

HEARING SUMMARY – LESLEY HOPKINS – SOUTHDOWN CONDITIONS

Southdown specific conditions

1. In response to the Board of Inquiry's Minute and Direction 26 "*Mercury Southdown Site Specific Conditions*" dated 25 July 2017, I attended expert conferencing with Mercury's planner, Mr Grala on 2 and 4 August 2017. The outcomes of the conference are set out in the Joint Witness Statement dated 4 August. Attached to the Joint Witness Statement are two sets of conditions, one being Mr Grala's conditions and the other being mine. The Joint Witness Statement records where we are in agreement or disagreement regarding the contents of the two condition sets.
2. Since conferencing with Mr Grala, matters have continued to evolve and I have undertaken a further review of the draft conditions that were attached to the Joint Witness Statement with a view to reflecting the risk related evidence, responding to areas of remaining disagreement and responding to comments from the Board during the evidence of other Transport Agency and Mercury witnesses. I have attached these amended conditions to this statement (**Attachment A**).
3. I understand that Mr Grala has also revised conditions to capture some additional matters and that he will present these when he appears before the Board on 31 August. Mr Grala provided these to me yesterday afternoon and I have had an opportunity to review them. Some of Mr Grala's amendments include matters that relate to access and I need to seek further advice from technical specialists regarding those matters before being in a position to comment on the proposed amendments.
4. To assist the Board, I have attached a document (**Attachment B**) which compares the two sets of revised conditions and identifies:
 - Where the conditions are the same and Mr Grala and I were in agreement during expert conferencing on their inclusion;
 - Where the conditions use different wording but have equivalent outcomes and Mr Grala and I were in agreement during expert conferencing on that outcome;
 - Where there is no equivalent in either set or the conditions are different and Mr Grala and I were not in agreement during expert conferencing in agreement on their inclusion.
5. There are a number of similarities between our condition sets and these are:
 - (a) Assessment of risk and installation of control measures. Mr Grala and I agree that any control measures required to reduce risk associated with the location of the East West Link on the Southdown Site should be identified in order to inform further design development and implemented as part of the construction of the East West Link.
 - (b) Identification of specific elements to be incorporated into the design of the East West Link. For example a minimum separation distance of 7m between any EWL structure and GE 105 and limiting the northern extent of the road alignment.
 - (c) The use of the Outline Plan process under section 176A of the RMA to provide design details/ confirmation of control measures.

- (d) The use of a Southdown Construction Management Plan for managing effects associated with construction. These conditions are the same in outcome however Mr Grala has duplicated the content of the NU condition which I do not consider necessary, preferring to use cross referencing instead. I have considered this further since the conference and I still prefer the approach set out in my conditions. As a result of the Southdown Specific conditions, I recommend that the previous changes to the NU conditions to include the Southdown Site as contained in my 19 July version of conditions are removed. This will be reflected in the revision of the conditions provided to the Board as part of the Transport Agency's closing submission.
 - (e) A waiver of the requirement for owners of assets on the Southdown Site to seek written consent under section 176(1). Mr Grala and I disagree on the scope of activities covered by the waiver, with my condition covering routine maintenance and his extending to the upgrading of assets.
6. The key areas where our conditions differed and where we remain in disagreement are:
- (a) How the risk assessment process is undertaken;
 - (b) Who is responsible for preparing the risk assessment;
 - (c) How agreement is to be reached prior to construction;
 - (d) What power station parameters form the basis of the risk assessment – a power station of 135MW or a power station of at least 135MW (i.e. it could be larger); and
 - (e) Retaining all Mercury, Transpower and First Gas Limited assets on the Southdown Site.
7. In regards to what power station parameters form the basis of the risk assessment, Mr Grala has sought that the design of the EWL consider a power station of no less than 135MW (Grala SD.2(a)) whereas I have specified a 135MW power station (Hopkins SD.2A(c)). Mr Grala's condition could necessitate consideration of a larger power station on the site. I am still of the view that the assessment should be based on a 135MW power station (i.e. the same capacity as the previous power station and the subject of all existing resource consents for the site) rather than a larger power station because this is consistent with the existing environment.
8. In regards to other electricity and gas assets on the Southdown Site, Mr Grala has sought that the Transport Agency confirm that all Mercury, Transpower and First Gas Limited assets shall be retained on the Southdown Site. I am still of the view that this condition is not appropriate, as neither the Transport Agency or Mercury own these assets and the owners should make their own decisions about the location of their assets. The outcome that is important is that the EWL does not impact the ability to supply services to the site.
9. In regards to the risk assessment matters, Mr Grala and I both agree that an assessment of risk needs to be undertaken prior to works commencing. The key difference is that Mr Grala's Condition SD.1 provides Mercury with a veto right in relation to risk matters whereas my Joint Witness Statement Condition SD.1 required a Risk assessment by an independent expert for that purpose. This matter is the key area of remaining disagreement. On reflection I consider that the key difference between the two approaches is centred around who prepares and confirms the assessment and ultimately who gets to decide whether the activities can be co-located safely. The exception being where control measures may be required outside the designation boundary on the Southdown site. I consider that this could be resolved by the

Transport Agency and Mercury jointly agreeing who undertakes the risk assessment and the terms of reference for the assessment. I have identified changes to my conditions included with the Joint Witness Statement to reflect this approach.

10. The key amendments I recommend are:

- (a) A condition requiring that the EWL shall not unreasonably constrain the ability of the owners of existing electricity or gas assets at the Southdown Site to access, operate, maintain and upgrade their assets. This is based on Mr Grala's Condition SD.2 but the key difference is that my condition includes "unreasonably" and applies to existing assets.
- (b) A condition requiring the preparation of a Risk Assessment Report involving:
 - (i) Approval by the Transport Agency and Mercury of the Suitably Qualified Person or Persons to undertake the risk assessment;
 - (ii) Agreement by the Transport Agency and Mercury for the terms of reference for the Risk Assessment Report;
 - (iii) Preparing a risk assessment that identifies and assesses relevant hazard scenarios, recommends Control Measures and identifies any risk that cannot be manage to an Acceptable or Tolerable Risk Level;
 - (iv) Providing for the risk assessment prepared by Mr Erskine to form an input to the new risk assessment;
 - (v) Assessing risk levels for each hazard scenario, recommending control measures for each scenario and identifying whether the control measures are to be implemented on the EWL or on the Southdown Site;
 - (vi) Consultation with Mercury on the control measures to be implemented during construction and those control measures that can be deferred until Mercury gives notice that it intends to recommence gas fired electricity generation at the Southdown Site.
- (c) A condition requiring that the Outline Plan include documentation of the Control Measures to be implemented within the designation and written confirmation from Mercury that it has been consulted and agrees to measures located on the Southdown site outside the designation or the control measures to be deferred.
- (d) A condition requiring that, unless otherwise agreed between the Transport Agency and Mercury, construction of the EWL from the west of Hugo Johnston Drive to the Great South Road Intersection shall not commence if there are Unacceptable Risks that cannot be addressed through Control Measures. I previously identified that this section of the alignment extended from the end of the reclamation, however, I have reconsidered this as the majority of that area is in the Coastal Marine Area and therefore not subject to the designation conditions. I consider it appropriate that the Southdown Specific Conditions apply within the designation.
- (e) The addition of a dispute mechanism should the Transport Agency and Mercury disagree on any matters.

- (f) A condition requiring that the Transport Agency consult with the relevant asset owner regarding any design details.
 - (g) Additional definitions for Acceptable or Tolerable Risk Level, Control Measures and Unacceptable Risk for certainty.
 - (h) Changes to other conditions in the Southdown Specific condition set to reflect changes in terminology or to clarify intent of the condition.
11. In my opinion these changes provide a robust process for how the parties can work collaboratively to identify appropriate control measures for the EWL being located on the Southdown Site and, should disputes arise, provide a mechanism to resolve these disputes.
12. I have not had the opportunity to consider the summary statements and examination of the remaining Mercury witnesses during the review of the conditions. I expect that there may be benefit in further refinement of the conditions following the presentation of all evidence in relation to the Southdown Site.

