5.4 impacts of additional parking demand

Saturday

The parking surveys undertaken on Saturday 23rd February 2008 included the 341 public parking spaces that are available within walking distance of the marina. The results are shown in Table 3.

table 3: existing public parking utilisation on Saturday (341 space capacity)

Time of Day	Cars Parked	% Utilisation	Vacant Spaces
9am	218	64%	123
10am	243	71%	98
11am	253	74%	88
Noon	283	83%	58
1pm	311	91%	30
2pm	333	98%	8

It can be seen that the existing parking supply is almost at capacity at 2pm; and was at full capacity at 2.30pm with some 'illegal' parking observed. About 95 of these 341 spaces relate to the existing marina operations.

Sunday

The parking surveys undertaken on Sunday 24rd February 2008 also included the 341 public parking spaces that are available within walking distance of the marina. The results are shown in Table 4.

table 4: existing public parking utilisation on sunday (341 space capacity)

Time of Day	Cars Parked	% Utilisation	Vacant Spaces
9am	205	60%	136
10am	229	67%	112
11am	288	84%	53
Noon	328	96%	13
1pm	344	100%	0
2pm	345	100%	0

It can be seen that the existing parking supply is at capacity at noon and that this continues in the afternoon up to about 2.30pm. About 148 of these spaces are associated with the existing marina operations at peak times.

Having regard for the above results it is evident that there is likely to be a need for an additional 20 space demand on Saturday and 40 space demand on Sunday. The redesign provides 9 on-site spaces so that there is a shortfall of 11 spaces on a Saturday and 31 spaces on a Sunday, which if they occur in practice cannot be accommodated.

It is considered that this shortfall can suppressed and essentially be overcome so that in practice they will not occur. Specifically, existing parking constraints will have a 'self-enforcing' effect, whereby drivers will be discouraged from attending the site. A more appropriate response is therefore to

implement measures intended to accommodate the expected patron demand by altering travel choice and/or travel behaviour. The following measures are therefore recommended for further consideration:

- The introduction of a staff car pooling policy, whereby higher average car occupancies are encouraged to reduce staff parking demands;
- The possible introduction of a shuttle bus service between more remote public parking areas and the marina on weekends, for use by members and their visitors. This will require the identification of candidate site/s which would need to be the subject of a licensing arrangement to ensure availability and would only be justified in the event of a demonstrated demand. This service has the potential to significantly reduce demands even with the expanded marina and would probably be of benefit to existing patrons. To be effective, the shuttle bus would need to operate with a maximum 15 minute frequency. It is considered that if this initiative were to be taken, a trial period may be a suitable approach rather than the imposition of a condition that may be onerous and potentially ineffective if there is insufficient demand;
- The introduction of practices aimed at promoting public transport and taxi usage, particularly for employees. In this regard, it is recommended that management issue staff with taxi vouchers for use on weekends, to reduce car usage;
- The implementation of a courtesy vehicle for 'on demand' operation in the locality;
- The implementation of a taxi hotline; and
- The designation of a 'transport coordinator' within the marina to coordinate the above initiatives;

The cumulative effect of the above initiatives is considered to essentially offset the increased parking demand that would otherwise occur, so that the development would be supportable subject to the inclusion of suitable condition/s governing the above matters.

5.5 disabled parking

The existing Council roadway provides a disabled parking space which serves the adjoining parklands. This space can be relied upon by the marina, particularly given its relatively infrequent use. The original proposal for a roadway within the park would have provided a superior arrangement, not just for disabled parkers but for traffic conditions more generally, including set-down/pick-up activity as well

as servicing. However, this arrangement has been resisted by Council from a public interest perspective, with the perception of the use of public land for a private facility.

5.6 servicing

Servicing of the site will be significantly improved through the provision of an indented bay that extends further to the site than at present, so that trucks will no longer need to reverse into oncoming traffic travelling north along Spit Road. This arrangement will accommodate a 12.5 metre HRV which is not presently possible, providing more operational flexibility and improved safety. It is recommended that consideration be given to managing truck deliveries so that they do not occur during the evening on-street peak period or on weekends during summer between about 10am and 4pm.

