17 MAY 23

Our Ref: 22032

[redacted]
Aspect Environmental

[redacted]

Re: Fill importation audit, MPW Stage 3

I provide the Fill importation Audit required by Condition A15 of SSD 10431.

Where the information provided is considered to not meet the requirements of a particular aspect of this Condition a suggested means to close the is presented.

Please also find separately a file containing all the data and documentation referred to within performance of this audit.

Your attention is drawn to Section 2.3.4 where input from Aspect is required.

Please contact me if you require further information.

[redacted]
Principal
ErSed Environmental Pty Ltd

1 Introduction and Scope of audit

ErSed Environmental P/L was engaged by Aspect Environmental to undertake an audit fill importation records and information against the requirements of Condition A15 of SSD10431.

This Condition is given below.

A15 Prior to the commencement of fill importation or fill placement, the Applicant is to engage a suitably qualified and independent person or persons to conduct an audit of:

- *a) The amount of fill (whether unconsolidated, consolidated or structural) brought to the site to date;*
- *b) Where the fill has been used on site, include and aerial plan clearly indicating the location and boundary of the placed fill relevant to its respective consent;*
- *c) For what purpose all fill has been used.*
- *d) How all fill uses is justified under existing development consents applying to the land; and*
- *e) current site levels*

The suitably qualified person or persons are to be approved by the Planning Secretary prior to conduct of the audit. Fill importation or placement must not commence until the Planning Secretary approves the audit.

1.1 Comment to Auditor

Carl Vincent (ErSed Environmental Pty Ltd) was Presented to the Department of Planning and Environment August 2022, and approved 19 September 2022.

At the time of issue of this report, no importation or placement of fill material has occurred under the approval for MPW Stage 3.

[redacted] **was accepted as suitably qualified and independent by the DPE, and this audit has been conducted prior to any fill importation or placement.**

As such this aspect of Condition A15 is complied with.

The method applied the conduct of the audit is provided following.

1.2 Observation to the Condition of Consent / Limitations to information

SSD SSD1043 was issued by the Planning Secretary 11 MAY 2021. Information provided and used to assess compliance with the Condition A15 relates to importation of material between 10/02/2017 and 19/09/22 and as part of the approval for MPW1 and 2, which did not include a similar condition to the data requirements of Condition A15 of SSD 1043.

As such, A15 SSD1043 seeks to retrospectively apply a requirement to SSD7709 post the activity occurring and the details of the requirement of Condition A15 of SSD 1043 was not known at time of import and generation of data.

Assessment of the information provided will make comment to the extent that the information available addresses the requirement of SSD SSD1043 Condition A15. Where the information or performance of material tracking does not meet the requirements of condition A15, this limitation is so indicated as is, where appropriate, a comment if the limitation is reasonable given the fact the data requirements of SSD 1043 Condition A15 are being retroactively applied.

For import of material under SSD10431 it expected that data limitations reasonably identified by this audit would be addressed as part of future importation and by implementation of the Fill Importation Management Plan – Moorebank Logistics Park – West Precinct Stage 3. (LOGOS 2023).

2 Method

2.1 Information Provided

Tactical provided the following information to ErSed on 21 NOV 2022.

CARAS DATA

- MPW Import Register – 220921.XLS.
  which details collected at the weighbridge when trucks enter the site.
  The data set covers material imported from 10/02/2017-19/09/22.
- Email clarifying why weighbridge data for gross mass at import is not complete.

TACTICAL DATA

- All MPW Import Copy.XLS
  Which tracks the volume of material imported by donor site/project location and destination within the development.
  The period of import covered by the data set is not indicated within the file.
  It is assumed to be that covered by the MPW Import Register – 220921
  It was indicated that this data has been derived by TACTICAL from the CARAS data.

- 20210920 INTS FL RLs plot SRF1370.PDF
  A survey of the finished levels at the development using data captured 20 SEPT 2021

Georgiou DATA

- MPW 221026 SW GRID OVERLAY optimized.PDF
  Which shows a ~1ha grid over a site aerial photo.
- Import use Register MPW.XLS
  Which shows the location, purpose and quantity of material placed at the site utilising the grid provided within MPW 221026 SW GRID OVERLAY optimized.PDF
- Project Bell Overlay 221010.PDF
  Which is an aerial photo showing design levels for the development.
- 221026- Stockpile Tracker.XLS
  Which provides information relating to stockpile tracking mostly associated with onsite won material.
- 221026- South and North Stockpiles.PDF
- A general arrangement for the site indicating locations of warehouse lots and designated stockpile locations. This general arrangement includes overlay of the grid provided within MPW 221026 SW GRID OVERLAY optimized.PDF.

The following information has been provided to the Auditor post the issue of a draft audit report.