Attachments:

Attachment A: Revised Southdown Specific conditions

Attachment B: Comparison of Hopkins and Grala conditions

Attachment A - Revised Southdown Specific conditions

Designation definitions:

Amend the list of Definitions to include the following new definitions:

Acronym/term	Definition
<u>Acceptable or Tolerable Risk Level</u>	<p>The Acceptable or Tolerable Risk Level is to be determined using the Victorian Interim Risk Criteria offsite tolerability and acceptability values for location specific individual fatality risk for gas releases, and the societal risk criteria (F-N) for the aggregated risks for the site.</p> <p>In accordance with those values, an Acceptable Risk Level means an offsite risk within the broadly acceptable region, that is: Risk < 1 x 10⁻⁷ (lower than 1 in 10 million per year). A Tolerable Risk Level means an offsite risk within the tolerable region, that is: 1 x 10⁻⁷ < Risk < 1 x 10⁻⁵ (between 1 in 100,000 and > 1 in 10 million per year) for gas related risks, and if all reasonably practicable control measures to reduce the risk are undertaken.</p> <p>For the aggregated risks, the risk curve or values must be in or below the medium region, or in the low region of the F-N criteria.</p>
<u>Control Measures</u>	A measure or action taken to eliminate or minimise risk so far as is reasonably practicable.
<u>Unacceptable Risk</u>	<p>The Unacceptable Risk Level is to be determined using the Victorian Interim Risk Criteria offsite tolerability and acceptability values for location specific individual fatality risk of gas release related risks.</p> <p>In accordance with those values, an Unacceptable Risk Level means an offsite risk that is higher than 1 in 100,000 per year for gas release related risks, and for the aggregated site risks, the region noted by the societal risk (F-N) curves of tolerability and acceptability</p>

Designation conditions:

Delete existing proposed Conditions DC.14.A, DC14.B, DC14.C and advice note.

Insert new Condition DC.14:

DC.14	NoR 1	<u>As part of the Outline Plan prepared under Section 176A of the RMA, the Requiring Authority shall demonstrate how the requirements of Conditions SD.1, SD.2A, SD.2B and SD.3 have been achieved.</u>
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Resource consent conditions:

No changes required are required to the proposed resource consent conditions. Links to the relevant resource consents have been included in the proposed designation conditions. An advice note is proposed after proposed Condition SD.5 to clarify which resource consent conditions also apply to the

Southdown Site. Condition SD.6 (Southdown Construction Management Plan) includes reference to the air quality resource consent conditions.

Southdown Site (SD) conditions:

Add the new set of Southdown Site (SD) conditions at the end of the designation conditions set, after the Construction Traffic (CT) conditions.

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Southdown Site (SD)		
<i>Outline Plan – Southdown Site Risk Assessment and Design</i>		
<u>SD.1</u>	<u>NoR 1</u>	<u>The Requiring Authority shall design and construct the Project so that it does not unreasonably constrain the ability of the owners of existing electricity and gas assets at the Southdown Site to access, operate, maintain and upgrade those assets. The implementation of Conditions SD.2A to SD.10 is intended to achieve this outcome .</u>
<u>SD.2A</u>	<u>NoR 1</u>	<p>(a) <u>Within one month of the date on which this designation is included in the AUP, the Requiring Authority shall, at its cost, appoint a Suitably Qualified Person or Persons, approved by Mercury, to undertake a full risk assessment and to produce a Risk Assessment Report (RAR) in accordance with (b) – (e) below.</u></p> <p>(b) <u>The terms of reference of the RAR shall be agreed between the Requiring Authority and Mercury, in consultation with other owners of electricity and gas assets on the Southdown Site.</u></p> <p>(c) <u>The purpose of the RAR is to:</u></p> <ul style="list-style-type: none"> (i) <u>identify and assess relevant hazard scenarios arising from the location of the EWL on the Southdown Site, including:</u> <ul style="list-style-type: none"> a. <u>hazards from the EWL posing health and safety risks to workers and visitors to the Southdown Site; and</u> b. <u>hazards from the operation of a 135MW gas fired power station (and associated activities) posing health and safety risks to the users of the EWL;</u> (ii) <u>recommend any Control Measures required to manage the identified health and safety risks to an Acceptable or Tolerable Risk Level;</u> (iii) <u>identify any health and safety risk that cannot be managed to an Acceptable or Tolerable Risk Level by implementation of any Control Measures (Unacceptable Risk).</u> <p>(d) <u>The RAR shall have regard to the <i>Risk Assessment for the Mercury Southdown Site Report</i> dated July 2017 prepared by GHD (the GHD Assessment);</u></p> <p>(e) <u>In respect of each hazard scenario identified, the RAR shall:</u></p> <ul style="list-style-type: none"> (i) <u>Assess the risk level as Acceptable, Tolerable or Unacceptable;</u> (ii) <u>Recommend Control Measures required to reduce any Unacceptable Risk to Acceptable or Tolerable levels, or to ensure that all reasonably practicable steps will be taken in relation to any Tolerable Risk;</u> (iii) <u>Identify whether the Control Measures are required to be implemented on the EWL or on the Southdown Site;</u> (iv) <u>Identify, following consultation with the Requiring Authority and Mercury,</u> <ul style="list-style-type: none"> a. <u>The Control Measures to be implemented as part of construction of the EWL, and</u> b. <u>The Control Measures that could be deferred and implemented within a four month period in the event that Mercury gives notice under Condition SD.10 to recommence gas fired electricity generation,</u>

<u>SD.2B</u>		<p>(a) <u>With regard to Condition SD.2A (e)(iv) above, the Control Measures to be implemented within the designation as part of the construction of the EWL shall be set out in the Outline Plan in accordance with Condition SD.3. For the avoidance of doubt, these Control Measures shall include the items listed in Condition SD.3(a)(iii) and (vi).</u></p> <p>(b) <u>As part of the Outline Plan, the Requiring Authority shall provide written confirmation from Mercury that:</u></p> <p>(i) <u>Mercury has been consulted on the Control Measures in Condition SD.2(e)(iv)(a);</u></p> <p>(ii) <u>Mercury agrees to the implementation of the Control Measures to be located on the Southdown Site, outside of the designation; and</u></p> <p>(iii) <u>Mercury agrees the Control Measures that can be implemented within a four month period may be deferred by the Requiring Authority pending receipt of written notice under Condition SD10. In respect of such Control Measures, the Requiring Authority shall be deemed to have complied with Condition SD.2C.</u></p>
<u>SD.2C</u>		<p>(a) <u>Unless otherwise agreed between the Requiring Authority and Mercury, construction of the EWL viaduct west of Hugo Johnston Drive and the Great South Road intersection (between approximately Chainage 4200 and 5075) shall not commence:</u></p> <p>a. <u>if any Unacceptable Risks are identified in the RAR that cannot be addressed through Control Measures; and</u></p> <p>b. <u>until the Requiring Authority has provided Mercury's written confirmation referred to in Condition SD.2B.</u></p>
<i>Expert determination for disputes</i>		
<u>SD.2D</u>	<u>NoR 1</u>	<p>(a) <u>The Requiring Authority shall work collaboratively with Mercury with respect to all of the matters set out in these SD conditions. In the event of a dispute, the Requiring Authority shall engage an independent Expert as set out in the following clauses.</u></p> <p>(b) <u>In the event of any dispute between the Requiring Authority and Mercury relating to the appointment of the Suitably Qualified Person to undertake the RAR, the terms of reference and methodology for the RAR, the required Control Measures, or any other technical matter related to the RAR, the matter in dispute shall be referred to the Expert for determination under this condition.</u></p> <p>(c) <u>The Requiring Authority shall appoint an Expert, approved by Mercury. The Expert shall be a Suitably Qualified Person with specialist expertise in relation to the subject matter of the dispute. In the event that the Requiring Authority and Mercury are unable to agree on the Expert, the Requiring Authority may make a request to the President of the New Zealand Law Society to nominate an Expert.</u></p> <p>(g) <u>The costs of appointing the Expert and the Expert's costs shall be determined by the Expert or in the absence of such determination shall be shared equally between the Parties.</u></p>
<u>SD.23</u>	<u>NoR 1</u>	<u>As part of the An Outline Plan shall be prepared under section 176A of the RMA for the designated land within the Southdown Site. The Requiring Authority Outline Plan shall include:</u>