6. traffic impacts

6.1 trip generation

The surveys undertaken show a peak movement of 87 persons in and 19 out between 11am and noon on Saturday; and of 89 persons in and 19 out on Sunday between 1pm and 2pm. On the assumption of 55% car driver, this equates to the following vehicle movements:

- 48 in, 10 out on Saturday between 11am and noon; and
- 48 in, 10 out on Sunday between 1pm and 2pm.

6.2 trip distribution and impacts

These are moderate flows that will be spread over all areas that are currently used for marina parking, with the majority occurring within the 200 space car park to the south of the site within the "Parking Reserve".

It may be expected that some of this demand will transfer to the new internal parking area, which could potentially accommodate about 20 veh/hr (10 in, 10 out) during peak periods. This can be readily accommodated with no adverse impact on traffic conditions on Spit Road. These trips will all occur via left turn entries and exits, with improved safety afforded by the significantly improved geometry.

In summary, the traffic impacts are moderate and can be accommodated. Traffic volumes during weekday commuter peak periods are expected to be very moderate and are not critical for assessment purposes.

6.3 construction traffic impacts

The construction impacts associated with the redevelopment will be addressed in detail as part of an overall construction traffic management plan (CTMP), which it is anticipated will be the subject of a condition of consent. This will need to incorporate vehicular and pedestrian management during each construction stage, which cannot be established until a builder has been appointed. The CTMP will include the timing and duration of stages, truck types and frequencies, truck routes, employee levels and parking arrangements, crainage requirements, loading requirements and access arrangements.

7. access & internal design aspects

7.1 access requirements

The proposed development has been designed to operate independently of the Council roadway that presently serves the site. As discussed, this roadway is sub-standard for the following reasons:

- Only cars and light vehicles are able to turn within the small turning area at the end of the public roadway. The exit movement involves a sharp 'U' turn manoeuvre that does not permit the vehicle to enter the kerbside lane in the Spit Road, which introduces an accident potential. The required 'U' turn also presents headlight glare problems as exiting vehicles are facing oncoming traffic, which is an additional safety hazard at night time; and

- The requirement for trucks to access the public roadway (and hence the marina) is presently of concern. Trucks must presently reverse out of the roadway into oncoming traffic on the Spit Road into two lanes of northbound traffic which is unexpected and extremely hazardous. This manoeuvre is shown in appendix c, based on the AutoTurn computer model, as permitted under AS 2890.1 and AS 2890.2.

- The above manoeuvres and the one-way width of the roadway introduce the potential for on-street queuing and for extended delays to through traffic movement along the Spit Road.

In response, a proposed new roadway was considered along the southern site boundary, extending into the park, to allow forward entry and exit movements for all vehicles. This was to be developed as a shared zone. This proposal was however withdrawn due to strong community objections and the current proposal was developed in response, which still provides a safer access arrangement within an indented bay.

7.2 internal design

It is intended that the new hardstand area provide parking for tenants and this area will be designed to comply with AS 2890.1. The indented bay will also be of great assistance and will result in an overall improvement in traffic safety.

Finally, no changes are proposed to Council's roadway or to the existing vehicular crossing onto Spit Road, so that the development can be dealt with separately. Conditions will improve along this roadway as a result of the development, due to the indented bay. Nevertheless, Council would have the opportunity of improving its existing roadway through the rationalisation of the existing parking and the pedestrianisation of the carriageway, should it consider this to be an appropriate response.

In summary, the proposed site access will operate satisfactorily and is an improvement notwithstanding the proposed expansion.

8. conclusions

The following matters are noteworthy:

- The proposed development is expected to result in a moderate increase in parking and traffic demands. This is due to the relatively small increase in marina capacity, and to the fact that the areas within the building are ancilliary to the marina use and are principally intended to improve the efficiency and amenity of existing tenancies that are to remain;

- The traffic demands can be readily accommodated and the operation of the site will be significantly safer and more efficient than the present sub-standard arrangement using Council's roadway. Specifically, as discussed, the existing roadway is unsafe due to the sharp acute angle for left turn exit movements, the potential for headlight glare, the potential for on-street queuing effects and the requirement for trucks to reverse out of the roadway into oncoming traffic which is extremely hazardous and non-conventional;