BMD Data -14 April 2023

- Data/summary estimating material loaded from stockpiles via articulated hauler/dump truck (MOXY) for placement around various areas within the INTS works.
- Note that this loading and movement of material as post import and recording via the CARAS gate / Weighbridge.
- Material quantities is to be considered an estimate as loads were counted it is assumed that

each load was 30 tonne or 13m3 which is the indicated capacity of the MOXY.
- A general arrangement showing the project locations, very broadly, where material is placed.

LOGOS FIMP – 14 April 2023

- Fill Importation Management Plan – Moorebank Logistics Park – West Precinct Stage 3. (MIC2-QPMS-EN-APP-00001 -LOGOS 20/03/2023).

LOGOS Grid Overlay -18 April 2023

- A grid overlay has been provided which includes grids as per that used by the Georgiou General Arrangement with inclusion of the Project Boundary.
- The indicated boundary corresponds with the boundary for the consents for SSD5506 and SSD7709 as the material imported and placed under these Consents.

2.2 Review of Data

The MPW Import Register – 220921.XLS was examined and utilised as the base data for the audit as this is intended to be the first and most complete record of which to compare other data within the site.

This data was used to provide the following summary table which breaks down the imported material by year (including date range), number of loads type & intended use.

A summary of material imported by the full date range was generated.

Year		**2017**
Date range		10/02/17-11/12/17
Number of entries (=assumed number of loads)		1340
Imported material - total tonnes		32390.50 tonne
Volume of fill imported (total) at 2.2 tonne/m3		14722.95m3
Volume by type	1. Structural Sandstone	14722.95m3

Year		**2018**
Date range		15/02/17-17/10/18
Number of entries (=assumed number of loads)		1469
Imported material - total tonnes		47162 tonnes
Volume of fill imported (total) at 2.2 tonne/m3		21437.27 m3
Volume by type	1. Structural Sandstone	21437.27 m3

Year		**2019**
Date range		13/02/19-20/12/19
Number of entries (=assumed number of loads)		9334
Imported material - total tonnes		256,804.10 tonne
Volume of fill imported (total) at 2.2 tonne/m3		116,729 m3
Volume by type	1. Structural Sandstone	181913.22 tonne (5741 entries)
		82687.83 m3 (5741 entries)
	2. Select Sandstone	74890.88 tonne (3593 entries)
		34041.31 m3 (3593 entries)

Year	**2020**
Date range	02/01/20-17/12/20

Number of entries (=assumed number of loads)		60756
Imported material - total tonnes		1932550.94 tonne
Volume of fill imported (total) at 2.2 tonne/m3		878432.25 m3
Volume by type	1. NA	2195.63 TONNE (73 entries)
		998.01 m3 (73 entries)
	2. Select Sandstone	1802.62 (74 entries)
		819.37 m3 (74 entries)
	3. Structural Sandstone	1928552.69 (60609 entries)
		876614.84 m3 (60609 entries)

Year		**2021**
Date range		04/01/21-17/12/21
Number of entries (assumed number of loads)		25642
Imported material - total tonnes		885524.85 tonne
Volume of fill imported (total) at 2.2 tonne/m3		402511.30 m3
Volume by type	1. Structural Sandstone	885524.85 tonne
		402511.30 m3

Year		**2022**
Date range		12/04/22-19/09/22
Number of entries (assumed number of loads)		59063
Imported material - total tonnes		325589.75 tonne
Volume of fill imported (total) at 2.2 tonne/m3		147995.34 m3
Volume by type	1. Structural Sandstone	325026.24m3 (56039 entries)
		147739.2 m3 (56039 entries)
	2. NA	563.51 tonne (24 entries)
		256.14 m3 (24 entries)

Summary (CARAS DATA)	**2017-2021**
Number of entries (assumed number of loads)	156700
Imported material - total tonnes	3,480,022.14
Volume of fill imported (total m3) at 2.2 tonne/m3	1,581,828

Summary (TACTICAL) DATA)	**2017-2021 (assumed as data is not dated)**
Tonnes	3,416,022
Volume of fill imported (total) at 2.2 tonne/m3	1,552,737
Variance: Tactical – CARAS m3	-29,091
Variance: Tactical – CARAS (%)	-1.8%

2.3 Interpretation and Audit of Data

The following sections provide an audit of each aspect of Condition of Consent A15.

A response to the review of the data /information provided which presents observations and interpretations.

Observed limitations of the data/information provided or where the data does not meet the requirements of the Condition of Consent are presented.

A conclusion is provided stating to the extent that the information meets the Condition of Consent including suggested means of addressing any gaps identified between the information and the requirements of the Condition of Consent.

