



MEMO

TO: Tim Donnan, TransGrid
FROM: Alex Cockerill, WSP
SUBJECT: **Response to AER preliminary position TransGrid Contingent Project EnergyConnect December 2020 – Environmental Offset Costs**
OUR REF: PS117658-ECO-MEM-011 Rev B AER response 23 03 2021
DATE: 23 March 2021

1. BACKGROUND

1.1 OVERVIEW

This memorandum (memo) provides further clarification and response to the preliminary position presented by the Australian Energy Regulator (AER) in their; *Preliminary Position TransGrid Contingent Project EnergyConnect December 2020* (https://www.aer.gov.au/system/files/AER%20-%20Preliminary%20Position%20-%20TransGrid%20-%20Project%20EnergyConnect%20Contingent%20Project%20-%20December%202020_0.pdf) and AERs request for information following a presentation by TransGrid to the AER on the 2 February 2021

Specifically, this memo responds to AERs request for additional information and clarification around TransGrid's previous forecast for its environmental offset costs (biodiversity offsets) of \$127.4 Million (M) (\$2017-18) and a contingency of \$38.2M for additional biodiversity risk costs as they relate to the project's offset requirements under the NSW *Biodiversity Conservation Act (BC Act)* using the Biodiversity Assessment Methodology (BAM) and Biodiversity Offset Scheme (BOS). The memo should be read in conjunction with and reference to the assumptions and information provided in the previous advice (WSP 2020).

The AERs preliminary position is that the likely offset cost of \$26M for a Biodiversity Stewardship Agreement (BSA) offset is reasonable, however acknowledged their intention to revise this position as more field work/surveys data is provided, demonstrating more offsets are required.

The AERs supports WSPs approach to offsets, including;

- Using WSPs field work and surveys to determine the exact ecosystem and species credit liabilities;
- Identifying BSA land to offsets these specific credit liabilities; and
- Identifying if there are additional costs in offsetting any residual liabilities.

WSP acknowledge the AERs acceptance of the \$26M for a single Western BSA, but reiterate that this is a partial component of the overall offset costs/liabilities for the project, with the

remainder to be confirmed through further survey and likely delivered via a combination of additional BSAs and a biodiversity offset payment into the Biodiversity Conservation Fund (BCF). As such the current forecast for the environmental offset costs with this approach is expected to be in the order of **\$168.7M** (**\$150M** CAPEX plus of **\$18.7M** contingency risk cost), as explained in this memo.

Providing accurate biodiversity offset liabilities suitable for business case and funding assessments in NSW is complicated by limitations in the accuracy of desktop information, regular changes in the BOS policy, market fluctuation in credit prices and availability of suitable 'like for like' offsets areas required to be established as BSA under the BAM.

In providing an offset liability estimate there are two fundamental parts:

1. establishing the quantum of credits associated with a project's impact,
2. determining the Biodiversity Offset Strategy (BOS) (or mechanism of delivering the offset).

A discussion in regard of each of these items as it relates to the AER determination and TransGrid's position is provided below in Sections 2.1 and 2.2, while a comparative analysis of offset liabilities for similar recent projects in NSW is also provided in Section 3.

1.2 PROGRAM TIMEFRAMES IN REGARD TO OFFSETS

The current program for the project has direct implications for determining the accuracy of the credit liability and estimating potential offset cost. While credit liabilities for the EnergyConnect – Western Section (comprising the section between SA/NSW border and the NSW/Victorian border, via Buronga substation) are close to finalisation of the known offset credit requirements (August 2021), the EnergyConnect – Eastern Section (covering the section from Buronga substation to Wagga substation) is limited for the majority of the alignment to desktop assessment of biodiversity values being impacted and a small proportion of field validation surveys and estimates of credit liabilities.

Following the AER preliminary position the project's credit liability has been further refined to include;

- Targeted field surveys for threatened species over a portion of the EnergyConnect – Eastern Section
- Changes in the limited clearing scenario informed by comment from the regulator (BCD) on the BDAR for EnergyConnect – Western Section
- Changes in the potential design footprint for EnergyConnect – Western Section informed by the selected contractor - Secure Energy Joint Venture.

A summary of the current project programs as they relate to the BDAR and credit liabilities for both EnergyConnect – Western Section and Eastern Sections is provided in Table 1.1 below.



TABLE 1.1 SUMMARY OF THE CURRENT PROJECT PROGRAMS AS THEY RELATE TO THE BDAR AND CREDIT LIABILITIES FOR BOTH ENERGYCONNECT – WESTERN SECTION AND EASTERN SECTIONS

KEY PROCESS STEPS FOR REGULATOR TO DETERMINE/CONFIRM OFFSET LIABILITY	TIMING: WESTERN NSW EIS	TIMING: EASTERN NSW EIS (*FORECAST)
<p>The proponent determines whether the Biodiversity Offsets Scheme applies. Scheme applies to CSSI.</p>	Completed	Completed
<p>An accredited assessor applies the Biodiversity Assessment Method and offsetting rules to the activity. An accredited assessor must apply the Biodiversity Assessment Method (BAM) to the proposal. A BDAR is prepared that documents those steps applied to avoid and minimise impacts on biodiversity, and sets out the number/type of ecosystem and species credits required to offset residual impacts of the activity on biodiversity ('credit obligation'). Once completed, the proponent submits the BDAR to the relevant consent authority (DPIE and BCD) with the EIS as part of their application.</p>	<p>Completed (BDAR submitted to DPIE with the EIS in October 2020)</p>	<p>In progress WE ARE HERE</p>
<p>The consent authority assesses the application and determines whether to approve or refuse the application. For the impacts on biodiversity, the BDAR will be assessed against the legislative and technical requirements of the <i>Biodiversity Conservation Act 2016</i>, Biodiversity Conservation Regulation 2017, the (Cwth) <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (EPBC Act), and the BAM. The assessment and offset scheme is an approved under a bilateral agreement to include all relevant Cwth EPBC Act matters (MNES).</p>	<p>December 2020 - ~July 2021 WE ARE HERE Meeting with BCD/DPIE on the BDAR- End of Feb & Mar 2021. Final revised BDAR end March. TransGrid is updating the EIS and BDAR for resubmission in Apr 21.</p>	<p>Start – Mid 2022</p>