- In contrast, the proposed new indented kerbside lane will assist vehicle manoeuvring and in effect act as a deceleration lane for access to the site as well as Council's car park;

- The additional parking demand, though moderate in absolute terms, cannot be met at peak times during the summer months, based on the surveys undertaken. Accordingly, management measures are proposed to reduce private car travel. These measures will apply to existing and future marina occupants as well as staff, so that there is a prospect for a net improvement in parking conditions in the locality;

- The proposed new indented bay will comply with all relevant standards/guidelines, notably the requirements of AS 2890.1 and AUSTROADS. The opportunity is available to Council to improve its roadway should it see benefit in doing so;

- Provision is made for the normal servicing requirements of the site, which are essentially unchanged in their nature and frequency, though with improved access.

It is therefore concluded that the proposed development is supportable on traffic planning grounds.

appendix a:

photographic record

View looking south across Spit Road at Pirriwi Road signals.

View looking north towards the marina from the “Parking Reserve”.

View of existing sub-standard Council road access to Spit Road.

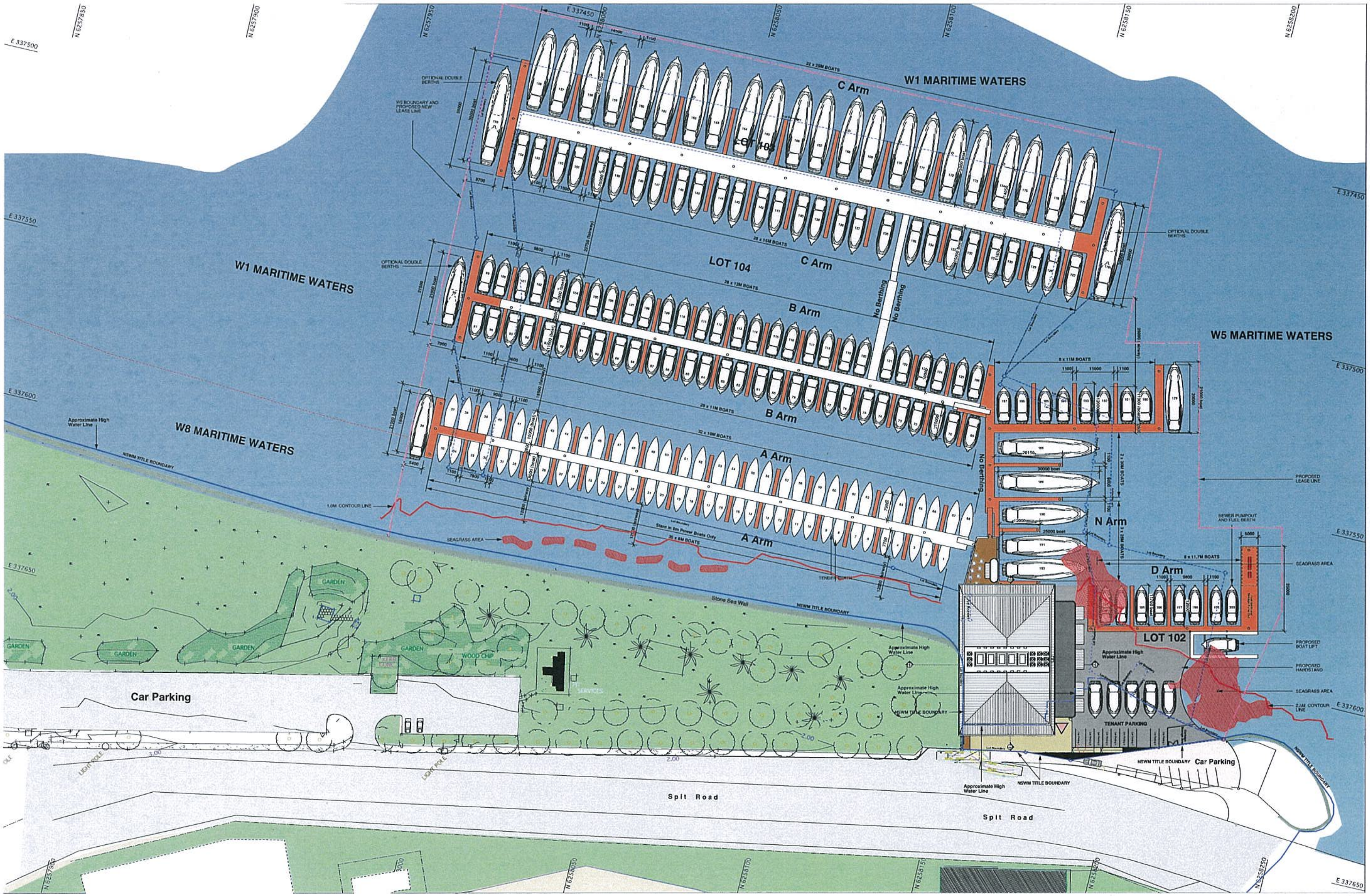
View looking north towards the marina from the existing western spit car park.

