project including habitat quality assessments in the IPC area to determine the baseline habitat		

Reference Source	Reliability	Uncertainties
quality for the matters of state and Commonwealth environment significance against which to compare proposed offsets for these matters. Where historical information may have been superseded by more recent information, additional survey work has been conducted. This is provided as Appendix 4 - Assessment of Grasslands TEC areas, to the Referral.		

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

The IPC provides substantial economic benefits to the local region, Queensland and Australia. Approximately 220 people are employed at the mine, and the mine generates additional indirect employment in the region and throughout Queensland. The Australian Government receives significant direct and indirect tax revenue from the mine, and the Queensland Government obtains substantial royalties from the mine (estimated at $64 M to date, with a forecast $90 M for the Extension). Without the Extension, open cut mining operations at IPC will cease in 2024. The Extension will mine an additional 8.2 Mt coal thereby enhancing the economic viability of the IPC, securing the longer-term future of the IPC, and extending the associated employment and economic benefits.

The Extension is critical to the ongoing ability of Stanmore to continue to extract metallurgical (steel making) coal from IPC to meet it forecast production volumes. The current EPBC Act approval for IPE (2016/7827) limits the footprint of mining activities. Due to the recent progression of mining in a favourable economic climate, mining activities will be curtailed by the existing approved footprint limitations.

The location of the proposed action has been defined by factors including the economic coal reserves, geological constraints (e.g. faults), avoidance of direct impacts on the local watercourses (Smoky Creek and Billy's Gully), floodplain area, underlying granted mining lease boundaries, and underlying land ownership. Where possible, infrastructure has been located to avoid vegetation and creeks.

IPC has existing infrastructure which will be utilised for the Extension, including the CHPP, rail loop, MIA, offices, haul roads and water management infrastructure. The proposed mining method for the Extension will utilise the current open cut mining methods and equipment. Alternative mining methods and equipment are not considered feasible.

The proposed action would result in residual voids on completion of mining operations. The size of the proposed residual void will be reduced through progressive in-pit placement of overburden and rehabilitation of overburden areas. The residual void will be safe, structurally stable and non-polluting.

There are no feasible alternatives available for the Extension other than not taking the action.

There is demand for metallurgical coal products throughout international markets, resulting in the Extension being deemed viable. The Extension will allow for the continuation of approximately 220 full time operational and management jobs in the production of metallurgical coal for export. This will provide employment security and stability, with associated social and economic benefits in the Moranbah area. The Extension will provide businesses within the local

area and broader Central Queensland region increased goods and services supply opportunities.

The Queensland Government is a significant benefactor from coal mining royalties, with coal the largest export commodity in the State. Additional royalty revenue will flow from the Extension throughout the life of mine.

The consequences of not proceeding with the Extension would be a loss of royalties, loss of employment and training, loss of supply opportunities and loss of positive social benefits.

Loss of royalties: The Queensland Government would lose in the order of $90 M over the life of Extension.

Loss of tax revenue: The Federal government would not receive tax revenue from company profits and employee wages.

Loss of employment and training: Opportunities (direct and in-direct) in the local and regional area for employment and training would be lost.

Loss of supply opportunities: Opportunities for the local, regional and broader Queensland businesses to supply goods and services would be lost.

Loss of positive social benefits: The local and regional community benefits derived from the flow on effect of employment and business confidence generated by the Extension would be lost.

The potential positive impact of not proceeding with the Extension is avoidance of potential environmental impacts arising from the Extension. However, with the proposed environmental management measures and biodiversity offsets for significant residual impacts, the net benefits of the Extension outweigh the potential impacts.

Refer to Supporting Report Section 1.2

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

General Manager Operations

9.2.2 First Name

Bernie

9.2.3 Last Name

O'Neill

9.2.4 E-mail

bernie.oneill@stanmorecoal.com.au

9.2.5 Postal Address

Level 8, 100 Edward Street
Brisbane QLD 4000
Australia

9.2.6 ABN/ACN

ABN

79606244615 - STANMORE IP COAL PTY LTD

9.2.7 Organisation Telephone

0732381000

9.2.8 Organisation E-mail

richard.oldham@stanmorecoal.com.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:..... Date: .....

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, BERNIE O'NEILL, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature:..... Date: 27/09/2019

I, BERNIE O'NEILL, the person proposing the action, consent to the designation of STANMORE IP COAL P/L as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:..... Date: 27/09/2019

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

General Manager Operations

9.5.2 First Name

Bernie

9.5.3 Last Name

O'Neill

9.5.4 E-mail

bernie.oneill@stanmorecoal.com.au

9.5.5 Postal Address

Level 8, 100 Edward St
Brisbane QLD 4000
Australia

9.5.6 ABN/ACN

ABN

79606244615 - STANMORE IP COAL PTY LTD

9.5.7 Organisation Telephone

0732381000

9.5.8 Organisation E-mail

richard.oldham@stanmorecoal.com.au

Proposed designated proponent - Declaration

I, BERNIE O'NEILL, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:..... Date: 27/09/2019

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

General Manager Operations

9.8.2 First Name

Bernie

9.8.3 Last Name

O'Neill

9.8.4 E-mail

bernie.oneill@stanmorecoal.com.au

9.8.5 Postal Address

Level 8, 100 Edward St
Brisbane QLD 4000
Australia

9.8.6 ABN/ACN

ABN

79606244615 - STANMORE IP COAL PTY LTD

9.8.7 Organisation Telephone

0732381000

9.8.8 Organisation E-mail

richard.oldham@stanmorecoal.com.au

Referring Party - Declaration

I, BERNIE O'NEILL, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature: B.O'N Date: 27/09/2019

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. Appendix 1 - Protected Matters Search.pdf
2. Appendix 2 - Surface Water Assessment Part A.pdf
3. Appendix 2 - Surface Water Assessment Part B.pdf
4. Appendix 2 - Surface Water Assessment Part C.pdf
5. Appendix 2 - Surface Water Assessment Part D.pdf
6. Appendix 2 - Surface Water Assessment Part E.pdf
7. Appendix 3 - Groundwater Assessment Part A.pdf
8. Appendix 3 - Groundwater Assessment Part B.pdf
9. Appendix 3 - Groundwater Assessment Part C.pdf
10. Appendix 4 - Assessment of Grasslands TEC Areas.pdf
11. Attachment 1 - Environment and Sustainable Development Policy.pdf
12. Current Approved IPE Approval Boundary.zip
13. Extension Area.zip
14. IPC ML Boundaries.zip
15. IPE Extension Referral Supporting Report Sep 2019 Part A.pdf
16. IPE Extension Referral Supporting Report Sep 2019 Part B.pdf
17. IPE Extension Referral Supporting Report Sep 2019 Part C.pdf
18. IPE Extension Referral Supporting Report Sep 2019 Part D.pdf