KEY PROCESS STEPS FOR REGULATOR TO DETERMINE/CONFIRM OFFSET LIABILITY	TIMING: WESTERN NSW EIS	TIMING: EASTERN NSW EIS (*FORECAST)
<p>The consent authority determines the application and sets the offset obligation.</p> <p>On approval of the EIS, the full credit obligation (and any other actions) will be included as conditions of the relevant approval or consent.</p> <p>The consent authority has the discretion to increase or decrease the credit obligation generated by the BDAR.</p>	<p>August 2021</p>	<p>~Q3 2022</p>
<p>The proponent satisfies its credit obligation and can begin the approved activity.</p> <p>When the proponent has completed these steps for all credits obligations, they can proceed with their activity in accordance with their approval.</p>	<p>Underway.</p> <p>Requested staged delivery/retirement of credits post commencement.</p> <p>Verbally endorsed by BCD (subject to EIS approval)</p>	<p>Late-2022</p>

2. DISCUSSION

2.1 ESTABLISHING THE QUANTUM OF OFFSET CREDITS ASSOCIATED WITH A PROJECT'S IMPACT

2.1.1 OVERVIEW AND DEMONSTRATED INCREASES IN CREDIT LIABILITY

Estimates without detailed field validation and accurate BAM credit calculations are speculative. For these reasons, any estimate of the quantum of the EnergyConnect credit liability should, where possible, be based on field validation and current information.

The three scenarios used in the initial desktop assessment of credit liability in the WSP Biodiversity Offset Liability Estimate, 28 November 2019, p17 (WSP, 2019) provided a range of credit liabilities:

1. Lower 19,848 credit liability
2. Mid-range 24,811 credit liability
3. Upper 29,773 credit liability.

These estimates were based on preliminary TransGrid clearing assumptions and desktop assessment of biodiversity values present prior to actual field surveys and prior to detailed BAM calculations being completed for EnergyConnect – Western Section. The AER position relies upon the best case ‘Lower 19,848 credit liability’ scenario from this desktop estimate.

Following refinement of the EnergyConnect vegetation clearing requirement assumptions and detailed field validated mapping of the biodiversity values of the areas to be potentially impacted by EnergyConnect – Western Section and portions of the EnergyConnect – Eastern Section a revised WSP Biodiversity Offset Liability Estimate memo, September 2020 (WSP, 2020) was provided to TransGrid. This revised assessment identified a 29,380-biodiversity credit liability (comprising 7,081 in the Western Section and 22,299 in the Eastern section) and this revised and more realistic value formed the basis of the TransGrid forecast cost for biodiversity offsets.

The AER has referenced support for the \$26 M credit liability by concluding;

This report showed that the expected environmental impacts in the Western section are below those forecast in WSP's lowest scenario impacts.

However, the actual BAM calculations presented within the *EnergyConnect – NSW Western Section Environmental Impact Statement (EIS)* and associated Biodiversity Development Assessment Report (BDAR) (WSP, 2020) identified a requirement for 8,845 ecosystem credits, which is approximately 25% above the estimate in the revised estimate for EnergyConnect – Western Section liability of 7,081 ecosystem credits (WSP, 2020). Furthermore, based on recent consultation with the Biodiversity Conservation Division (BCD), as the NSW Regulatory body responsible for determining biodiversity impacts and offset requirements, and further detailed design and constructability advice there is potential for the credit requirements to require some further increases.

Specifically, BCD have requested more detailed understanding on;

- the proposed maintenance zone clearing methodology
- potential additional impacts to low vegetation within the limited clearing scenario.

- additional species impacts and liability for bird strike and Electric and Magnetic Field (EMF).

The revised credit liability in the BDAR for EnergyConnect – Western Section is currently estimated at 9,347 ecosystem credits or 32% above the estimate in the funding request (WSP, 2020). The current whole of project forecast CAPEX for its environmental offset costs is based on 38,782 biodiversity credit liability (comprising 9,347 in the Western Section and 29,434 in the Eastern Section).

Table 2.1 provides overview of the credit liability progression for the whole of EnergyConnect in NSW.



TABLE 2.1 A SUMMARY OF THE CREDIT LIABILITY PROGRESSION (WHOLE PROJECT - NSW)

	ESTIMATE REFERENCE IN AER RESPONSE	WSP ESTIMATE (2019)	WSP ESTIMATE (2020)	ESTIMATE WITH BDAR WEST (2020)	ESTIMATE WITH REVISED BDAR WEST (2021)
Ecosystem credit liability	19,848	24,811	29,380	31,144	38,782
Offsets liability BOPC payment into BCF (ecosystem)	\$118,667,796.00	\$148,334,745.00	\$214,190,253.37	\$224,455,345.00	\$238,217,206.15
Single hypothetical BSA scenario	\$26,467,200.00	\$33,084,000.00	\$39,173,333.33	\$41,525,333.33	NA
Species offset liability	\$0.00	\$6,616,800.00	\$14,430,686.35	\$14,430,686.35	\$22,180,165.00
WSP Recommended likely offset scenario (Multiple BSAs and residual BCF)	NA	\$83,245,140.00	\$128,721,513.17	\$128,721,513.17	\$149,995,664.00

2.1.2 SIGNIFICANT CHANGES IN LOW AND DISTURBED CREDIT LIABILITIES

Of further significance is that the clearing assumptions presented in the initial credit liability estimates (WSP 2019) and relied upon by AER included no liabilities for Plant Community Types (PCTs) for low/ derived or grassland structure. This assumption was based on available desktop based mapping of areas of these PCTs which identified the potential for these PCTs to be potentially be Category 1 lands excluded from the BAM or exotic vegetation and therefore excluded from any initial offset estimates. Significantly for the project's liability, field validation, occurring after the issue of the WSP 2019 memo, has instead confirmed the presence of these PCTs in moderate to good condition, triggering the need for offsets under BAM. This requirement for substantial extra credit liability, particularly for the EnergyConnect – Eastern Section alignment, were identified in the revised credit liability estimates as 9,257 additional ecosystem credits or approximately \$100M in the BOPC (WSP 2020).

With increased field survey, greater definition on project design (including construction methods), regulator consultation and BAM assessment it is clear the initial 'Lower credit estimate liability scenario' from the 2019 advice is not realistic for EnergyConnect and unlikely to be supported by the findings of the field surveys, design requirements and regulatory review of the limited clearing scenario.