View looking north along Spit Road towards the site, with the western spit car park access on the left.

View looking north across the intersection of Pirriwi Road with Spit Road with the existing marina in the distance on the left.

appendix b:

reduced plans



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revisions

no	amendment	date
L	Dimensions added, lot lines added, lot numbers added, MWHM added. Geo referencing added	2/4/09
M	Dimensions added	28/5/09
N	Proposed lease line added, boat revisions added, berth notes added, smaller boats added to berth 98, 150, 178, tenant parking noted	24/11/09
O	NSWM title boundary Line corrected and noted	10/12/09
O	ISSUE TO DEPARTMENT OF PLANNING	21/4/10

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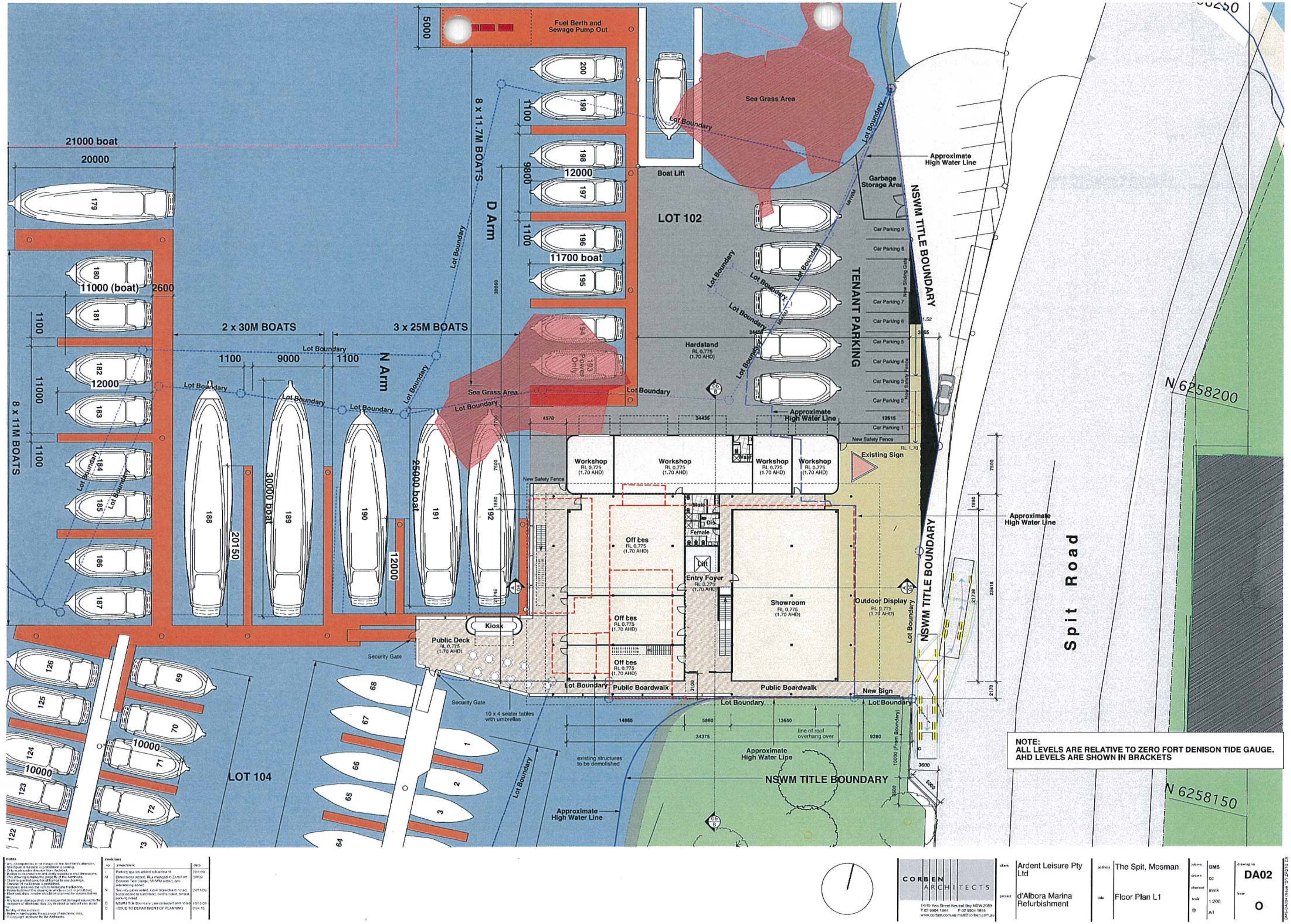