2.3.1 Part (a) – Amounts of fill and type.

a) *The amount of fill (whether unconsolidated, consolidated or structural) brought to the site to date.*

Response to Review of Data

Data has been provided collected by CARAS. This data set provides.

- Date of record
- the number of truck movements – indicated by the number of individual entries.
- The registration for each truck movement
- The source of material
- the nature of the material (product size, material type)
- the destination for use
- the intended use of material
- The tonnage of the material per individual entry

Departures/ limitations/comments

1. The CARAS data does not indicate if material is consolidated or unconsolidated.

   Given the nature of how the material is generated and transported it is assumed that all material is unconsolidated.

   As such the data set complies with this aspect of the requirements of A15(a)

2. for various periods, especially prior to 2020, the net tonnage is calculated from the tare of the individual truck. This information is assumed to have provided by the tucking company.

   This was explained by CARAS in an email to Aspect Environmental (18/10/22) below.

   > *For a period from 2017-2019 the weighbridge was not operating, and the information for truck records was manually recorded and uploaded.*
   >
   > *As such, during this period the lack of a weighbridge meant that there was no gross weight recorded (hence them being recorded as N/A). A commercially agreed on mass for each truck combination was used for determining the net weight (to be used for billing in this time), hence them being consistent.*

   Numerous random checks of the data set indicate that the tare applied for each registration is consistent.

   As such the data set complies with this aspect of the requirements of A15(a)

- the CARAS data when compared to the TACTICAL Data set does not align perfectly in terms of total tonnage.

- The TACTICAL All MPW Import Copy.XLS does not provide information on the number of loads or specifically the nature of the material (i.e., Shale or Sandstone) – however this could

likely be broadly inferred as it gives the source of the material (or underlying strata) at each location would be largely consistent.

The variation in the data sets over ~3.4 Million tonnes is ~29,000 tonnes or < 2%.

Note that It was indicated that the TACTICAL Data has been derived from the CARAS Data.

The CARAS Data is adopted and maintained as the base information for the Audit.

Conclusion

The CARAS data set collected as trucks enter the development adequately records and provides records of the amount of fill brought to the site.

The CARAS data satisfies the requirements of A15(a).

2.3.2 Part (b) – Fill use locations

a) Where the fill has been used on site, include and aerial plan clearly indicating the location and boundary of the placed fill relevant to its respective consent.

1 GEORGIOU has provided an aerial image of the development overlayed with a grid overlay (MPW221026 SW GRID OVERLAY).

No scale ins indicated on the grid however this has been measured at approximately 100m x 100m (1ha) portions. This grid size is considered appropriate for the size of the development (~170ha+).

2 GEORGIOU has prepared an arial image which indicates the various work areas / warehouse boundaries over the Grid provided within the MPW221026 SW GRID OVERLAY. This image includes location of designated stockpiles.

3 The GEORGIOU Import Use Register – MPW Copy provides detailed information on the location of where material is placed. This information is provided using to the grid referenced within the GEORGIOU image MPW221026.

4 However, the Georgiou Import Use Register **covers** the period of 27/03/20-31/10/22. The entries are consolidated for each day and records a total 1.157 million tonnes (~526,000m3).

This compares to the CARAS data for the period of review of 10/2/17 – 19/09/22 and ~3.4 million tonnes/~1,581,000m3.

The CARAS data also includes material handled by BMD (see point 5 below).

5 The BMD summary provides information on the estimated quantity of material loaded from the imported material stockpiles to the INTS area. The location of the fill placement is recorded however in much broader terms or areas than that recorded by the GEORGIOU MPW221026 SW GRID OVERLAY.

The time period for this movement of material is not indicated in the summary. The total

quantity indicated is 372,056 m3 or ~756,500 tonnes.

6 The GEORGIOU image MPW221026 SW GRID OVERLAY – does not include boundaries relevant to the respective consents – however this is available from other sources such as the relevant consents themselves.

7 **18 April 2023** - The LOGOS Grid Overlay provides the same grid with the project boundary indicated.

Conclusion

The GEORGIOU image MPW221026 SW GRID OVERLAY provides a suitable grid referencing system for indicating where material is used on site.

The GEORGIOU image MPW221026 SW GRID OVERLAY does not include the boundaries of the respective consents. This requirement is addressed by the separate LOGOS Grid overlay.

The GEORGIOU Import Use Register provides adequate information for the location of where material is placed on site by GEORGIOU.

The information collected and presented by GEORGIOU/LOGOS meets requirements of A15(b).

The BMD summary and accompany General Arrangement (INTS Sandstone Placement) provides broad locations within the project areas indicating where material is used on site. This is not as detailed as the GEORGIOU.

The information collected and presented by BMD meets requirements of A15(b).