		<p>(a) Details for the design details for <u>Design details for</u> of the following hazard controls <u>Control Measures</u>, unless identified as not being required by the updated Risk Assessment RAR <u>updated Risk Assessment RAR</u> prepared under Condition SD.42 above or otherwise agreed between <u>the Requiring Authority and Mercury and the Requiring Authority</u>:</p> <ul style="list-style-type: none"> (i) A bridge structure <u>The EWL viaduct</u> located so that the northern edge of the structure is no further north than the road alignment shown on the drawings listed in Condition DC.1 and referred to in Condition DC.4, unless otherwise agreed between <u>the Requiring Authority and Mercury and the Requiring Authority</u>; (ii) A bridge structure <u>The EWL viaduct</u> providing at least 5.1m vertical clearance between ground level and the underside of the cross head viaduct <u>between Chainage 4520 and 4550 as shown on Drawing SK-PI-008-201 (Rev C) and Drawing Z5A-SK-80-202 (Rev C) to allow access under the structure</u>; (iii) A bridge structure <u>The EWL viaduct</u> incorporating a TL5 road barrier (or equivalent) of at least 1.1m to provide crash protection; (iv) A bridge structure <u>The EWL viaduct</u> providing a minimum separation distances of 7m between any new structure associated with EWL to existing Gas Engine Turbine 105 (GE 105); (vi) A concrete noise barrier with a minimum height of 2.5m located between approximately Chainage 4550 and 4670. The <u>purpose of the barrier</u> is to manage potential effects on road users arising from noise generating activities at the Southdown Site and will also act as a debris screen; (vii) A shared path located on the southern side of the <u>EWL viaduct bridge structure</u>; (viii) Any additional Control Measures identified <u>Control Measures identified recommended by the updated Risk Assessment RAR</u> under Condition SD.1 that need to be incorporated into the design of the EWL <p>(b) Confirmation from the Suitably Qualified Person, who undertook the updated assessment <u>updated assessment RAR</u> under Condition SD.42A that the design details in (a) above are appropriate controls in accordance with the outcomes <u>and recommendations</u> of the updated Risk Assessment RAR <u>updated Risk Assessment RAR</u>;</p> <p>(c) Confirmation of approval from First Gas Limited for the relocation of its assets, being the existing gas pigging station (metering station) on the East Tamaki to Taupaki Gas Pipeline and the natural gas supply for the power station on the Southdown Site. This shall include details of the commissioning of any new gas facilities to provide an uninterrupted supply of gas to the Southdown Site unless <u>otherwise agreed otherwise</u> with First Gas Limited and Mercury. The relocation of the gas facilities shall occur prior to <u>the Commencement of Construction any excavation or drilling activities (excluding geotechnical investigation)</u> on the Southdown Site associated with the Project; <u>and</u></p>
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		<p>(d) Final details of the following, unless <u>otherwise agreed otherwise</u> between <u>the Requiring Authority</u>, Mercury, Transpower, KiwiRail and First Gas Limited and the Requiring Authority:</p> <ul style="list-style-type: none"> (i) The Three permanent site access points for the Southdown Site as shown on Drawing SK-PI-008-201 (Rev C); (ii) Any changes to the earthgrids on the Southdown Site; (iii) The relocated storeroom on the Southdown Site; (iii) Landscape planting and treatment of batters and reinstatement of existing planting on the Southdown Site; (iv) Permanent fencing for the Southdown Site; and. <p>(e) <u>Where any of the items listed in Condition SD.3(d) are located outside of the designated land, the details shall be included in the Outline Plan for information purposes only to demonstrate to the Manager how the required outcomes have been achieved.</u></p> <p>(h) Details of the input and comments from Mercury, Transpower, KiwiRail and First Gas Limited, how this has been incorporated into the design and, where any input has not been incorporated, set out the reason why.</p>
<u>SD.4</u>	<u>NoR1</u>	<u>The design details set out in Condition SD.3 (c) and (d) shall be developed in consultation with the relevant asset owner. Any comments and inputs received from the asset owner shall be summarised within the Outline Plan or a supporting document, setting out how this input been incorporated into the design, and where any input has not been incorporated, the reasons why.</u>
<u>SD.65</u>	NoR 1	Prior to Completion of Construction, t The Requiring Authority shall implement the e Control m Measures set out in Condition <u>SD.2 and SD.23(a) as part of the Construction Works.</u>
<u>SD.6</u>	NoR 1	The Requiring Authority shall work with Mercury, Transpower, KiwiRail and Auckland Transport to confirm the design and construction methodology for Construction Works on and around the Southdown Rail Supply Substation. Construction Works that would compromise the ongoing operation of the transformer and other assets located within the Southdown Rail Supply Substation shall not occur until such time as measures are in place as agreed with those parties to mitigate any potential risks to the rail network and ensure continuity of electricity supply.
<u>Construction – Southdown Site Southdown Construction Management Plan</u>		
<u>SD.37</u>	NoR1	<p>(a) A <u>Southdown Construction Management Plan</u> (Southdown CMP) shall be prepared for the Southdown Site in accordance with Condition NU.3. For the purposes of preparing that plan <u>the Southdown CMP</u>, any reference to Network Utility in that eCondition <u>NU.3 shall should</u> be interpreted as a reference to both network utilities and other infrastructure at the Southdown Site.</p> <p>(b) The Southdown CMP shall be prepared in consultation with Mercury, Transpower, KiwiRail and First Gas Limited.</p>

		<p>(c) The Southdown CMP shall include procedures, methods and measures to manage effects of the Construction Works on the Southdown Site.</p> <p>(d) In addition to the matters listed in Conditions NU.3, NU.5 (Transpower) and NU.7 (First Gas Limited), the Southdown Site CMP shall also include details of the following:</p> <ul style="list-style-type: none"> (i) Dust controls and contingency measures under Condition AQ.2 <u>of the resource consents granted for the Project, so that Construction Works do not interfere with ongoing use of</u> for the solar panels associated with the existing Solar Research and Development Centre and high voltage transmission assets (e.g regular inspection and provision for cleaning of solar panels); (ii) Identify <u>Specific site security, authorisations and health & safety procedures</u> required for access to the Southdown Site during construction; and (iii) <u>Identification of</u> any equipment, buildings or other structures on the Southdown sSite that are vibration sensitive and will require a Site Specific Vibration Management Plan under Condition CVN.7A¹. <p>(e) The Southdown CMP shall be provided to the Manager in accordance with Condition NU.4.</p>
	NoR 1	<p>Advice Notes:</p> <p><i>For the avoidance of doubt, construction related activities occurring on or adjacent to the Southdown Site shall also be undertaken in accordance with relevant designation conditions including:</i></p> <ul style="list-style-type: none"> • General conditions (DC); • Communication and Social (CS); • Mana Whenua Collaboration (MW) ; • Historic Heritage (HH); • Landscape and Visual (LV) ; • Construction Noise and Vibration (CNV); and • Construction Traffic (CT). <p><i>For the avoidance of doubt, construction related activities occurring on or adjacent to the Southdown Site shall also be undertaken in accordance with the following relevant resource consent conditions:</i></p> <ul style="list-style-type: none"> • General resource consent conditions RC.1 – RC.5 (excluding RC.8B); • Dust management – Conditions AQ.1 – AQ.4; • Earthworks and land disturbance – Conditions E.1 – E.14; • Works in contaminated land – Conditions CL.1 – CL.8; and • Stormwater and impervious surfaces – Conditions SW.1 - SW.17.
SD.4-8	NoR1	The Requiring Authority shall not commence any Enabling Works (<u>excluding geotechnical investigations</u>) or Construction Works on the Southdown Site until:

¹ **Note:** Condition CNV.7 is to be amended to also include the DIN 4150-3 guideline values for buried pipework as recommended by Ms Wilkening (Paragraph 10.32 of her Evidence in Chief).