TransGrid's previous forecast capex for its environmental offset costs (biodiversity costs) is similar to the 'Upper credit liability scenario' as it is based on a 29,380-biodiversity credit liability (for the combined NSW Western Section and Eastern Section) and accounts for the most assumptions on vegetation clearing, site values and includes provisions for the PCTs previously excluded based on vegetation condition.

Following ongoing regulator discussions, there have been further increases in credit liability association with the maintenance clearing and the capex for its environmental offset costs is now based on 38,782 biodiversity credit liability (comprising 9,347 in the Western Section and 29,434 in the Eastern section).

2.1.3 LATEST CREDIT LIABILITIES

WESTERN BDAR ECOSYSTEM AND SPECIES CREDITS

Following development of the EnergyConnect – Western Section design and responses to regulator feedback the revised BDAR currently identifies estimates of **9,347 ecosystem credits** and **274 species credits**. These calculations are subject to further consultation with BCD late March and proposed for finalisation in April 2021.

EASTERN BDAR ECOSYSTEM CREDITS

The Eastern BDAR has not been sufficiently progressed to provide accurate credit calculations in accordance with BAM. Based on the 32% increase following the response to submission approach in the ecosystem credits for EnergyConnect – Western Section, the equivalent increase in EnergyConnect –Eastern Section would equate to a combined new total estimate of **29,435 ecosystem credits**. Incorporating; 3,173 PCT 44 credits, 2,073 PCT 46 credits and 3,708 PCT 164 Credits. These calculations are subject to further revision following field verification of previously unsurveyed properties and actual BAM calculations proposed for finalisation in December 2021.

EASTERN BDAR SPECIES CREDITS

Following targeted threatened species surveys in late 2020, 10 threatened species were recorded and or known to occur within the potential project alignment of EnergyConnect – Eastern Section (approximately 20 % field validated). Species credit liability have been conservatively estimated and extrapolated based on recorded or assumed habitat across the potential project alignment.

A summary is provided in Table 2.2 below.

TABLE 2.2 SUMMARY OF SPECIES CREDIT LIABILITIES WITHIN ENERGYCONNECT – EASTERN SECTION

SPECIES	CREDITS LIABILITY	OFFSET COST*
<i>Pilularia novae-hollandiae</i>	2375	\$685,947.50
<i>Maireana cheelii</i>	8080	\$2,193,396
<i>Swainsona murrayana</i>	17479	\$5,048,284
<i>Swainsona sericea</i>	9720	\$2,638,591
<i>Eleocharis obicis</i>	1654	\$448,994
<i>Brachyscome papillosa</i>	13182	\$3,807,225
Plains-wanderer	11923	\$5,414,234
Squirrel Glider	680	\$460,842
Southern Bell Frog	1807	\$820,558
Superb Parrot	680	\$662,789
TOTAL	67,580	\$22,180,865

Notes; *= Offset cost to pay into the BCF based on BOPC credit price as of 31/7/2020

2.1.4 DISCUSSION ON SPECIFIC ITEMS RAISED BY AER IN RELATION TO CREDIT LIABILITY

1. *There are reasons why TransGrid should be able to minimise the impact on native vegetation and species on the route;*

TransGrid has already changed the EnergyConnect route to minimise biodiversity and environmental impacts (notably by revising its route to avoid Darlington Point). This has been considered in the revised credit estimate supporting TransGrid’s offset liability.

2. *A significant proportion of the final route uses existing infrastructure corridors (71 per cent) and/or impacted agricultural land.*

The clearing areas and associated revised credit estimate has incorporated consideration of existing agricultural lands and infrastructure corridors in the final impact calculations. Significant agricultural land holdings within the alignment that are not subject to existing cropping and irrigation are dominated by remnant native and derived grassland communities that will require biodiversity offsetting. The majority of the alignment with native vegetation meets the condition thresholds for offsets in accordance with BAM irrespective of the current or past agricultural land uses.

While a proportion of the EnergyConnect alignment is proposed to use, and run parallel with existing infrastructure corridors the construction methodology and design of the project will still require disturbance to native vegetation beyond the existing infrastructure corridor. This has been considered where possible within the revised credit estimate supporting TransGrid's offset liability.

3. *TransGrid has avoided using guyed towers (large footprint) in environmentally sensitive areas. TransGrid is also using micro-siting and other actions to minimise environmental impacts.*

The final design of tower locations and types along the full route has yet to be confirmed. However, it is proposed that micro siting will be used to avoid particularly sensitive biodiversity values and may potentially see reductions in species credit liabilities but not completely avoid native vegetation and offsets. In most areas identified for potential micro siting, the revised location will still impact on native vegetation and incur an offset liability.

The current BDAR calculations for the response to submissions of the EnergyConnect – Western Section have incorporated actual tower designs (as provided by SEJV) including those identified for guyed towers.

4. *The NSW offsets policy framework has specific provisions for transmission lines, which allow for calculation of partial vegetation retention within impact zones. This significantly reduces TransGrid's credit liability and offset costs, and provides more certainty in relation to the offset scenario and forecasts that is most likely to occur.*

This has been considered and incorporated into the revised clearing estimates, however the extent of partial vegetation retention is reliant on construction methodology, maintenance requirements and specific biodiversity values within the maintenance zone. Consultation on the EnergyConnect - Western Section BDAR with BCD on the limited clearing scenario and application of the partial clearing have already indicated the likely need for some additional impacts and increases in the credit liability for consideration.

5. *TransGrid's forecast \$38.2 M biodiversity offset risk cost is based on WSP's impact estimate of a hypothetical "full clearing" scenario of 62,788 credits.*

The risk cost is based on 30 % of the additional cost between "full clearing" scenario and limited clearing scenarios liability. The percentage is associated with the allocated likelihood that the NSW Department of Planning, Industry and Environment (DPIE) will reject limited clearing and require TransGrid to offset the effects of complete vegetation clearing for the entire easement width and maintain in perpetuity.

2.2 DETERMINING THE BIODIVERSITY OFFSET STRATEGY

2.2.1 OVERVIEW

The type of offset strategy preferred for the delivery of biodiversity offsets may have substantially different associated costs.

The BOPC provides a consistent tool for evaluating a likely upper limit cost liability through the payment into the BCF at any given time. The alternative BSA approach requires speculation and assumptions on availability of establishing and finding suitable offset properties to establish BSA(s), the potential land values and corresponding in perpetuity management costs. The costs of BSA(s) are therefore particularly tenuous until firm agreements with land holders are achieved and agreement of likely management costs with BCT is achieved on the final strategy, respectively.

