ETHOS URBAN

12 May 2021

To: The Independent Planning Commission
Attention: Casey Joshua

GLEBE ISLAND CONCRETE BATCHING PLANT AND AGGREGATE HANDLING FACILITY (SSD 8544) QUESTIONS ON NOTICE

This submission has been prepared by Ethos Urban on behalf of Hanson, to provide additional information to the Independent Planning Commission's request for information dated 7/5/2021 in relation to the proposed Glebe Island Concrete Batching Plant and Aggregate Handling Facility (SSD 8544).

1. ***Further height and plan details***
   a) ***The RL height of the heritage silos (to top of concrete) and the Multi user facility surrounding the Project Site;***
   b) ***The RL of the ANZAC Bridge deck at the pylon structure closest to the proposed development;***
   c) ***The dimensions (including RL height, depth and width) and setbacks of all proposed buildings at the Project Site;***
   d) ***Details of the minimum height possible for the aggregate handling building, and the impact on capacity from a reduction in height (for example a height reduction of 1.0m would equate to how many cubic metres of aggregate?).***

The Reference Level of surrounding structures have been obtained as follows:

a) The height of the heritage silos has been obtained from LIDAR data and verified with the Port Authority of NSW as RL 43.9m to the top of the silos and 52.4m to the top of the signage structure.
b) The height of the ANZAC Bridge deck at the pylon structure closest to the proposed development has been obtained from LIDAR data as RL 30.63 AHD.

The Multi-User Facility has not yet been constructed, and so the height of this structure is based on the plans that have been provided by the Port Authority of NSW. These indicate that the height of the Multi-User Facility will be 20.7m above existing ground level. The inferred ground level of the Multi-User Facility site is RL 3.5m, meaning that height of the Multi-User Facility is expected to be at RL 24.2m AHD at the top of the ridge.

The site plans have been revised to specify the height and dimensions of buildings and structures, and these revised plans are provided at **Attachment A**. The table below provides a summary of the key dimensions for the main buildings and structures as proposed (note that minor variations to the building dimensions may arise as a result of detailed design).

Building	Ground Level (RL, m)	Top of Building (RL, m)	Height (m)	Setback (to closest boundary)
Cement Silos	3.5	28.1	24.6	68.3m (From south-east boundary)
Concrete Batching Shed	3.5	11.4	7.9	18.2m (From north-west boundary) 68.9m (From south-east boundary)
Aggregate Storage Silos	3.6	37.6	34	8.1m (From south-west boundary)
Truck Unloading Tipper Bay	3.5	19.2	15.7	7.3m (From north-east boundary) 33.6m (From south-east boundary)
Aggregate Receival Bin	3.0	15.0	12.0	0m. Located on south-east boundary 18m from edge of the wharf
Shipping container wall	3.2	10.8	7.6	0m. Located on south-east boundary 18m from edge of the wharf

In relation to sub-point (d) and the impact on operational capacity from a reduction in the height of the aggregate silos, Hanson does not consider this is best understood in the context of aggregate storage capacity. Rather, the aggregate storage silos have been designed functionally to support Hanson's broader supply chain – noting that concrete batching plants operate fundamentally on a just in time approach, with capacity to store rarely more than 1 days supply of aggregates in advance. In this regard, any reduction in the storage capacity of the silos would affect Hanson's ability to manage material flows through its supply chain. Any such reduction in on-site storage capacity would reduce the capacity of Hanson to deliver to aggregates by ship, and would result in increased heavy vehicles delivering aggregates to Sydney via truck – fundamentally undermining the business case for the proposal as well as the environmental and sustainability benefits that are being sought. It would also result in a slower unloading process – but up to 2 hours per shipment. With this in mind, Hanson notes that every 1 metre reduction in the height of the aggregate storage silos could result in an additional 40 trucks movements per day to haul aggregates to the concrete batching plant.

2. ***Visual Impact***
   a) ***Confirmation that the photomontages submitted with the Visual Impact Assessment (VIA) are accurate and have been prepared in accordance with best practice guidelines, for example the Land and Environment Court's Photomontage Policy;***
   b) ***Provide accurate photomontages for the plans submitted with the Response to Submissions (RTS) from locations 4, 6 and 7 in the VIA.***

AECOM were responsible for preparing the photomontages and the Visual Impact Assessment. AECOM have confirmed that the methodology used was consistent with best practice guidelines, in particular is generally consistent with the Land and Environment Court's Photomontage Policy, and has been used in the assessment of several major building and infrastructure development proposals around Sydney.