NOTE:
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AHD LEVELS ARE SHOWN IN BRACKETS
Spit Road
N 6258200
N 6258150
NSWM TITLE BOUNDARY
TENANT PARKING
LOT 102
LOT 104
D Arm
N Arm
8 x 11.7M BOATS
3 x 25M BOATS
2 x 30M BOATS
8 x 11M BOATS
Fuel Berth and Sewage Pump Out
Sea Grass Area
Boat Lift
Garbage Storage Area
Approximate High Water Line
Lot Boundary
Hardstand RL 0.775 (1.70 AHD)
Workshop RL 0.775 (1.70 AHD)
Showroom RL 0.775 (1.70 AHD)
Offices RL 0.775 (1.70 AHD)
Entry Foyer
Outdoor Display RL 0.775 (1.70 AHD)
Public Deck RL 0.775 (1.70 AHD)
Kiosk
Public Boardwalk
Existing Sign
New Sign
Security Gate
10 x 4 seater tables with umbrellas
existing structures to be demolished
line of roof overhang over
21000 boat
30000 boat
25000 boat
11700 boat
11000 (boat)
193 Power Only
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d'Albora Marina Refurbishment
The Spit, Mosman
Floor Plan L1
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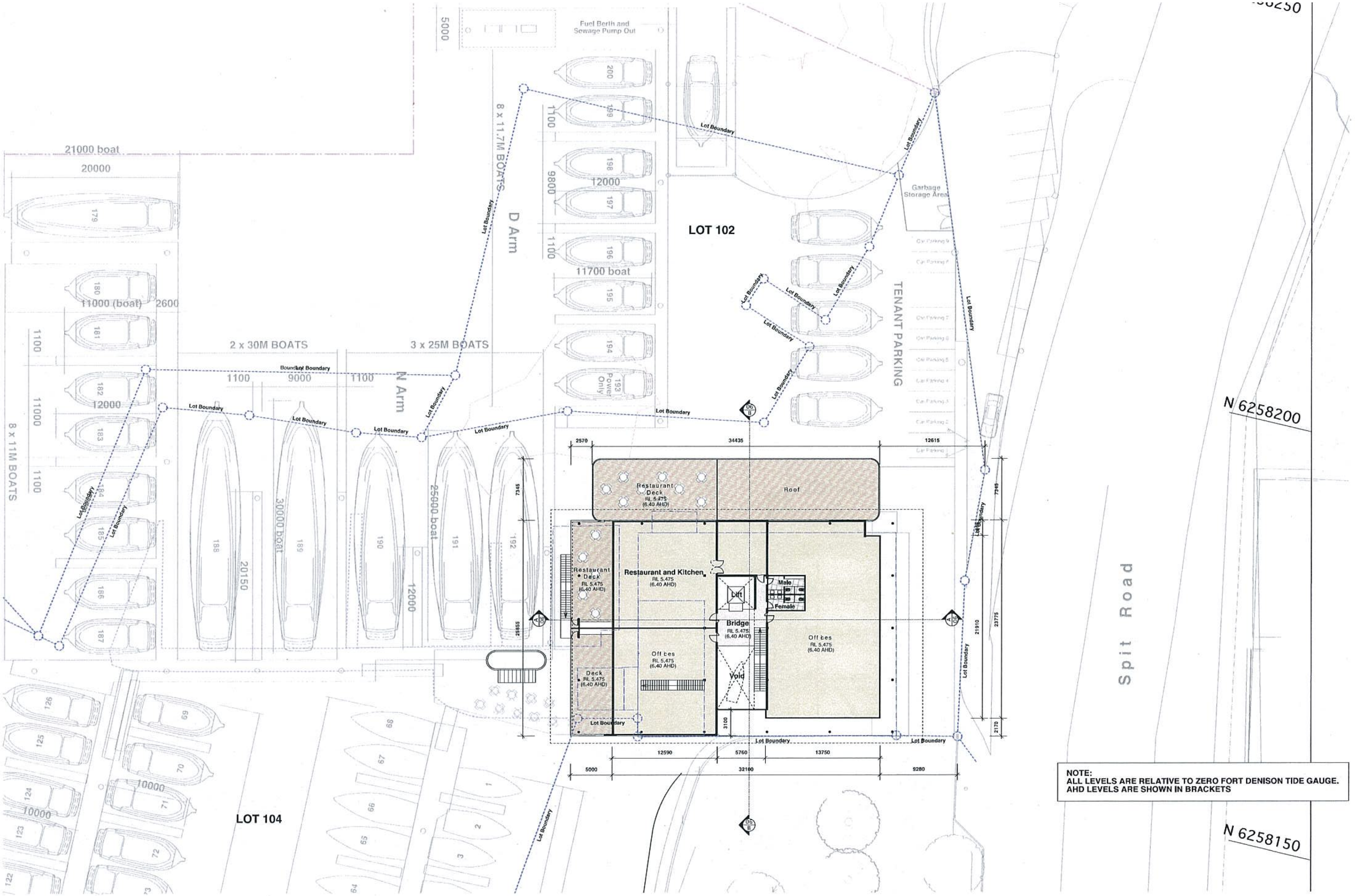