		<p>(a) <u>The requirements of Conditions SD.2, SD.3, SD.4 and SD.6 have been achieved;</u></p> <p>(b) Any variations to existing resource consents <u>R/LUC/1994/560763, LUC57030408001, Air discharge consent 39725 and the consent to divert and discharge stormwater 28244 for the gas fired power station at 135 MW capacity at the for Southdown Site at that time</u>, which are required as a direct result of the location of the <u>read EWL</u> on the site, have been granted. (provided these consents have not been cancelled). <u>The existing resource consents to which this condition applies are those which exist in August 2017, being R/LUC/1994/560763, LUC57030408001, Air discharge consent 39725 and the consent to divert and discharge stormwater 28244.</u></p> <p>(c) Any new statutory approvals required to implement the e<u>Control</u> m<u>Measures</u> in Condition SD.23 or as a direct result of the e<u>Construction Works of the EWL</u> on the Southdown Site, have been granted.</p>
SD.6	NoR 1	Prior to Completion of Construction, the Requiring Authority shall implement the control measures set out in Condition SD.2(a).
<i>Routine Maintenance of the Southdown Site – Existing Assets</i>		
SD.79	NoR 1 (Operational condition)	The Requiring Authority shall not require the owners of electricity and gas assets within the Southdown Site to seek written consent under section 176 of the RMA for on-going access to enable work associated with the <u>routine maintenance of assets at the Southdown Site</u> . To the extent that written approval is required, this condition shall constitute written approval.
<i>Future Power Generation Activities at the Southdown Site</i>		
SD.810	NoR 1 (Operational condition)	<p>In the event that, following Completion of Construction, Mercury provides formal notification to the Requiring Authority of its intent to recommence gas fired electricity generation at the Southdown Site using generators GE 101, GE 102 or GE 105; <u>then</u> within 4 months of the date of that notice, the Requiring Authority shall undertake the following:</p> <p>(a) Review the Risk Assessment Report <u>RAR</u> prepared under Condition SD.4(a)2 to identify any <u>additional eControl mMeasures additional to those listed in Condition SD.2(a)</u> to be installed on the Southdown Site <u>to manage risk associated with for the operation of the turbines in proximity to the EWL to an Acceptable or Tolerable Level</u>. The review shall be undertaken by a Suitably Qualified Person endorsed by both the Requiring Authority and Mercury and the Requiring Authority.</p> <p>(b) The Requiring Authority shall fund the following any additional hazard controls <u>Control Measures on the Southdown Site unless identified as not being required by the Risk Assessment RAR prepared under (a) above or as otherwise agreed between the landowner and the Requiring Authority and Mercury:</u></p> <p>(i) Install a barrier near generator GE 105, to reduce the risk of projectiles reaching the EWL. The barrier should be a manufacturer recommended barrier for protection against turbine disintegration, or a design by a Suitably Qualified Person; and</p>

		<p>(ii) Extend or relocate the three existing emergency gas release valve pipes (which are currently around 6.5m high). The replacement pipes shall be designed to conform to relevant New Zealand gas codes and be modelled for suitable height and position of venting/relief using appropriate consequence modelling of gas release scenarios.</p> <p>(iii) Any additional hazard controls <u>Control Measures</u> identified by the review of the Risk Assessment Report <u>RAR</u> under (a) above) and</p> <p>(iv) any variations to the existing consents listed in Condition SD.4(a) required to implement these hazard <u>Control Measures</u>.</p> <p>(c) <u>If there is a disagreement between the Requiring Authority and Mercury as to the additional Control Measures identified under Condition SD.10(a), the dispute mechanism set out in Condition SD.2D shall apply.</u></p>
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Attachment B - Comparison of Grala and Hopkins Conditions

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
<p>Outline Plan – Southdown Site Risk Assessment and Design</p> <p>SD.1</p> <p>The Requiring Authority shall design and construct the Project so that it does not unreasonably constrain the ability of the owners of existing electricity and gas assets at the Southdown Site to access, operate, maintain and upgrade those assets. The implementation of Conditions SD.2A to SD.10 is intended to achieve this outcome.</p>	<p>SD.2 Design and construction - Outcomes to be achieved</p> <p>The Requiring Authority shall design and construct the Project so that it does not constrain the ability of the owners of electricity and gas assets at the Southdown Site to access, operate, maintain and upgrade those assets. This includes (but is not limited to) the ability to access, operate, maintain and upgrade the following assets at the Southdown Site:</p> <ul style="list-style-type: none"> (a) An operable thermal power station with an operating capacity of no less than 135MW which can be started within a 3-4 month period; (b) the Mercury solar research and development centre (including battery research and development facilities); (c) Supporting assets such as the stormwater systems and earthgrid. <p>The letter provided to the consent authority under condition SD.1 shall specify how the outcomes listed in this condition SD.2 will be achieved.</p>	<p>Hopkins SD.1 and Grala SD.2 are similar.</p> <p>Key differences:</p> <ul style="list-style-type: none"> • Ms Hopkins specifies that the Project shall not unreasonably constrain. • Ms Hopkins specifies that the condition applies to existing assets. • Grala lists assets and includes a power station of no less than 135MW (i.e. it could be larger). Ms Hopkins considers that the definition of “Southdown Site” includes all these assets so not necessary to relist in the condition.
<p>SD.2A</p> <ul style="list-style-type: none"> (a) <u>Within one month of the date on which this designation is included in the AUP, the Requiring Authority shall, at its cost, appoint a Suitably Qualified Person or Persons, approved by Mercury, to undertake a full risk assessment and to produce a Risk Assessment Report (RAR) in accordance with (b) – (e) below.</u> (b) <u>The terms of reference of the RAR shall be agreed between the Requiring Authority and Mercury, in consultation with other owners of electricity and gas assets on the Southdown Site.</u> (c) <u>The purpose of the RAR is to:</u> <ul style="list-style-type: none"> (i) <u>identify and assess relevant hazard scenarios arising from the location of the EWL on the Southdown Site, including:</u> <ul style="list-style-type: none"> a. <u>hazards from the EWL posing health and safety risks to workers and visitors to the Southdown Site; and</u> b. <u>hazards from the operation of a 135MW gas fired power station (and associated activities) posing health and safety risks to the users of the EWL;</u> (ii) <u>recommend any Control Measures required to manage the identified health and safety risks to an Acceptable or Tolerable Risk Level;</u> (iii) <u>identify any health and safety risk that cannot be managed to an Acceptable or Tolerable Risk Level by implementation of any Control Measures (Unacceptable Risk).</u> (d) <u>The RAR shall have regard to the <i>Risk Assessment for the Mercury Southdown Site Report</i> dated July 2017 prepared by GHD (the GHD Assessment);</u> (e) <u>In respect of each hazard scenario identified, the RAR shall:</u> <ul style="list-style-type: none"> (i) <u>Assess the risk level as Acceptable, Tolerable or Unacceptable;</u> (ii) <u>Recommend Control Measures required to reduce any Unacceptable Risk to Acceptable or Tolerable levels, or to ensure</u> 	<p>SD.4 Design - Risk measures</p> <p>Prior to the Requiring Authority applying for any Outline Plan of Works for Sector 3 - <i>Anns Creek to Great South Road / Sylvia Park Road Intersection</i> of the Project, the Requiring Authority shall identify the measures required to both:</p> <ul style="list-style-type: none"> (a) Achieve levels of residual safety risk related to the colocation of the road and the electricity, gas and associated assets at the Southdown Site that are acceptable to the landowner, the owners of the electricity and gas assets at the Southdown Site and the Requiring Authority and that is consistent with all of the relevant parties' health and safety policies; and (b) Achieve the outcomes and requirements specified in conditions SD.2, SD.3 and SD.6. <p>The identified measures shall be specified in the letter provided to the consent authority under condition SD.1. The letter shall also include confirmation from a Suitably Qualified Person that the measures required to achieve both (a) and (b) above are appropriate.</p>	<p>Hopkins and Grala conditions differ in wording.</p> <p>Ms Hopkins' condition sets out a risk assessment process with input/agreement from Mercury and consultation with other owners of electricity and gas assets on the Southdown Site. The outcome of the process is the identification of control measures to be implemented as part of construction of the EWL and the control measures that could be deferred and implemented within a four month period in the event that Mercury gives notice of intent to recommence gas fired electricity generation.</p> <p>Mr Grala's condition requires that the Transport Agency identify the measures acceptable to Mercury and other owners of assets on the Southdown Site to achieve levels of residual safety risk, do not constrain assets, do not require the relocation of some assets from the Southdown Site, and shall achieve specific design elements.</p> <p>Mr Grala requires that the measures are specified in a letter to the consent authority. Ms Hopkins has specified that the measures are included in the Outline Plan.</p>