For projects with large offset liabilities the use of the BOPC and BCF is often cost prohibitive and a BOS that incorporates a mixture of BSAs with only limited use of the BCF for meeting residual credits requirements provides for preferred cost outcome.

Offset liability estimates proposing the use of BSAs will often consider the BCF option as the funding baseline. However, TransGrid initial estimate for the offset liability (WSP 2019 and 2020) prudently incorporated the potential establishment of a hypothetical BSAs combined with a residual payment into the BCF. Despite this estimate being concluded as a likely realistic outcome, AERs preliminary position was to support and provide cost liability associated with a single hypothetical BSA for the entire project (Eastern and Western sections combined).

2.2.2 VALUE OF RESIDUAL CREDITS FROM WESTERN BSAs

TransGrid has negotiated an option to purchase one of two adjoining properties and commenced initial consultation with the BCT who regulate the BSAs. Field surveys and assessment of the likely values and in perpetuity cost of establishing the BSA have been completed and provided for in the revised offset liability (WSP 2020). This land has the potential to generate over 42,000 ecosystem credits, as well as species credits. However only a proportion of these credits align (like for like) with the impacted PCTs (approximately 15,000 ecosystem credits) and are directly suitable and available for both the NSW sections of EnergyConnect. This BSA is expected to meet only a part of the ecosystem and species credits requirements for both the NSW sections of EnergyConnect. Multiple additional BSAs targeting the specific biodiversity values impacted by the project will be required to account for the total offset liability (WSP 2020).

The AER has queried if the substantial residual credits from any Western BSA could be used to meet the project EnergyConnect – Eastern Section and/or could potentially be used to realise a return/value that could subsequently fund in part the residual offset liabilities.

The use and/or value of surplus credits from the western BSA were considered previously in the TransGrid initial estimate of offset cost. The remaining identified surplus credits generated by the western BSA are of limited value. This position is based on limitations and restrictions in the regulated trading rules under the BAM, a lack of demand for the surplus credit types available and uncertainty on the long-term ownership of the BSA and surplus credits. Further discussion of these two items is provided below.

TRADING RULES UNDER BAM

An important aspect of demand also relates to the “like for like” credit trading rules. For Commonwealth EPBC-listed ecosystem credits the like for like trading rules are very rigid and essentially only credits that form the same threatened ecological community or threatened species habitat can be used to offset a project’s impacts. This essentially means that on projects with EPBC-listed matters, credits can only be obtained within a restricted location. However the trading rules under the NSW Biodiversity Offsets Scheme (BOS), where Commonwealth EPBC matters are not present, are more flexible and allow trading under higher level trading groups (less specific than individual PCT) and in regions that adjoin the impact region rather than necessarily being in the location of the impact.

The variation rules are outlined in Section 6.4 of the Biodiversity Conservation Regulation 2017. The most important clauses of Section 6.4 are the following:

“6.4 (1) (b) In the case of impacts on threatened ecological communities or on the habitat of threatened species that are ecosystem credit species or other native vegetation—the biodiversity credits to be retired need not represent the same threatened ecological community or the same class of vegetation or represent a location in the same or adjoining Interim Biogeographic Regionalisation of Australia subregion, so long as:

- (i) they represent the same vegetation formation, and*
- (ii) they are in the same or a higher offset trading group, and*
- (iii) they represent a location that is in:*
 - (A) the same Interim Biogeographic Regionalisation of Australia (IBRA) region as the impacted site, or*
 - (B) a subregion that is within 100 kilometres of the outer edge of the impacted site, and*
- (iv) if the impacted habitat contains hollow bearing trees—they represent vegetation that contains hollow bearing trees or artificial hollows. “*

In the context of EnergyConnect Western Section proposed BSAs, the credit liability considered and applied appropriate credit trading rules. The majority of surplus credits are either ecological unsuitable (of different vegetation formations), of lower conservation significance (lower offset trading groups) or significantly outside of the geographical requirements.

POTENTIAL ON SALE OR VALUE OF RESIDUAL CREDITS TO THIRD PARTY

The value of credits is fundamentally related to supply and demand. High prices are generally determined by lower supply and higher demand. The best example of this is that the highest value ecosystem credits are located in western Sydney within the Cumberland Plain. Demand is very high due to the intense development within western Sydney. However, supply is low due to the poor availability of western Sydney ecosystem credits and this is primarily a result of there being little remnant native vegetation left on the Cumberland Plain and that land ownership on the Cumberland Plain recognises the value of, and demand for, the native vegetation (which only occurs in western Sydney in the entire world). As a result, the low supply and high demand means that the current value of ecosystem credits in western Sydney is up to \$40,000 a credit. Generally, the further away from intensive urban development areas an area is, the lower the credit value will be, though this is not always the case in the BCF costings due to immaturity and / or irregularities in the system.

Key restrictions on the likely demand for surplus credits from the Western Section BSAs would be associated with the BAM trading rules under subclause (1)(b)(iii). This requires a potential credit purchaser’s location to be:

- Within the Murray Darling Depression IBRA region; and
- Within 100 kilometres of the South Olary Plain IBRA subregion.

However, the land use development pressures triggering the BOS within these geographic areas are extremely limited. To further demonstrate the extremely limited demand for the surplus BSA credits the following evidence can be relied upon, demonstrated by the following facts;

- There are no BioBank or Biodiversity Stewardship Sites currently available with credits for sale in the Murray Darling Depression IBRA region, nor have there ever been (<https://www.environment.nsw.gov.au/BIMSPRAPP/SearchAgreementResult.aspx>);
- There are no “credits wanted” within the Murray Darling Depression IBRA region on the public “credits wanted” list (<https://customer.lmbc.nsw.gov.au/application/BOAMCreditDemandRegisterExport> <https://www.environment.nsw.gov.au/bimsprapp/SearchCWR.aspx?Start=1>)
- There have been no credit transactions recorded within the Murray Darling Depression IBRA region on the public “BOS transactions register” list since the inception of the credit schemes in 2008. (<https://customer.lmbc.nsw.gov.au/application/BOAMCreditTransactionSaleRegisterExport>)
- Under the Biodiversity Wanted Credits list, there are a small number of credits wanted that the Tareena and Big Bend site would have in excess, being for PCT 19 (5 credits @ \$14347.58 = \$71,735), PCT 58 (51 credits @ \$2782.19 = \$141,882) or PCT 252 (51 @ \$2782.19 = \$141,882). In total this could theoretically mean that these excess credits could be sold for a maximum total of approximately **\$213,617**.