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revisions

no	amendment	date
G	Access updated, cycleway/walkway added	1/5/08
H	Access way deleted, truck lay off added	15/5/08
I	Hardstand car spaces added	2/2/09
J	Dimensions added, RLs changed to Zero Fort Denison Tide Guage. MHWM added, geo referencing added	2/4/09
J	ISSUE TO DEPARTMENT OF PLANNING	28/4/10

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drawing no **DA03**
issue **J**

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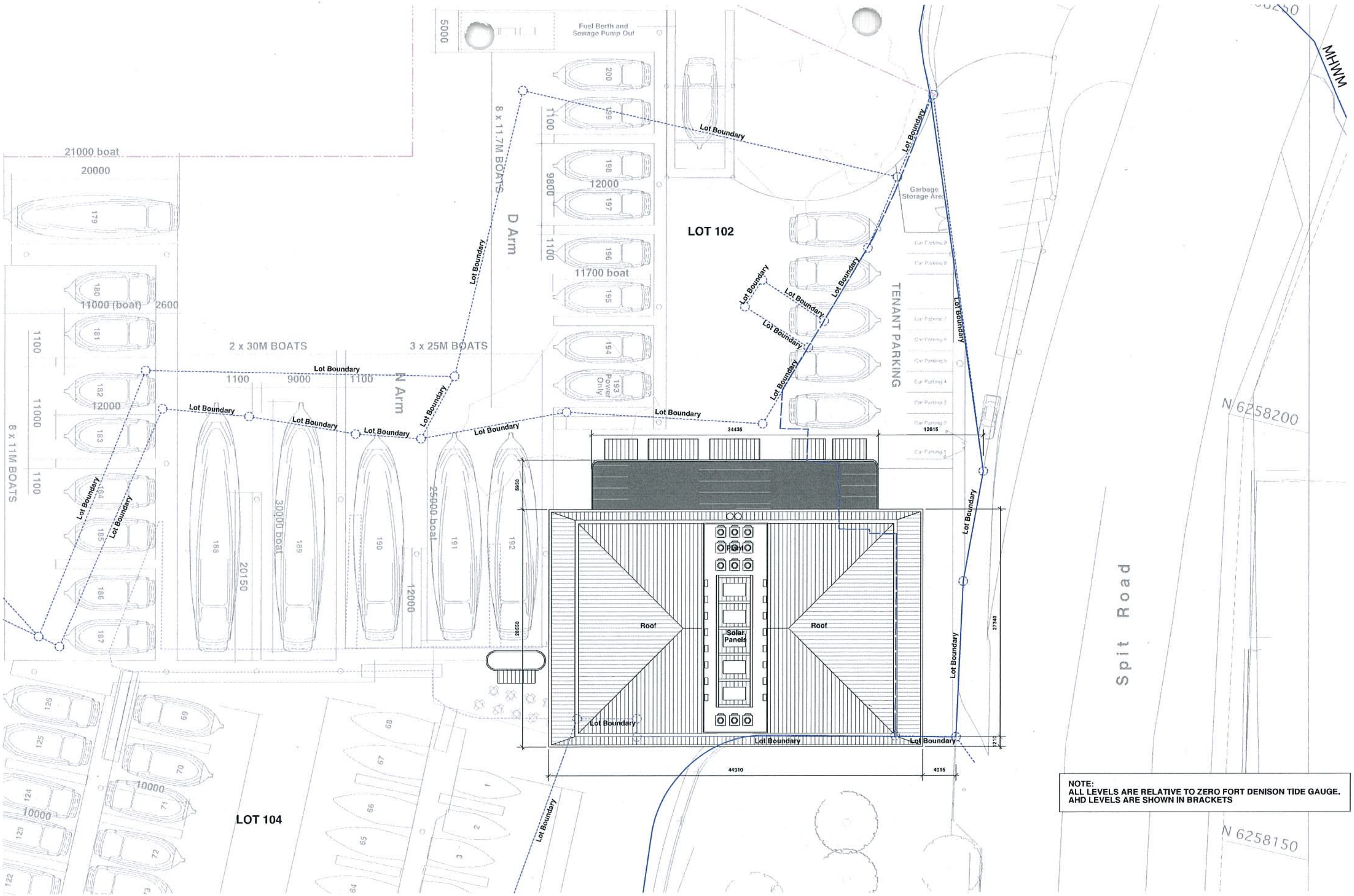

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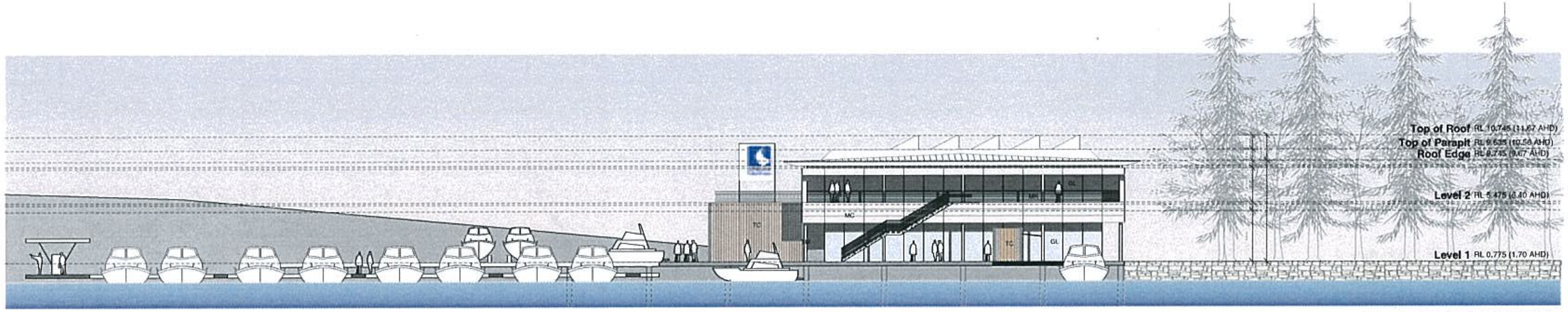
drawing no	DA04
issue	I