The combined quantity of material placement (GEORGIOU + BMD) is 526,000m3 + 372,000m3 or 898,000m3. This compares to 1,581,000m3 or 57% of the recorded import.

The quantities of placement by BMD and GEORGIOU does not align with the quantities of imported material reported by CARAS.

Please see comments at Section 1.2 above which explain limitations underlying the information recording against the requirements of Condition A15.

2.3.3 Part (c) – Purposes of Fill use

f) For what purpose all fill has been used.

Response to Review of Data

Data has been provided collected by CARAS. This data set provides.

- Date of record
- the number of truck movements – indicated by the number of individual entries.
- The registration for each truck movement
- The source of material
- the nature of the material (product size, material type)
- the destination for use
- the intended use of material
- The tonnage of the material per individual entry

Departures/ limitations/Comments

1. The CARAS Data provides the intended destination for each load and its intended use. The destinations listed include pads, laydowns, CATA and general stockpile areas.

   The CARAS data does not account for final fate of material loaded out from the initial destination post-delivery or what the final use of the material is.

2. The Georgiou Import Use Register – MPW Copy provides more detailed information on the location of where material is used and the purpose.

   However, the Georgiou Import Use Register **only covers** the period of 27/03/20-31/10/22. The entries are consolidated for each day and records a total 1.157 million tonnes.

3. The Georgiou 221026- Stockpile Tracker.XLS tracks material movement within the site however once imported material is temporarily placed or stockpiled it is not possible to track its final location if material is generally moved to another area.

   This is not considered unreasonable as it would be impractical to track the exact placement of every load imported and stockpiled or consolidated separate from all other imported material.

4. The BMD summary provides information on the estimated quantity of material loaded from the imported material stockpiles to the INTS area. It does not provide information on the use/purpose of the material.

Conclusion

The CARAS data collected as trucks enter the development adequately records and provides records the initial destination of the delivered material and the intended use the site.

The GEORGIOU data provides more detailed record of final placement and use of the material however this record is not complete for the period covered by the CARAS data set.

The BMD summary does not indicate the use of the material placed.

The CARAS data partially satisfies this aspect of the requirements of A15(a).

2.3.4 Part (d) – Use justifications.

The following statements have been provided by the Client in respect to Condition A15 (d).

MPW 1

Under MPW 1 Early Works (Stage 1) there are no limitations for the import of material on site, additionally the information required by SSD10431 CoC A16 were not specified in SSD 5066, hence, the application of an SSD 10341 consent conditions retrospectively on works carried under a SSD

5066 where the requirement did not exist could be discussed when referring to limitations in data.

MPW Early Works (Stage 1) – SSD 5066 involves the demolition of buildings, including services termination and diversion; remediation of contaminated land; heritage impact remediation works; and the establishment of construction facilities and access.

All Material imported to site 2017 – 2019 inclusive was carried out under MPW 1 for backfilling of areas where buildings were demolished, services and underground storage tanks were removed, contamination remediation (including unexpected finds (asbestos)), heritage excavations access, compounds, lining of swales and basins in PFAS impacted areas (IAW the PFAS management strategy), backfilling of sediment erosion structures utilised by the MPW 1 Consent and backfilling of other depression left by the removal of Defence infrastructure and training depressions.

MPW 2

MPW Stage 2 – SSD 7709 includes the importation of up to 1,600,000m3 of uncompacted fill, temporary stockpiling and placement over the entire site to raise existing ground levels by up to 3m.

CoC B40. The Applicant must: (a) keep accurate records of the source, volume and type of fill imported to, and material removed from, the site. Apart from B40, the information required by SSD10431 Coc A16 was not specified in the consent, hence, the application of an SSD 10341 consent conditions retrospectively on works carried under a SSD 7709 where the requirement did not exist could be discussed when referring to limitations in data.

Conclusion

Please see comments at Section 1.2 above which explain limitations underlying the information recording against the requirements of Condition A15.

2.3.5 Part (f) – Current site levels

A PDF of a site survey is to be provided by the client. It is recommended that this survey also be made available in DWG form or similar to the Planning Secretary if requested.

e) current site levels

The consent conditions for SSD 10431 were issued 11 MAY 2021

A site survey plot has been provided 210920 INTS FL RLs PLOT SRF 1370 (dated of plot 20 Sept 21).

At this time No import had commenced under MPW3

Conclusion

The survey issued was generated prior to the commencement of import and placement of material under the approval for MPW3 and as such satisfies the requirements of Consent Condition A15e).

An updated site survey should be prepared immediately prior to the commencement of import and placement of material under the approval for MPW3 as this is assumed to be the intent of this condition.

Attachment 1

Please see attached data file.

For website publication, Attachment 1 has been redacted due to file size. It is available on request.