In conclusion, the above analysis of credit trade history since NSW offsets schemes began in 2008, likely future demand for any credits within the Murray Darling Depression IBRA region is likely to be negligible.

The only potential demand for on sale of the surplus credits is through the BCT tender process which sum total for demand since the inception of BAM is 56 credits with a theoretically value of approximately **\$213,617**. This effectively means that the actual value of the remaining surplus credits would be zero (\$0).

LONG-TERM TENURE AND OWNERSHIP OF BSAS

TransGrid are currently reviewing and considering options for the long-term ownership of any BSA established. Long term ownership options being considered may include, divestment with in-perpetuity conservation management contribution to private or public land owners or dedication to regional reserve estate. Any transfer of land ownership could include the residual credit surplus and in the case of dedication to reserve estate retirement of credits. These uncertainties in regard to the long term ownership further limit the likelihood of surplus credits generating a value in costs.

2.2.3 SPECIES CREDIT LIABILITIES

The AER estimate does not include the provision of costs for species credits liabilities. Given the scale and diversity of habitat throughout the span of the alignment, the project will impact on a wide ranges species that are likely to have unique and special habitat requirements for sections. For example, the ‘Mallee’ habitats dominant in the EnergyConnect - Western Section contain a unique sweet of species restricted to this region. The proposed BSA in the far west will provide some species credit liabilities for these species, however, will not provide and credits for the wide range of species occurring through EnergyConnect - Eastern Section. TransGrid’s estimate incorporates an allocation of approximately \$14M for species credit, following field surveys in the eastern section this has been revised to approximately \$20M.

2.2.4 BSA MANAGEMENT COSTS

TransGrid estimate of management costs for the BSAs is based on historical experience in evaluating management cost for approved BSAs and Biobanks. These agreements are subject to regulatory review and approval of management costs however the costs are commercial in confidence and not published. Indicative costs for individual management items are also not provided by the regulator.

To assist the AER the following guidance on management actions and guidelines provided by the BCT to evaluate the type and scale of management actions required to be costed;

- <https://www.bct.nsw.gov.au/sites/default/files/2020-11/BCT%20Essential%20Conservation%20Fencing%20guide%20Nov%202020.pdf>
- <https://www.bct.nsw.gov.au/sites/default/files/2020-11/BCT%20Restoring%20native%20vegetation%20guidelines%20Nov%202020.pdf>
- <https://www.bct.nsw.gov.au/sites/default/files/2020-06/Final%20web%20version%20BCT%20Guideline%20for%20Managing%20Over-abundant%20Kangaroos.pdf>
- <https://www.bct.nsw.gov.au/sites/default/files/2019-08/Guidelines%20for%20BSA%20Sites%20-%2028tracks%20and%20trails%29.pdf>

The in perpetuity cost sheet (TFD) for the Western Section BSAs is also provided that outlines unit costs for each management action TFD.

All unit costs for revegetation and pest management are based on current contractor rates for land management bush regenerator hourly costs of \$60 per hr.

2.2.5 ADDITIONAL DISCUSSION ON SPECIFIC ITEMS RAISED BY AER

1. The AER states that “*developers who impact land must establish an ‘offset’ area of land to be protected*” however this is not an accurate interpretation of biodiversity offsetting requirements/processes in NSW. Developers are not required to establish and offset area or land.

The BC Act and BAM requires residual biodiversity values impacted by a project to be offset. The BOS that underpins biodiversity offset requirements within NSW involves the trading of credits (both ecosystem and species).

An offset incorporates the retirement of the quantum of ecosystem and species credits generated by a project’s impacts (credit liability). To satisfactorily meet the credit liability a proponent can:

- Purchase and retire credits from the open market,
- Make a payment into the government run Biodiversity Conservation Trust (BCT) based on the current BOPC determined through BAM,
- Establish new BSA(s) over lands to create credits and use applicable credits against liability.

The number and type of biodiversity credits is not determined by the NSW DPIE. The biodiversity credit liability is determined by the proponent’s accredited assessor through the application of the BAM and preparation of a BDAR.

The BDAR is reviewed by BCD and DPIE as part of the EIS for adequacy and application of the BAM. WSP has prepared a BDAR for the EnergyConnect – NSW Western Section which is currently being assessed.

2. *Already negotiated significant Biodiversity Stewardship Agreement (BSA) land, which is able to provide both ecosystem and species credit offsets at a cost in line with WSP's lowest scenario impacts.*

TransGrid has negotiated an option to purchase one of two adjoining properties and commenced initial consultation with the BCT who regulate the BSAs. Field surveys and assessment of the likely values and in perpetuity cost of establishing the BSA have been completed and provided for in the revised offset liability (WSP 2020). Multiple additional BSAs targeting the specific biodiversity values impacted by the project will be required to account for the total offset liability (WSP 2020).

This initial BSA acquisition and in perpetuity management is currently estimated at \$31,490,000 and provides only a portion of the total offset liability. The single initial BSA costs are significantly above the lower cost liability scenario provided to compare BSA offset strategies with the BCF option identified in the initial liability estimate (WSP 2019) of \$26,467,200 and subsequently adopted in the AER recommendation.

3. *Our preliminary estimate is based on the clearance impacts for the Western section, which is in line with WSP's lower scenario and was costed around \$26 M for BSA land offsets.*

The estimate of **\$26M** for a hypothetical single BSA offset liability was based on initial desktop assessment (WSP 2019) and identification of applicability of this to EnergyConnect was superseded in subsequent memo's.

The AER make no reference to the likely offset liability and recommended offset approach in Section 6.1 of the initial estimate that clearly identifies a realistic approach to the credit liability combining a mixed BCF and BSA approach and an offset liability for the limited clearing scenario of **\$83M** (WSP 2019).

The initial liability estimate (WSP 2019) was progressively updated with further information and defined costs, cumulating in the revised offset liability (WSP 2020) incorporating the base cost recommendation of **\$128M**.