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
<p><u>that all reasonably practicable steps will be taken in relation to any Tolerable Risk:</u></p> <p>(iii) <u>Identify whether the Control Measures are required to be implemented on the EWL or on the Southdown Site;</u></p> <p>(iv) <u>Identify, following consultation with the Requiring Authority and Mercury,</u></p> <p>a. <u>The Control Measures to be implemented as part of construction of the EWL, and</u></p> <p>b. <u>The Control Measures that could be deferred and implemented within a four month period in the event that Mercury gives notice under Condition SD.10 to recommence gas fired electricity generation.</u></p>		
<p>SD.2B</p> <p>(a) <u>With regard to Condition SD.2A (e)(iv) above, the Control Measures to be implemented within the designation as part of the construction of the EWL shall be set out in the Outline Plan in accordance with Condition SD.3. For the avoidance of doubt, these Control Measures shall include the items listed in Condition SD.3(a)(iii) and (vi).</u></p> <p>(b) <u>As part of the Outline Plan, the Requiring Authority shall provide written confirmation from Mercury that:</u></p> <p>(i) <u>Mercury has been consulted on the Control Measures in Condition SD.2(e)(iv)(a);</u></p> <p>(ii) <u>Mercury agrees to the implementation of the Control Measures to be located on the Southdown Site, outside of the designation; and</u></p> <p>(iii) <u>Mercury agrees the Control Measures that can be implemented within a four month period may be deferred by the Requiring Authority pending receipt of written notice under Condition SD10. In respect of such Control Measures, the Requiring Authority shall be deemed to have complied with Condition SD.2C.</u></p>	<p>SD.7 Design and construction - OPW requirements</p> <p>As part of any Outline Plan(s) prepared under section 176A of the RMA for Sector 3 - <i>Anns Creek to Great South Road / Sylvia Park Road Intersection</i> of the Project, the Requiring Authority shall provide the following information (including plans):</p> <p>(a) Sufficient information to confirm that the outcomes specified in conditions SD.2, SD.3, SD.4 and SD.6 will be achieved in the manner agreed with Mercury under condition SD.1(a);</p> <p>(b) Confirmation from an independent Suitably Qualified Person that the design details are appropriate to meet the outcomes specified in conditions SD.2, SD.3, SD.4 and SD.6.</p> <p>(e) The programme for carrying out the proposed work (including staging details, if applicable) within the designation area;</p> <p>(f) The extent, location and nature of major earthworks including details of how land will be reinstated post construction; and</p> <p>(g) Any proposed landscaping including details of existing landscaping to be re-instated, new landscape planting and treatment of batters and reinstatement of existing vegetation.</p>	<p>Hopkins and Grala conditions differ in wording.</p> <p>Ms Hopkins' condition requires that the control measures are detailed in the Outline Plan and that the Outline Plan shall also include written confirmation from Mercury.</p> <p>Mr Grala's Outline Plan condition is covered in part by various Hopkins conditions in SD.2 and SD.3:</p> <ul style="list-style-type: none"> • Grala (a) is similar to Hopkins SD.2B(a) with information to support the Outline Plan. • Grala (b) is similar to Hopkins SD.3(b). Ms Hopkins does not agree with referencing other assets for the reasons set out in response to that condition. • Grala (e) has no equivalent in Ms Hopkins' conditions. • Grala (f) has no equivalent in Ms Hopkins' conditions but is required by section 176A(3) of the RMA in any event so Ms Hopkins does not consider that its inclusion is necessary. • Grala (g) is the equivalent of Hopkins SD.3(g)(iii).
<p>SD.2C</p> <p>(a) <u>Unless otherwise agreed between the Requiring Authority and Mercury, construction of the EWL viaduct west of Hugo Johnston Drive and the Great South Road intersection (between approximately Chainage 4200 and 5075) shall not commence:</u></p> <p>a. <u>if any Unacceptable Risks are identified in the RAR that cannot be addressed through Control Measures; and</u></p> <p>b. <u>until the Requiring Authority has provided Mercury's written confirmation referred to in Condition SD.2B.</u></p>		<p>Mr Grala has not included a similar condition in his set however there are similarities with his Condition SD.1 (Pre-start requirements) which requires that the Transport Agency cannot commence works between Sector 3- Anns Creek to Great South Road / Sylvia Park Road Intersection until it has identified the measures acceptable to Mercury and other owners of assets on the Southdown Site to achieve levels of residual safety risk, not constrain assets, not requiring the relocation of some assets from the Southdown Site, and including specific design elements.</p>
<p><u>Expert determination for disputes</u></p> <p>SD.2D</p> <p>(a) <u>The Requiring Authority shall work collaboratively with Mercury with respect to all of the matters set out in these SD conditions. In the event of a dispute, the Requiring Authority shall engage an independent Expert as set out in the following clauses.</u></p>		<p>There is no equivalent condition in Mr Grala's set.</p>

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
<p>(b) <u>In the event of any dispute between the Requiring Authority and Mercury relating to the appointment of the Suitably Qualified Person to undertake the RAR, the terms of reference and methodology for the RAR, the required Control Measures, or any other technical matter related to the RAR, the matter in dispute shall be referred to the Expert for determination under this condition.</u></p> <p>(c) <u>The Requiring Authority shall appoint an Expert, approved by Mercury. The Expert shall be a Suitably Qualified Person with specialist expertise in relation to the subject matter of the dispute. In the event that the Requiring Authority and Mercury are unable to agree on the Expert, the Requiring Authority may make a request to the President of the New Zealand Law Society to nominate an Expert.</u></p> <p>(g) <u>The costs of appointing the Expert and the Expert's costs shall be determined by the Expert or in the absence of such determination shall be shared equally between the Parties.</u></p>		
	<p>SD.3 Design and construction - Related assets to be retained</p> <p>In achieving the outcomes specified in condition SD.2, the Requiring Authority shall ensure that the design and construction of the Project does not require the relocation of any of the following assets away from the Southdown Site:</p> <p>(a) the Southdown Rail Supply Substation;</p> <p>(b) National Grid infrastructure; and</p> <p>(c) Gas supply infrastructure (including connections to the thermal power station referred to in condition SD.2(a)).</p> <p>The letter provided to the consent authority under condition SD.1 shall specify how the outcomes listed in this condition (SD.3) will be achieved.</p> <p><u>Except that this condition does not apply in the event that the landowner of the Southdown Site / Mercury confirms that they are no longer able to accommodate these assets within the Southdown Site.</u></p>	<p>There is no equivalent in Ms Hopkins' condition set.</p> <p>Ms Hopkins does not support the inclusion of this condition as these assets are owned by other parties (Transpower and First Gas) and they may have commercial, operational or other reasons for relocating their assets outside of the existing site notwithstanding that there may be room on the site. Ms Hopkins' Condition SD.3(c) addresses the First Gas assets on the site and Condition SD.10 addresses the Transpower owned Rail Supply Substation.</p>
<p>SD.23</p> <p>As part of the An Outline Plan shall be prepared under section 176A of the RMA for the designated land within the Southdown Site. The Requiring Authority Outline Plan shall include:</p> <p>(a) Details for the dDesign details for of the following hazard controls <u>Control Measures</u>, unless identified as not being required by the updated Risk Assessment RAR prepared under Condition SD.42 above or otherwise agreed between <u>the Requiring Authority and Mercury</u> and the Requiring Authority:</p> <p>(i) A bridge structure <u>The EWL viaduct</u> located so that the northern edge of the structure is no further north than the road alignment shown on the drawings listed in Condition DC.1 and referred to in Condition DC.4, unless otherwise agreed between <u>the Requiring Authority and Mercury</u> and the Requiring Authority;</p> <p>(ii) A bridge structure <u>The EWL viaduct</u> providing at least 5.1m vertical clearance between ground level and the underside of the cross head <u>viaduct</u> between Chainage 4520 and 4550 as shown on</p>	<p>SD.6 Design, construction and operation - Specific requirements</p> <p>In achieving the outcomes specified by conditions SD.2, SD.3 and SD.4, the Requiring Authority shall ensure that the design of the Project must incorporate, as a minimum, the following requirements:</p> <p>(a) A minimum (horizontal) separation distance of 7 metres between any structures at the Southdown Power Station and any above ground structures associated with the Project to enable adequate physical access to the Southdown Power Station.</p> <p><i>Note: Should any separation required resulting from condition SD.4 exceed 7m, this shall be in addition to this condition, which is purely required for operation and maintenance on the Southdown Site.</i></p> <p>(b) The protection, or if not practicable, the replacement of the earthgrid at the Southdown Site, provided that any replacement of the earthgrid shall be operational before the existing earthgrid is removed or modified in any way.</p> <p>(c) Clearances between all National Grid assets and ground levels and structures at the Southdown Site (during both construction and</p>	<p>Mr Grala and Ms Hopkins's conditions are similar although they differ in some content.</p> <p>The key similarities and differences are:</p> <ul style="list-style-type: none"> • Grala (a) is the equivalent of Hopkins (a)(iv). • Grala (b) is the equivalent of Hopkins (d)(ii). • Grala (c) has no equivalent in the Hopkins conditions. Ms Hopkins has dealt with this via the access condition. Ms Hopkins does not support reference to dispensations as this is a Transpower matter. • Grala (d) is similar to Hopkins (d)(i) although Mr Grala has added additional requirements regarding grade and additional clearance under the viaduct structure. • Grala (e) has no equivalent in the Hopkins conditions. Ms Hopkins does not support this clause it effectively requires that none of those facilities can be relocated. • Grala (f) is the equivalent of Hopkins (a)(vii). • Grala (g) is the equivalent of Hopkins (a)(i). • Grala (h) is similar to Hopkins (a)(ii) but Mr Grala's condition requires a clearance of 5.7m rather than 5.1m under the viaduct structures.