Hanson has engaged AECOM to prepare additional photomontages from locations 4, 6 and 7 as requested. However, AECOM have advised that these additional photomontages will take until Friday 21 May to be prepared. Hanson will provide the requested photomontages as soon as they are finalised.

3. Traffic

a) The intersection delays that have been identified at The Crescent/City West Link Road intersection are expected to result in a reduced Level of service (LoS) and resultant queuing impacts, with or without the proposal. The Commission seeks information to understand the developments that are included in this assessment of the cumulative impact and the length and location of queuing, particularly during the AM and operational peak periods;

b) The truck route for the development includes The Crescent, which passes through residential areas. Further information is sought on the truck routes and potential impacts;

c) Information relating to the volume and frequency of sand deliveries by truck.

a) Intersection Delays: The cumulative modelling referenced by the Commission relates to the 2023 operation of the intersection between the City West Link and the Crescent. This intersection is illustrated below to clarify the relevant legs of the intersection. The performance of this intersection has been modelled in its pre-WestConnex arrangement (although this arrangement is constantly changing as result of WestConnex road works).

In addition to the existing traffic associated with ongoing uses at the port and surrounds (which includes all existing Sydney Boathouse and marina activities, the cement, sugar and gypsum activities, as well as the White Bay Cruise Terminal, which are all factored in as background traffic), the cumulative traffic modelling also included the future traffic associated with the Multi-User Facility.

As set out in Section 4.7 of the Response to Submissions Report, whilst there are many future development proposals that are likely to affect the operation of the surrounding road network, they have either not been subject of a quantitative traffic modelling assessment, are a temporary construction-phase activity, or do not line up with the Hanson proposal in the context of the future opening of WestConnex. As such, apart from the Multi-User Facility it has been difficult to undertake quantitative modelling for these projects in the context of Hanson's proposed operational activities.

The modelling indicates that The Crescent / City West Link Road intersection operates at Level of Services F with or without Hanson's proposed development operating – noting that this cumulative assessment was based on Hanson's operational capacity being limited to 182 trucks per hour, rather than the peak operational capacity of 286 trucks per hour.

The modelled impacts indicate that the southern leg of The Crescent experiences significant delays (under current and future operating conditions), and although the majority of traffic is travelling eastbound and westbound along City West Link, the increase in traffic volumes on the major link trigger the signals to give priority to the east / west movement being the priority route, causing further queues on the southern leg of The Crescent. Queuing on the southern leg of the intersection (i.e. the northbound traffic on The Crescent approaching the intersection) are modelled to extend up to approximately 840m.

It is also highlighted that once WestConnex and the Rozelle Interchange opens the operation and capacity of the entire road network around the interchange will need to be reassessed. Because of this, the cumulative traffic modelling that has been carried out was limited to 2023, which is when WestConnex is projected to open. Further, and with consideration of both the forecast open date for WestConnex and the modelling assumptions, Hanson has proposed to limit the facility to 182 trucks per hour until WestConnex is operational and the operational capacity of the surrounding intersections can be reassessed. It should also be noted that WestConnex is intended to relieve traffic congestion around the site, and once operational it is expected that volumes through the relevant intersections will decrease as vehicles use the new tunnel.

b) Truck Routes: Whilst The Crescent is a Classified Road, and therefore considered to be suitable for heavy vehicle traffic, it is not nominated in the Traffic Impact Assessment as a specified truck route. Rather aggregate haulage trucks will almost exclusively use WestConnex once it is operational and the main road network. In relation to concrete agitator trucks, these vehicles must travel along roads to access the worksite, including ultimately on local residential streets if the worksite is a residential property. The generator of demand for the concrete agitator truck is therefore the construction work site, not the Hanson concrete batching plant – if Hanson does not supply concrete to these worksites then an alternative supplier will. Hanson's concrete agitator trucks will only travel along The Crescent if they are accessing worksites located along The Crescent or its surrounding areas. For longer trips, concrete agitator trucks will also preferentially use the motorway network to the extent possible.

c) Sand Delivery Trucks: In relation to sand deliveries, these are estimated at 75 per day (for an average production day) and up to 241 trucks per day (for a peak production day). These trucks would generally be spread predominantly across the 12 hour work day (7am-7pm), although as a 24-hour facility sand trucks could arrive at any time during the night time period as well. Arrival times for sand are dependent on many factors – including which quarry they are coming from, operational or approval constraints at the quarry, and traffic conditions including road congestion or whether they are have been any incidents on the roads along the route. As such, whilst it is impossible to accurately specify an hour-by-hour breakdown of the frequency of sand delivery trucks, it is expected that sand delivery trucks would arrive at up to approximately 20 trucks per hour during peak operational periods.