In particular the revised offset liability (WSP 2020) supporting TransGrid's funding request incorporated:

- changes in the identified alignment to accommodate the Dinawan route at a total distance of 692 km
- a revised construction footprint and clearing assumptions as provided by TransGrid on 4 August 2020 (refer section 1.2).
- revised assumptions on the credit liability for derived and remnant grassland PCTs
- updated credit pricing in line with the quarterly credit price review on the 31 July 2020
- refined ecological values from further detailed field surveys completed for the EnergyConnect NSW – Western Section
- field validated 'in perpetuity management cost' and 'actual negotiated property values' for the establishment of the initial BSA
- results of desktop analysis of additional potential BSA offsets

- additional shortlisted BSAs with an estimated cost of \$53,773,262 and a likely residual payment into the BCF to meet species specific and ecosystem credit liabilities unlikely to be met through BSAs at \$47,866,433.
- 4. *We consider that this also means that TransGrid does not reasonably require an additional allowance for offset risk. The full clearance scenario is not a construction or environmental scenario that has been proposed by TransGrid in its Environmental Impact Statements or its BDAR or engineering documents.*

The allocation of an offset risk cost is only partially dependent on the clearing scenario. As recent correspondence with BCD on the EnergyConnect – Western Section EIS and proposed limited clearing scenario suggests, additional impacts will be required to be considered as well the likely need for changes to design associated with access tracks for construction. These revisions have resulted in a 32% increase in the credit liability from the base case limited clearing scenario and demonstrate the prudent allocation of a 30% risk allocation to be justified.

Delivery of the EnergyConnect offset liability through payment of the BCF is still a viable option, particularly without successful establishment of the proposed and identified BSAs.

While the current risk cost associated with the limited clearing scenario has been substantially reduced following the development of the EnergyConnect – Western Section EIS and extrapolated impacts on EnergyConnect – Eastern Section credit liability, future risk costs are still required for the potential delivery of the offset strategy through the BCF.

- 5. *This was also not a scenario that WSP assigned any probability to occurring.*

The initial offset liability (WSP 2019) assigned 20-40% probability of a Full Clearing Scenario, see below:

Overall, the probability therefore of this discounted approach being accepted is considered to be relatively high. This is difficult to quantify, however based on experience we consider that the likely level of success of the discounted approach via the Limited Clearing Scenario would be in the order of approximately 60 - 80% (WSP 2019).

The risk cost estimate is directly related to this assumption and has applied a 30% probability of the Full Clearing Scenario.

3. COMPARATIVE PROJECT OFFSETS IN NSW

A comparison with similar sized SSI/CSSI projects currently being or previously assessed in NSW or equivalent using the NSW BOS, BAM and/or previous guidelines demonstrates the comparative quantum of the EnergyConnect offset liability. The identified TransGrid funding recommendation of **\$128M** and the now revised forecast of **\$150M** is consistent and proportionate to the scale of these comparative project impacts.

To provide a better understanding and comparative analysis of the EnergyConnect offset liability estimate with comparable projects, a summary Table 3.1 is provided below.



TABLE 3.1: SUMMARY OF COMPARATIVE PROJECT OFFSETS IN NSW

PROJECT (DATE)	PROPONENT TYPE (REFERENCE)	ASSESSMENT METHOD	AREA OF IMPACT TO OFFSET BIODIVERSITY	CREDIT LIABILITY	BOPC BCF OFFSET LIABILITY AND COST PER HA	PROPOSED OFFSET MECHANISM (ESTIMATED OFFSET LIABILITY IF KNOWN)
Proposed EnergyConnect Combined (NSW – Western and Eastern Sections)(2020/2021)	NSW/Commonwealth Government Infrastructure Greenfield transmission line	CSSI (State and Commonwealth accelerated project) NSW BAM	~606 ha Western ~1,520 Eastern Total ~2,126	BDAR West: 8,845 ecosystem credits 254 species credits. Revised offset liability estimate (WSP 2020) 7,081 Western 22,299 Eastern 29,380 Total (subject to final confirmation)	\$262M \$110,536/ha	BSAs with residual payment into BCF Approx. \$150 M
Sydney Metro Greater West (SMGW) (2020-21)	NSW/Commonwealth Government Infrastructure Greenfield rail corridor https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-10051%2120201019T005214.331%20GMT	CSSI (State and Commonwealth accelerated project) NSW BAM	36 ha	1,049 Ecosystem credits 1,272 Species credits	\$ [REDACTED] \$ [REDACTED] ha	Purchase on existing credits and payment into BCF
Snowy Hydro (2020)	NSW/Commonwealth Infrastructure Greenfield Dam	CSSI (State and Commonwealth accelerated project) NSW BAM	424 ha	12,927 Ecosystem credits 22,283 Species credits	\$ [REDACTED] \$ [REDACTED] ha	Strategic Payment of equivalent credit liability to Kosciusko National Park and species management

PROJECT (DATE)	PROPONENT TYPE (REFERENCE)	ASSESSMENT METHOD	AREA OF IMPACT TO OFFSET BIODIVERSITY	CREDIT LIABILITY	BOPC BCF OFFSET LIABILITY AND COST PER HA	PROPOSED OFFSET MECHANISM (ESTIMATED OFFSET LIABILITY IF KNOWN)
Inland Rail N2N (2020-21)	Government Infrastructure greenfield rail Greenfield rail corridor https://majorprojects.accelo.com/public/9f51a14f09ab7ac657de123011cfdc90/18%20P2N%20EIS%20Vol%201%20Part%20D%20Appendix%20L%20Part%201_Biodiversity%20offset%20strategy.pdf	CSSI (State and Commonwealth accelerated project) NSW BAM	1,732 ha	34,820 Ecosystem credits 160,421 Species credits	Estimated >\$200M \$115,000 /ha	Staged BSAs with residual payment into BCF
WSA (2017-2020)	Commonwealth Government Infrastructure Greenfield Airport https://www.westernsydneyairport.gov.au/sites/default/files/WSA-EIS-Volume-4-Appendix-K2-Offset-strategy.pdf	Commonwealth EIS NSW FBA (BBAM)	359 ha	16,692 Ecosystem credits 10,458 Species credits	\$550M BOPC \$1.5M/ha	████