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
<p>Drawing SK-PI-008-201 (Rev C) and Drawing Z5A-SK-80-202 (Rev C) to allow access under the structure;</p> <p>(iii) A bridge structure. The EWL viaduct incorporating a TL5 road barrier (or equivalent) of at least 1.1m to provide crash protection;</p> <p>(iv) A bridge structure. The EWL viaduct providing a minimum separation distances of 7m between any new structure associated with EWL to existing Gas Engine Turbine 105 (GE 105);</p> <p>(v) A concrete noise barrier with a minimum height of 2.5m located between approximately Chainage 4550 and 4670. The <u>purpose of the barrier</u> is to manage potential effects on road users arising from noise generating activities at the Southdown Site and will also act as a debris screen;</p> <p>(vi) A shared path located on the southern side of the <u>EWL viaduct</u> bridge structure;</p> <p>(vii) Any additional eControl <u>Measures identified recommended</u> by the updated Risk Assessment RAR under Condition SD.1 that need to be incorporated into the design of the EWL</p> <p>(b) Confirmation from the Suitably Qualified Person, who undertook the updated assessment <u>RAR</u> under Condition SD.42A that the design details in (a) above are appropriate controls in accordance with the outcomes <u>and recommendations</u> of the updated Risk Assessment RAR;</p> <p>(c) Confirmation of approval from First Gas Limited for the relocation of its assets, being the existing gas pigging station (metering station) on the East Tamaki to Taupaki Gas Pipeline and the natural gas supply for the power station on the Southdown Site. This shall include details of the commissioning of any new gas facilities to provide an uninterrupted supply of gas to the Southdown Site unless <u>otherwise agreed otherwise</u> with First Gas Limited and Mercury. The relocation of the gas facilities shall occur prior to <u>the Commencement of Construction</u> any excavation or drilling activities (excluding geotechnical investigation) on the Southdown Site associated with the Project; <u>and</u></p> <p>(d) Final details of the following, unless <u>otherwise agreed otherwise</u> between <u>the Requiring Authority</u>, Mercury, Transpower, KiwiRail and First Gas Limited and the Requiring Authority:</p> <p>(i) The <u>Three</u> permanent site access points for the Southdown Site as shown on Drawing SK-PI-008-201 (Rev C);</p> <p>(ii) Any changes to the earthgrids on the Southdown Site;</p> <p>(iii) The relocated storeroom on the Southdown Site;</p> <p>(iii) Landscape planting and treatment of batters and reinstatement of existing planting on the Southdown Site;</p> <p>(iv) Permanent fencing for the Southdown Site; and</p> <p>(e) <u>Where any of the items listed in Condition SD.3(d) are located outside of the designated land, the details shall be included in the Outline Plan for information purposes only to demonstrate to the Manager how the required outcomes have been achieved.</u></p>	<p>operation of the Project) that <u>achieve</u> compliance with NZECP 34:2001, including s5.2.1 <u>to ensure that without the need for</u> the landowner or the owner of any infrastructure at the Southdown Site <u>does not need to</u> obtain <u>any</u> Transpower dispensations.</p> <p>(d) Retention of the current, or provision of adequate and acceptable alternative, heavy vehicle access to, <u>and from and through</u> the Southdown Site at all times (during both the construction and operation of the Project).</p> <p><u>Any entrances to the Southdown Site must have a gradient of no more than 5% with suitable transitions at each end of the grade to provide for the necessary ground clearance for all vehicles.</u></p> <p>'Adequate and acceptable access' means the provision of safe, efficient and uninterrupted 24hr access to the Southdown Site at all times including appropriate geometry, tracking and dimensional envelopes for the maximum length legal vehicle, as well as the over-weight and over-dimension vehicles expected to use the site, without having to obtain dispensations from Transpower.</p> <p>(ej) Any infrastructure or asset connections, including but not limited to those in condition SD.3, within or to the Southdown Site will not be disturbed by the Project, which shall be demonstrated through solutions agreed with Mercury.</p> <p>(fk) The pedestrian walkway and cycleway within Sector 3 - <i>Anns Creek to Great South Road / Sylvia Park Road Intersection</i> of the Project shall be constructed on the southern-most side of the Project.</p> <p>(gl) The Project viaduct over the Southdown Site shall be constructed so that the northern edge of the viaduct structure is no further north than the road alignment shown on the drawings listed in Condition DC.1 and referred to in Condition DC.4, unless otherwise agreed between the owner of the Southdown Site and the Requiring Authority.</p> <p>(hm) Adequate access to all assets at the Southdown Site for <u>enacting an effective firefighting response</u> firefighting and <u>undertaking</u> maintenance and repair <u>activities purposes</u> shall be maintained, including at least a 5.4m <u>5.7m</u> vertical clearance underneath the viaduct for the Project <u>at all points</u> where that <u>viaduct</u> passes over the Southdown Site.</p> <p>(i) <u>The provision of appropriate pedestrian access to each of the parcels at the Southdown Site.</u></p> <p>(jp) <u>Clearances between all National Grid assets and ground levels and structures on Hugo Johnston Drive (during both construction and operation of the Project) that are no less than the clearances that currently exist on Hugo Johnston Drive.</u></p>	<ul style="list-style-type: none"> • Grala (i) has no equivalent in the Hopkins conditions. • Grala (j) has no equivalent in the Hopkins conditions. <p>Ms Hopkins specifies that the matters are to be included in the Outline Plan.</p>