4. ***Noise / Enclosure of structures***
   a) ***At paragraph 6.4.4, the Assessment Report describes how concrete batching will be undertaken in a partially enclosed building. Can the Applicant please confirm the extent of enclosure of all structures proposed.***
   b) ***The Applicant has indicated that the silos may be constructed of concrete of other material, such as metal cladding. Please confirm whether the Noise Assessment for the project specified whether the buildings need to be a specific material or acoustically treated to meet noise criteria.***

We are not sure where the Department's reference to 'partial enclosure' has come from, but in the EIS and the Response to Submissions Report, as well as all appended project documentation, Hanson definitively commits to carrying out all concrete batching and truck unloading activities within fully enclosed buildings. Further, the entire conveyor system will be fully enclosed in order to minimise noise and dust emissions. Aggregate trucks would be loaded up directly from underneath the bottom of the silos, which would be considered a partially enclosed area.

As identified in the Supplementary Noise Impact Assessment (Response to DP&E Request for Further Information) that was appended to the Response to Submissions Report (at Appendix C), SLR confirms that the silos are passive buildings and are not considered to be a major source of noise. As such, SLR has not specified a specific material or acoustic treatment for the purposes of meeting the noise criteria.

5. ***Landscaping***
   a) ***Please provide further details regarding the practicality of providing a green wall attached to the shipping container wall, ongoing maintenance challenges and its effectiveness in mitigating visual impacts.***

The shipping container wall is just a structural wall element. It is extremely strong and stable, and provides an excellent acoustic barrier. A whole range of façade treatments can be applied to the outside of the wall including painting, murals, cladding or a green wall, or indeed the containers could be retained as a the visual façade as a way of reflecting the maritime activities being undertaken at the port. As with any other façade treatment, a green wall facade can be attached to the containers in the same way that a green wall can be attached to any other structural substrate.

Maintenance requirements of any green wall would depend on the proprietary product selected, however, plants within the green wall would need to be watered and fed on a regular basis. Further, given the exposed location of the proposed green wall, hardy salt tolerant species would likely be the most suitable.

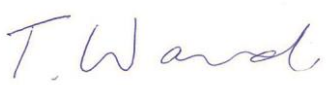
The shipping container wall (including a green wall if deemed preferable by the stakeholders as a façade) would provide a visual screen of the truck parking and movement areas, and other ground level activities at the site as well as the lower portions of the silos and concrete batching building, as seen from Pyrmont and vessels in Johnsons Bay.

Conclusion

We trust that the additional information provided will assist the Commission in its assessment and determination of SSD 8544.

Hanson would welcome the opportunity to clarify any further queries of the Commission, if required. Should you have any queries about this matter, please do not hesitate to contact me on 02 9956 6962 or at tward@ethosurban.com.