PROJECT (DATE)	PROPONENT TYPE (REFERENCE)	ASSESSMENT METHOD	AREA OF IMPACT TO OFFSET BIODIVERSITY	CREDIT LIABILITY	BOPC BCF OFFSET LIABILITY AND COST PER HA	PROPOSED OFFSET MECHANISM (ESTIMATED OFFSET LIABILITY IF KNOWN)
Warragamba (2021)	NSW/Commonwealth Dam https://www.smh.com.au/environment/conservation/offsets-could-triple-cost-of-raising-warragamba-dam-wall-to-2-billion-20201023-p5683m.html	CSSI (State and Commonwealth accelerated project) NSW BAM	Unknown	Unknown	\$1.34 billion	unknown
Inland Rail P2N (2017-20)	Government Infrastructure Greenfield rail corridor https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-7475%2120190227T223504.173%20GMT	CSSI (State and Commonwealth accelerated project) NSW BAM and FBA	65 ha	2,561 Ecosystem credits 491 Species credits	\$27M (Inland Rail – Parkes to Narromine Biodiversity Offset Strategy (Phase 1) ARTC 2017) \$415,384/ ha	Staged BSAs with residual payment into BCF
Boggabri Coal (2015-19)	Private Mining https://www.idemitsu.com.au/mining/wp-content/uploads/2016/02/PS107760-ECO-REP-001-RevG_compressed.pdf	SSI NSW BBAM/ FBA	1,439 ha	8,057 ha or 43,929 ecosystem (BBAM)	N/A \$69,492/ ha	██████

The EnergyConnect combined Western Section and Eastern Section impact on biodiversity (based on the limited clearing scenario) is nearly four times the Snowy Hydro 2.0 project and five times Western Sydney Airport (WSA) Stage 1. Both of these joint Commonwealth and/or State Government priority infrastructure projects in NSW required substantial offsets with BOPC estimated liabilities and/or estimated offsets approaches exceeding **\$100M**.

Alternatively, the current SMGW CSSI greenfield rail project with an impact on just 36 ha (<2% the scale of PEC impact) has an BOPC offset liability of **\$32M** greater than the current AER allocation of **\$26M**.

The Inland Rail project is a mixture of green and brownfield rail corridors covering 100s of kilometres and has an approved BOS similar to that proposed by WSP and EnergyConnect with staged BSAs and residual payments into the BCF. The estimated liability of one currently approved stage of the inland rail P2N stage is **\$27M** for just 65 ha impact and <10% the ecosystem credit liability of EnergyConnect. The more substantial N2N stage will have a comparative area of impact with EnergyConnect and an estimated **>\$200M** liability.

4. CONCLUSION

Offset estimates without detailed field validation and accurate BAM credit calculations are speculative. For these reasons, any estimate of the EnergyConnect offset liability should use the latest and current information in determining the offset costs.

The AER has supported the proposed approach to the delivery of offsets, however restricted the initial recommended liability to an allocation of \$26M for a single BSA as costed in the initial WSP 2019 memo.

Irrespective of the AER justification, the estimates provided in the 2019 advice were superseded and revised based on actual field validation and actual credit liabilities calculations for EnergyConnect, updated credits prices and known costs for the establishment of an initial BSAs in the revised offset estimate by WSP which was issued in 2020.

These updated credit estimates demonstrate significantly higher credit liabilities than the initial desktop assessment of a lower credit liability of 19,848 ecosystem credit relied upon by AERs preliminary position.

The AER allocation does not currently provide for the potential likely species credit requirements, specifically for the EnergyConnect – Eastern Section.

4.1.1 UPDATED CAPEX FORECAST

The current recommended offset liability of this mixed scenario (multiple BSA approach and residual payment into the BCF) is **\$149,995,663 (~\$150M)**. The upper range of estimates for delivery of offsets through only payment into the BCF would be **\$262M**. Table 4.1 details these values.



TABLE 4.1 UPDATED CAPEX FORECAST

PROJECT CREDIT LIABILITY	CREDIT LIABILITY FOR LIMITED CLEARING (CREDITS)	OFFSET OPTION			TOTAL ECOSYSTEM COST	RESIDUAL BCF PAYMENT (SPECIES)	TOTAL COST
		BSA credits		Residual BCF payment			
		Tareena & Big Bend	Additional BSA on preferred option 12 and 8				
Total Credit Liability	38,782	42,764	10,256	5,937	NA		
Offset costs							
Potential Offset Size (hectares)		12,000	9632.72668		-	-	-
Land Value (\$)	NA	\$3,216,000	\$24,081,816		\$27,297,816	-	\$27,297,816
In perpetuity management (\$)	NA	\$28,274,000	\$25,499,262		\$53,773,262	-	\$53,773,262
Pay into BCF (\$)	NA	NA	NA	\$46,743,720	\$46,743,720	\$22,180,865	\$69,699,404
Total cost of mixed option scenario					\$127,814,798	\$22,180,865	\$149,995,663
Total cost of paying directly into the BCF to offset all credit liability without establishing a BSA					\$262,038,926	TBA	TBA

Notes:

- 1) Assumes the clearing scenario as revised for the EnergyConnect – Western Section revised BDAR (WSP 2021) and incorporates desktop State-wide vegetation mapping for the entire EnergyConnect project alignment
- 2) BSA credits generated based on field verified vegetation mapping and a 4 credits per hectare for non-assisted regeneration.
- 3) Offset size based on combined Tareena and Pennington properties and for additional BSA is presumed best case outcome of property 12 and 8
- 4) Land value is based on sale price of \$3,216,000 for Tareena and Pennington JLL report (dated August 2020)
- 5) Land value for additional BSAs at \$2500 a hectare
- 6) In perpetuity management based on draft TFD for both Tareena and Pennington combined and assumes non-assisted regeneration.
- 7) In perpetuity management for additional BSAs assumes non-assisted regeneration and \$2500 a ha
- 8) Additional species credit offsets estimated as approximately 13% of total ecosystem costs.
- 9) BOPC credit price as of 31/7/2020

4.1.2 RISK COST

The allocation of an offset risk cost outlined in Section 5.1 of the initial offset liability (WSP 2019 and update (WSP 2020) was based on an assigned 20-40% probability of a Full Clearing Scenario.

As recent correspondence with BCD on the EnergyConnect – Western Section EIS and proposed limited clearing scenario suggests, additional impacts will be required to be considered as well the likely need for changes to design associated with access tracks for construction. These revisions have resulted in a 32% increase in the credit liability from the based case limited clearing scenario and demonstrate the prudent allocation of a 30% risk allocation to be justified.

While the risk cost associated with the limited clearing scenario has been substantially reduced following the development of the EnergyConnect – Western Section EIS and extrapolated impacts on EnergyConnect – Eastern Section credit liability, the allocation of an offset risk cost was only partially dependent on the clearing scenario.