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
(h) Details of the input and comments from Mercury, Transpower, KiwiRail and First Gas Limited, how this has been incorporated into the design and, where any input has not been incorporated, set out the reason why.		
SD.4 The design details set out in Condition SD.3 (c) and (d) shall be developed in consultation with the relevant asset owner. Any comments and inputs received from the asset owner shall be summarised within the Outline Plan or a supporting document, setting out how this input been incorporated into the design, and where any input has not been incorporated, the reasons why.		Ms Hopkins has deleted Condition SD.3(h) and relocated and expanded it here so that the requirement to consult is not “lost” in the list of matter in Condition SD.3. There is no equivalent condition in Mr Grala's set.
SD.65 Prior to Completion of Construction, the Requiring Authority shall implement the Control Measures set out in Condition SD.2 and SD.23(a) as part of the Construction Works.		
SD.6 The Requiring Authority shall work with Mercury, Transpower, KiwiRail and Auckland Transport to confirm the design and construction methodology for <u>Enabling Work</u> and Construction Works on and around the Southdown Rail Supply Substation. Construction Works that would compromise the ongoing operation of the transformer and other assets located within the Southdown Rail Supply Substation shall not occur until such time as measures are in place as agreed with those parties to mitigate any potential risks to the rail network and ensure continuity of electricity supply.	SD.13 Design and construction- Southdown Management Plan The Requiring Authority shall work with Mercury, Transpower, KiwiRail and Auckland Transport to confirm the design and construction methodology for <u>Enabling Work</u> and Construction Works on or and around the Southdown Rail Supply Substation. Construction Works that would compromise the ongoing operation of the transformer and other assets located within the Southdown Rail Supply Substation shall not occur until such time as measures are in place, as agreed with those parties, to mitigate any potential risks to the rail network and ensure continuity of electricity supply.	Relocated Condition NU.10 largely unchanged. The condition was developed with input from KiwiRail, Auckland Transport and Transpower. No comments received from Mercury. Grala has extended condition to cover enabling works. Ms Hopkins has added “Enabling Works” as there are likely to be some enabling works required for the relocation.
Construction – Southdown Site Southdown Construction Management Plan SD.37 (a) A Southdown Construction Management Plan (Southdown CMP) shall be prepared for the Southdown Site in accordance with Condition NU.3. For the purposes of preparing that plan <u>the Southdown CMP</u> , any reference to Network Utility in that Condition NU.3 shall <u>should be</u> interpreted as a reference to both network utilities and other infrastructure at the Southdown Site. (b) The Southdown CMP shall be prepared in consultation with Mercury, Transpower, KiwiRail and First Gas Limited. (c) The Southdown CMP shall include procedures, methods and measures to manage effects of the Construction Works on the Southdown Site. (d) In addition to the matters listed in Conditions NU.3, NU.5 (Transpower) and NU.7 (First Gas Limited) , the Southdown Site CMP shall also include details of the following: (i) Dust controls and contingency measures under Condition AQ.2 <u>of the resource consents granted for the Project, so that Construction Works do not interfere with ongoing use of</u> for the solar panels associated with the existing Solar Research and Development Centre and high voltage transmission assets (e.g regular inspection and provision for cleaning of solar panels);	SD.10 Design and construction- Southdown Management Plan (a) The Requiring Authority shall prepare and implement a Southdown Management Plan (SDMP). The SDMP shall be prepared in consultation with Mercury, First Gas, KiwiRail and Transpower. The purpose of the SDMP is to ensure that the design and construction of the Project takes account of, and includes, measures to, address the safety, integrity, protection and (where necessary and occurring only within the Southdown Site) the operation and, if necessary, relocation of existing assets located within the Southdown Site. (b) The SDMP shall include methods and measures to: i. Ensure that assets can be accessed for maintenance at all reasonable times, or for emergency works at all times, during and after construction activities <u>(with such access to be developed in conjunction with any changes to the layout of the Southdown Site required due to the relocation of any assets on that site);</u> ii. Manage the effects of dust and any other material potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear, to assets located at the Southdown Site <u>(in accordance with Condition SD.13); and</u> iii. Ensure that no activity is undertaken during construction that would result in ground vibrations, ground instability and/or ground	Ms Hopkins and Mr Grala's conditions are similar and are largely based on the wording of Condition NU.3. Grala (a) is copied from Hopkins NU.3. Grala (b) is the equivalent of Condition NU.3(b). (b)i. If retained Ms Hopkins suggests “and after construction” is deleted as the Southdown CMP will address construction and the Outline Plan will address design. (b)ii. If retained Ms Hopkins suggests that Grala Condition SD.13 (dust) could be incorporated here so that the conditions flow better. (b)iii. If retained Ms Hopkins suggests that Grala Condition SD.9 (vibration) is incorporated here so that the conditions flow better and avoids repetition. (b)iv. Has no equivalent in Ms Hopkins' conditions. Grala (c) is the equivalent of Hopkins Condition NU.3(c). Grala (d) refers to SD.12 (Procedures, Methods and Procedures) and SD.13 (Rail Supply Substation). Ms Hopkins considers that Grala SD.12 is now redundant as contained in the introduction to the Southdown CMP. Grala (e) is the equivalent of Hopkins Condition NU.3(e) with some amendments. Grala (f) is the equivalent of Hopkins Condition NU.3(f).

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
<p>(ii) Identify Specific site security, authorisations and health & and safety procedures required for access to the Southdown Site during construction; and</p> <p>(iii) Identification of any equipment, buildings or other structures on the Southdown sSite that are vibration sensitive and will require a Site Specific Vibration Management Plan under Condition CVN.7A¹.</p> <p>(e) The Southdown CMP shall be provided to the Manager in accordance with Condition NU.4.</p>	<p>settlement likely to cause material damage assets located at the Southdown Site; and</p> <p>iv. <u>Ensure that robust controls around hot work are implemented should the natural gas supply to the Southdown Power Station be required during the construction phase of the Project.</u></p> <p>(c) Demonstrate compliance with relevant standards and Codes of Practice including:</p> <p>i. NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances 2001; and</p> <p>ii. AS/NZS 4853:2012 Electrical hazards on Metallic Pipelines.</p> <p>(d) The SDMP shall also include the specific matters set out in Conditions SD.12 and SD.13.</p> <p>(e) At least 40 working days prior to the commencement of any Enabling Works or Construction Works affecting any assets at the Southdown Site, the Requiring Authority shall provide a draft of the SDMP to Mercury, First Gas, KiwiRail and Transpower for their review and comment.</p> <p>The Requiring Authority shall consider any comments received from the infrastructure provider when finalising the SDMP. The final SDMP shall describe how the input from the Southdown Site asset owners in relation to their assets has been incorporated into the SDMP.</p> <p>(f) Any amendments to the SDMP related to the assets at the Southdown Site shall be prepared in consultation with the relevant asset owner.</p>	
	<p>SD.11 Design and construction- Southdown Management Plan</p> <p>A copy of the SDMP shall be provided to the Manager for their information at least 20 working days prior to the commencement of any Enabling Works or Construction Works where those Enabling or Construction Works impact on Southdown Site assets.</p>	<p>Grala condition copied directly from NU.4. and equivalent to Hopkins Condition SD.7(e) which requires that the process in NU.4 is followed for the Southdown CMP.</p>
	<p>SD.9 Construction and operation - Vibration</p> <p>The Requiring Authority shall, to the extent practicable, ensure that any vibration effects occurring from operation of the Project shall not damage assets located within the Southdown Site.</p> <p>Should it not be practicable to avoid damage to those assets, any damage shall be promptly made good by the Requiring Authority in a manner agreed with the relevant asset owner.</p>	<p>Grala has included vibration as a separate condition.</p> <p>Hopkins has included vibration in SD.7(d)(iii).</p> <p>Mr Grala and Ms Hopkins adopt different wording.</p>
	<p>SD.12 Design and construction- Southdown Management Plan</p> <p>The SDMP shall include procedures, methods and measures to manage effects of the Enabling Works and Construction Works on the Southdown Site, in particular, effects on electricity and gas assets including but not limited to the assets identified in conditions SD.2 and SD.3</p>	<p>Mr Grala's condition is based on Condition NU.9 which Ms Hopkins considers is now redundant as it is covered in the introductory text for the Southdown Construction Management Plan either in Grala SD.10(a) or Hopkins SD.7(c).</p>
	<p>SD.14 Construction- Dust</p>	<p>Mr Grala's condition is a combination of resource consent Condition AQ.2 text and a repeat of text in Mr Grala's Condition SD.10(b)(ii).</p>

¹ **Note:** Condition CNV.7 is to be amended to also include the DIN 4150-3 guideline values for buried pipework as recommended by Ms Wilkening (Paragraph 10.32 of her Evidence in Chief).