Yours sincerely,



Tim Ward
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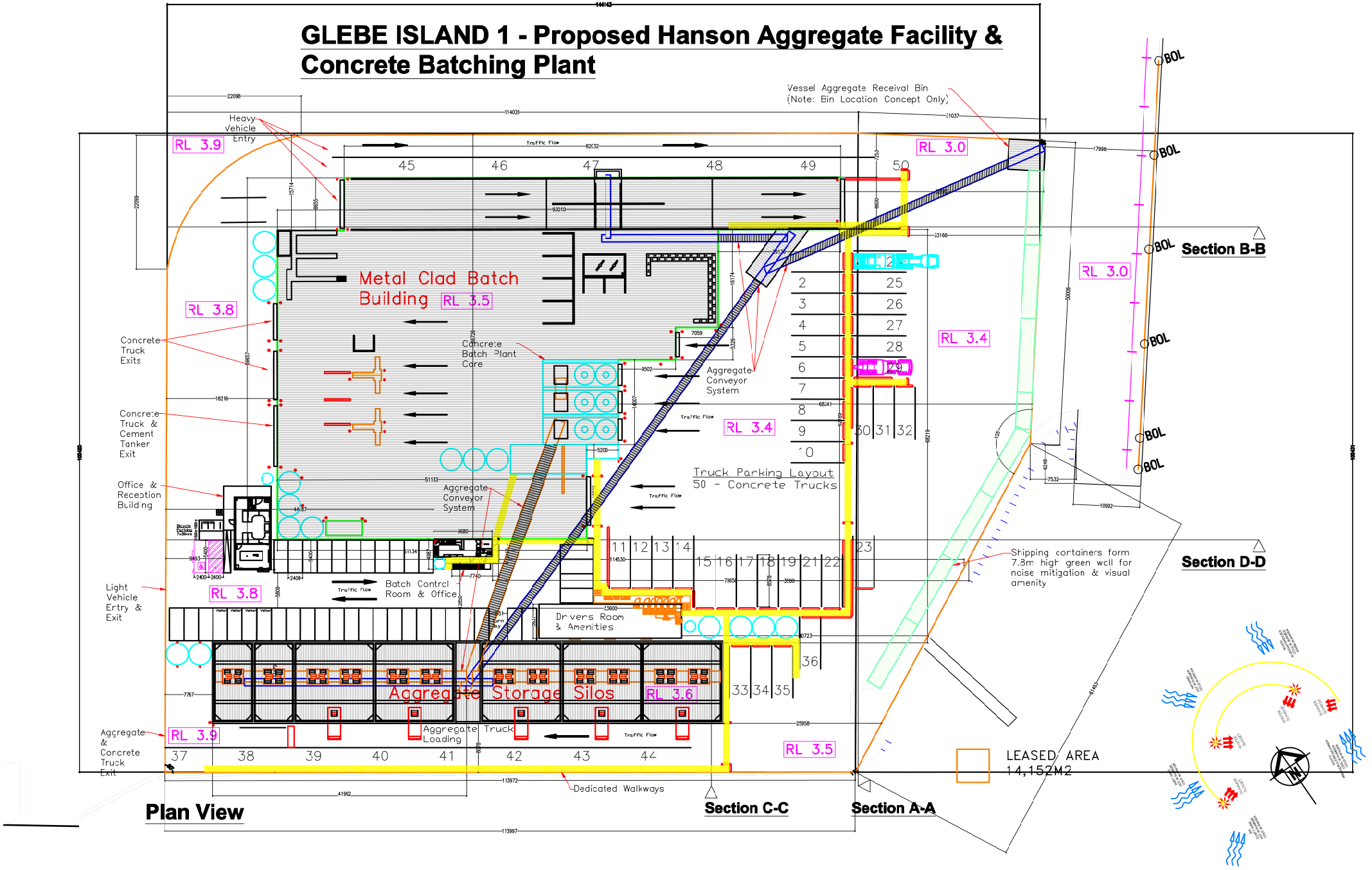
GLEBE ISLAND 1 - Proposed Hanson Aggregate Facility & Concrete Batching Plant



*All dimensions are indicative and subject to detailed design

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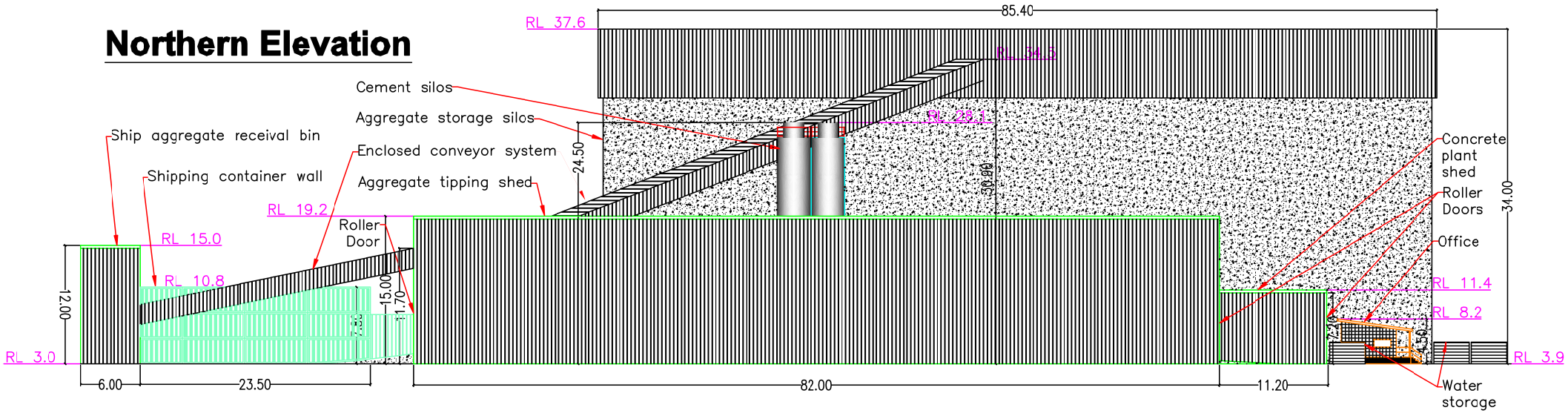
Hanson Aggregate Facility & Concrete Plant - Glebe Island
Concept Site Plan