Section 5.2 of previous memo (WSP, 2019 and WSP, 2020) also identified additional risk associated with the establishment of additional BSAs versus the payment of the BCF (although no cost was allocated for these risks in TransGrid offset liability).

Delivery of the EnergyConnect offset liability through payment of the BCF is still a viable option, particularly without successful establishment of the proposed and identified additional BSAs. A residual risk of these BSAs not being established is considered to have a 20% likelihood.

Therefore, a revised risk cost has been calculated on 20% of the difference between the BOS for payment into the BCF and the Additional BSA option. A summary of this revised risk cost is provided in Table 4.2 below.

TABLE 4.2 REVISED RISK COST

DIFFERENCE BETWEEN BOS FOR PAYMENT INTO THE BCF AND ADDITIONAL BSA OPTION'			
Offset strategy	BSAs	BCF	Total
Proposed likely BOS	\$49,581,078	\$46,743,720.32	\$96,324,798
Risk BOS with no additional BSAs	0	\$189,939,804.27	\$189,939,804.27
Difference in costs	-	-	\$93,615,005.94
Risk Cost (20% of difference in cost)	-	-	\$18,723,001.19

TransGrid and WSP have identified a BOS to deliver substantial savings from the baseline offset option of payment into the BCF through the prudent delivery of a combined staged establishment of BSAs and minimised residual payment into the BCF of **\$150M**. This strategy has been recently endorsed in principle by the BCD and DPIE in consultation of the EnergyConnect – Western Section EIS. A Total Risk Cost is proposed at **\$18.7M**.

Analysis of comparable recent projects in NSW, where there are significant residual impacts to biodiversity at a similar or proportionate scale to EnergyConnect, may have offset liabilities >\$100M.

The AER allocation of \$26M is significantly below the equivalent cost of these comparable projects.

5. BIODIVERSITY OFFSET LIABILITY ESTIMATE ASSUMPTIONS AND LIMITATIONS

The following details the assumptions and limitations to the liability calculations:

- The Biodiversity Assessment Method Calculator (BAM-C) (version 2.03) was not directly used to calculate biodiversity offset estimates due to the lack of available field data across the entire route at this early stage that would otherwise inform such calculations. Ultimately, the end ecosystem and species credit requirements and costs can only be known once all field work is completed. Completion of fieldwork could conclude that many PCTs are in disturbed condition (and therefore require less credits to offset the project impact). Until this fieldwork is complete, the calculations in this memo assume all impacted vegetation is at least in moderate to good condition.
- This estimate assumes that biodiversity offsets would also satisfy any requirements for threatened biodiversity listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Specific PCT's are however identified to enable further consideration and impact minimisation for those Threatened Ecological Communities (TEC's) listed under the Commonwealth EPBC Act. This is because in some cases offsetting under the NSW system is not considered to be acceptable at a Commonwealth level if it is not exactly "like for like".
- Future surveys and results would determine exact and / or additional offset requirements at a State level (for species) or at a Commonwealth level (for species or ecosystems).
- At this stage the impact calculations include the relatively minor multiple route option deviations but as this memo is to enable a high-level estimate of potential offset costs, this conservative approach is appropriate.
- Based on field data collected across the project west, credits generated per hectare for full clearing are estimated for remnant moderate to good condition vegetation at 22-25 credits per hectare. For maintenance credit generating is based on 8-11 credit per ha.
- Vegetation mapping used for PCT mapping is the NSW State-based regional mapping, as detailed PCT mapping for the entire route is not yet available. Once the entire route has been mapped in detail that mapping would supersede the regional mapping and allow more accurate offset requirements to be determined.
- The Biodiversity Offsets Payment Calculator (BOP-C) specific ecosystem credit prices for each PCT are current as of July 31st 2020 when they were obtained from the BOP-C.
- Where credits were available in Bionet and the BOP-C in multiple IBRA Bioregions or IBRA subregions, the likely more expensive regions were selected to ensure the credit price was likely to be a maximum credit price in the BOP-C for each PCT.
- Credit generation rates for Biodiversity Stewardship Agreement (BSA) sites are also conservative and only include Required Management Actions. Site-specific Active Restoration Management Actions may be able to be used on BSA sites which may increase the credits generated per hectare. Such outcomes cannot be known at this point in time.
- In addition to "ecosystem credits", "species credits" are required to offset impact to breeding habitat for threatened species. Threatened species considered to have breeding habitat within the project area (also known as candidate species) are still to be determined based on the findings of field investigations and detailed BAM calculations.

- The assumptions and the related arguments in relation to the Clearing Scenario would need to be justified and agreed to by DPIE (BCD) to be successful. End offset outcomes could be consistent with the below approach or could be a variation on these depending on what DPIE considers is a reasonable and justifiable outcome once they have the detailed information.
- The alternative approach to sourcing offsets presented in this memo consists primarily of sourcing project-specific offsets. Assumptions used for this approach include:
 - An average land value price of \$2,500 / hectare for land purchase
 - Approximately \$2,500 / hectare for in perpetuity management of good condition vegetation. The management price is based on our previous experience for large scale offsets sites in NSW. If the condition of the proposed offset sites vegetation is in poor to moderate condition this can increase significantly
 - The BSA would generate approximately 4 credit per ha (based on already being in at least moderate condition and not being subject to any Active Restoration Management Actions
 - A maximum of two additional BSAs would be established
 - Excludes BSA identification, survey, reporting and legal establishment costs.
- The potential for funding of strategic or supplementary biodiversity measures as approved by the Secretary also cannot be excluded as an alternative option. Such measures would likely only be able to satisfy a maximum of 10% of total offset requirements and whether this results in a material change to overall biodiversity offset cost cannot be known at this point in time.
- More accurate information will become available during the project lifetime and with each step certainty will increase in relation to biodiversity offset requirements. In the interim it is considered that this memo contains reliable information that can guide TransGrid in decision making as required at this early stage.
- In preparing this report, WSP has relied upon documents, data, reports and other information (both written and verbal) provided by TransGrid. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in this report are based in whole or part on the information, those conclusions are contingent upon the accuracy and completeness of the information provided. WSP will not be liable in relation to incorrect conclusions should any information be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP. The assessment and conclusions are indicative of the situation at the time of preparing the report. Within the limitations imposed by the scope of services and the assessment of the data, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable consultants under similar circumstances. No other warranty, expressed or implied, is made.