Hopkins Text (with post JWS amendment in strike through and underline)	Grala Text (with post JWS amendment in strike through and underline) Conditions reordered to sit alongside similar Hopkins conditions	Key differences
	<p>The Consent Holder shall avoid (as far as practicable) dust, offensive or objectionable odour and fumes arising from construction activities at any point on the Southdown Site. This includes:</p> <p>(a) Managing the effects of dust and any other potentially resulting from construction activities and able to cause material damage, beyond normal wear and tear, to infrastructure and assets at the Southdown Site; and</p> <p>(b) Identifying contingency measures to address verified effects on property in the event of a process malfunction or an accidental dust discharge</p>	<p>Ms Hopkins suggests that if the Grala text is retained, that it is included in the Southdown Management Plan contents rather than as a separate condition.</p>
<p>Advice Notes:</p> <p><i>For the avoidance of doubt, construction related activities occurring on or adjacent to the Southdown Site shall also be undertaken in accordance with relevant designation conditions including:</i></p> <ul style="list-style-type: none"> • General conditions (DC); • Communication and Social (CS); • Mana Whenua Collaboration (MW) ; • Historic Heritage (HH); • Landscape and Visual (LV) ; • Construction Noise and Vibration (CNV); and • Construction Traffic (CT). <p><i>For the avoidance of doubt, construction related activities occurring on or adjacent to the Southdown Site shall also be undertaken in accordance with the following relevant resource consent conditions:</i></p> <ul style="list-style-type: none"> • General resource consent conditions RC.1 – RC.5 (excluding RC.8B); • Dust management – Conditions AQ.1 – AQ.4; • Earthworks and land disturbance – Conditions E.1 – E.14; • Works in contaminated land – Conditions CL.1 – CL.8; and • Stormwater and impervious surfaces – Conditions SW.1 - SW.17. 		<p>No equivalent in the Grala conditions.</p> <p>This advice note is included in Ms Hopkins' conditions to clarify the designation and resource consent conditions that apply to the EWL within the Southdown Site.</p>
<p>SD.4-8</p> <p>The Requiring Authority shall not commence any Enabling Works <u>(excluding geotechnical investigations)</u> or Construction Works on the Southdown Site until:</p> <p>(a) <u>The requirements of Conditions SD.2, SD.3, SD.4 and SD.6 have been achieved;</u></p> <p>(b) Any variations to existing resource consents R/LUC/1994/560763, LUC57030408001, Air discharge consent 39725 and the consent to divert and discharge stormwater 28244 for the gas fired power station at 135 MW capacity at the for Southdown Site at that time, which are required as a direct result of the location of the road EWL on the site, have been granted. (provided these consents have not been cancelled). <u>The existing resource consents to which this condition applies are those which exist in August 2017, being R/LUC/1994/560763, LUC57030408001, Air discharge consent 39725 and the consent to divert and discharge stormwater 28244.</u></p>	<p>SD.1 Pre-start requirements</p> <p>The Requiring Authority shall not commence any Enabling Works or Construction Works for Sector 3- Anns Creek to Great South Road / Sylvia Park Road Intersection of the Project until a letter has been provided to the consent authority from Mercury and the Requiring Authority confirming that:</p> <p>(a) Agreement has been reached with Mercury on how the Requiring Authority will meet the requirements set out in conditions SD.2, SD.3, SD.4, and SD.6; and</p> <p>(b) All required resource consents (including variations to existing resource consents) or other statutory approvals have been granted for any activities or works to be undertaken on the Southdown Site associated with the operation, relocation or reconfiguration of the Mercury, First Gas and Transpower assets located at the Southdown Site (including the KiwiRail substation) to meet the requirements of conditions SD.2, SD.3, SD.4, and SD.6 in the manner agreed under condition 50.1(a); and</p>	<p>Hopkins and Grala conditions differ in wording.</p> <p>The key similarities and differences are:</p> <ul style="list-style-type: none"> • Grala (a) and Hopkins (a) are similar but differ is the requirements of the reference conditions. • Grala (b) and Hopkins (b) and (c) are similar but Ms Hopkins' condition reflects the agreement reached in expert conference (Grala and Rickard) regarding which resource consents are applicable to the existing Mercury activities on the Southdown Site. • Grala (c) has no equivalent in Hopkins conditions. Ms Hopkins does not support this clause as the works cannot be completed before any enabling works start as, in and of themselves, they may be considered enabling works.

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(c) Any new statutory approvals required to implement the e Control m Measures in Condition SD.23 or as a direct result of the e Construction Works of the EWL on the Southdown Site, have been granted.	(c) Any works agreed under condition SD.1(a) are complete.	
SD.6 Prior to Completion of Construction, the Requiring Authority shall implement the control measures set out in Condition SD.2(a).	SD.5 Design and Construction - Implementing measures The Requiring Authority shall ensure that the measures for achieving the outcomes in SD.2, SD.3, SD.4 and SD.6 identified in the letter provided to the consent authority under condition SD.1 are incorporated in, and implemented through, the Enabling Works and Construction Works for the Project.	Hopkins SD.6 has been deleted as this is now captured by Hopkins Condition SD.5. Grala Condition SD.5 is similar to Hopkins condition SD.5.
Routine Maintenance of the Southdown Site – Existing Assets SD.79 The Requiring Authority shall not require the owners of electricity and gas assets within the Southdown Site to seek written consent under section 176 of the RMA for on-going access to enable work associated with the <u>routine</u> maintenance of assets at the Southdown Site. To the extent that written approval is required, this condition shall constitute written approval.	SD.8 Operation- s176 approval waiver The Requiring Authority shall not require either the owner of, or the owners of assets within, the Southdown Site to seek written consent under section 176 of the RMA to access, operate, or undertake maintenance or <u>upgrading</u> of any assets located within the Southdown Site. To the extent that written approval is required, this condition shall constitute written approval.	Hopkins SD.9 and Grala SD.8 conditions are similar. The key differences are: <ul style="list-style-type: none"> Ms Hopkins considers “the owners of” wording is unnecessary. Grala condition provides for upgrading of assets. Ms Hopkins does not agree with this as it depends on what the upgrading is and whether it could prevent or hinder a public work or project or work to which the designation relates.
Future Power Generation Activities at the Southdown Site SD.810 In the event that, following Completion of Construction, Mercury provides formal notification to the Requiring Authority of its intent to recommence gas fired electricity generation at the Southdown Site using generators GE 101, GE 102 or GE 105; <u>then</u> within 4 months of the date of that notice, the Requiring Authority shall undertake the following: (a) Review the Risk Assessment Report RAR prepared under Condition SD.4(a)2 to identify any <u>additional</u> e Control m Measures <u>additional to those listed in Condition SD.2(a)</u> to be installed on the Southdown Site to manage risk associated with <u>for the operation of the turbines in proximity to the EWL to an Acceptable or Tolerable Level</u> . The review shall be undertaken by a Suitably Qualified Person endorsed by <u>both the Requiring Authority and Mercury and the Requiring Authority</u> . (b) The Requiring Authority shall fund the following any additional hazard controls <u>Control Measures on the Southdown Site unless identified as not being required by the Risk Assessment RAR prepared under (a) above or as otherwise agreed between the landowner and the Requiring Authority and Mercury:</u> (i) Install a barrier near generator GE 105, to reduce the risk of projectiles reaching the EWL. The barrier should be a manufacturer recommended barrier for protection against turbine disintegration, or a design by a Suitably Qualified Person; and (ii) Extend or relocate the three existing emergency gas release valve pipes (which are currently around 6.5m high). The replacement pipes shall be designed to conform to relevant New Zealand gas codes and be modelled for suitable height and position of venting/relief using appropriate consequence modelling of gas release scenarios. (iii) Any additional hazard controls <u>Control Measures identified by the review of the Risk Assessment Report RAR under (a) above} and</u>		No equivalent in the Grala conditions. This is an operational condition to provide for additional control measures at the time that Mercury recommences operation of the power station. Ms Hopkins has deleted the specific control measures in (b) as these will be identified through the process set out in Condition SD.2 and therefore do not need to be listed in this condition. Ms Hopkins has added a dispute mechanism.

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<p>(iv) any variations to the existing consents listed in Condition SD.4(a) required to implement these hazard Control Measures.</p> <p><u>(c) If there is a disagreement between the Requiring Authority and Mercury as to the additional Control Measures identified under Condition SD.10(a), the dispute mechanism set out in Condition SD.2D shall apply.</u></p>		
	<p>SD.15 Construction and operation- NOx monitoring</p> <p>To determine the effects of the Project on the background air quality in the vicinity of the Southdown Site, the Requiring Authority shall set up an air quality monitoring station in close proximity to both the Project site and the Southdown Site and continuously monitor ambient air contaminant levels for NOx, for two six month periods from February through to July (inclusive), one six-month period to be pre construction of the Project and the other six-month period to be post construction of the Project.</p>	<p>No equivalent condition in Hopkins conditions. Ms Hopkins does not support the inclusion of this condition.</p>