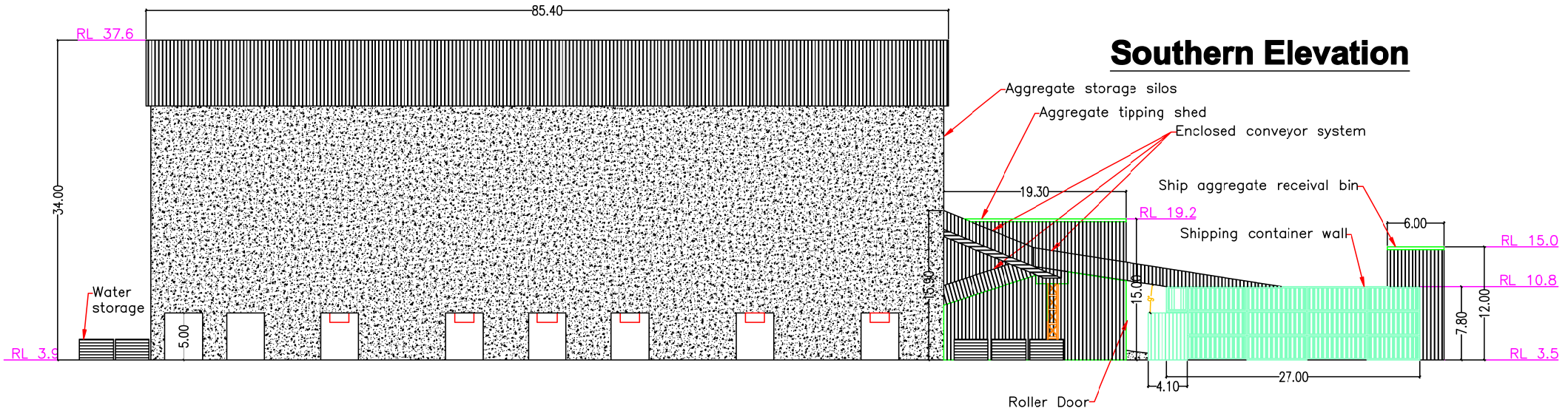
Drawn	GS	Date	Scale	Job No	Drawing Number	Rev.
Checked		11.05.2021	NTS	Glebe Island IGAs - 01		Rev B
Approved						

E – IPC – Inclusion of RLs
D – Update to Batch Interface – Silos & Batch Interface
C – Update to Batch Interface
B – Aggregate Weigh Hopper Detail
A – General Arrangement
REVISION

Northern Elevation



Southern Elevation



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E					
D					
C	IPC				
B	RNS				
A	General Arrangement				
REVISION					

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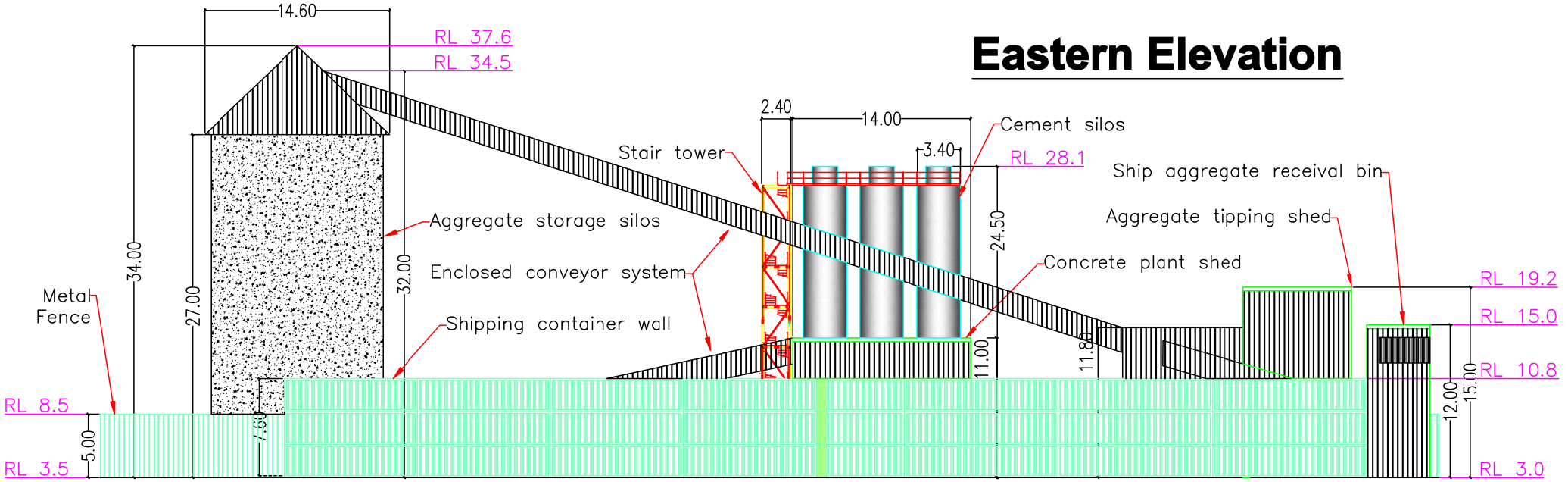
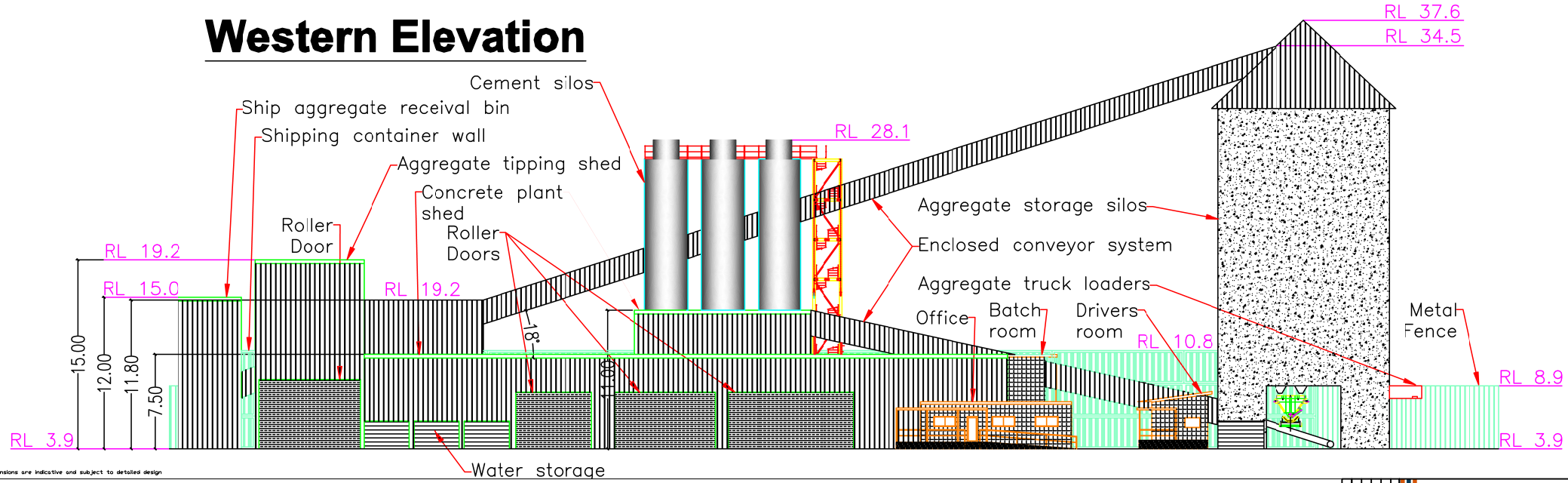
Hanson Aggregate Facility & Concrete Plant - Glebe Island
Concept Northern and Southern Elevations

Drawn	GB	Date	Scale	Job No	Drawing Number	Rev.
Checked		11.05.2021	NTS	Glebe Island IGAs - D2		Rev C
Approved						

Eastern Elevation



Western Elevation



*All dimensions are indicative and subject to detailed design

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Hanson Aggregate Facility & Concrete Plant - Glebe Island
Concept Eastern and Western Elevations

Drawn		Date	Scale	Job No	Drawing Number	Rev.
Checked		15.05.2025	NTS	Glebe Island IGAs - 33		rev c
Approved						

Issue: A Issued Arrangement; B RFC; C RFI; D Issued for Approval