revisions

no	amendment	date
F	Parking and Fire Hydrant removed, existing parking reinstated	2/4/09
G	Access updated, cycleway/walkway added	5/5/09
H	Access way deleted, truck lay off added	15/5/09
I	Dimensions added, FLs changed to Zero Fort Denison Tide Gauge, MHWM added, grid referencing added	2/4/10
I	ISSUE TO DEPARTMENT OF PLANNING	24/4/10



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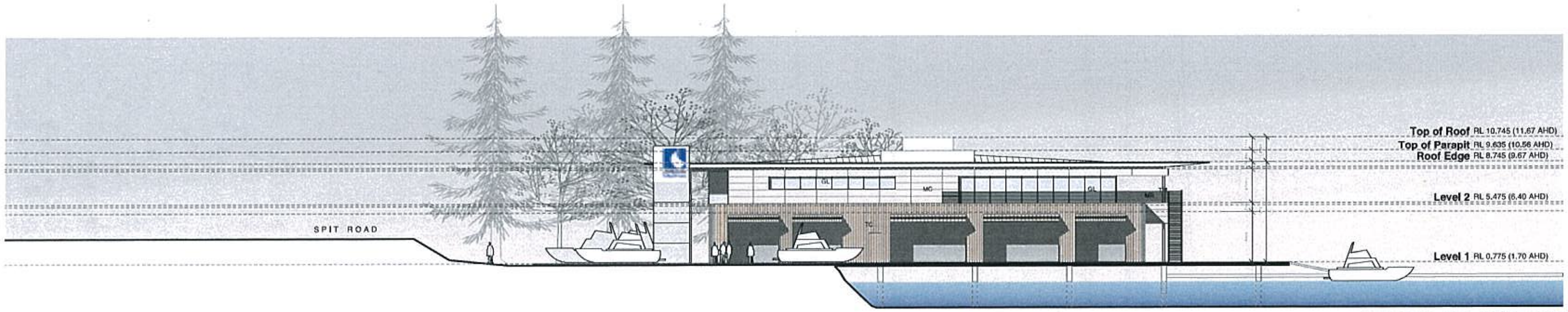

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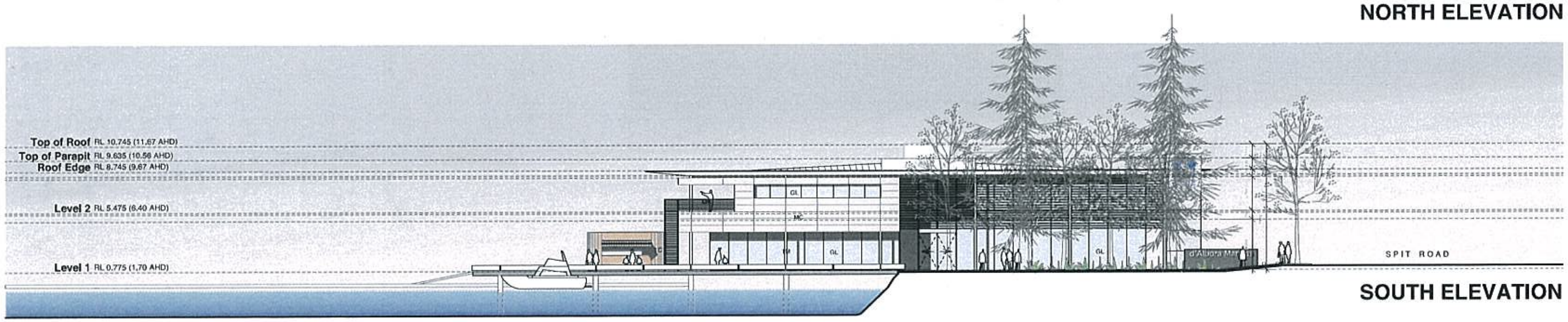

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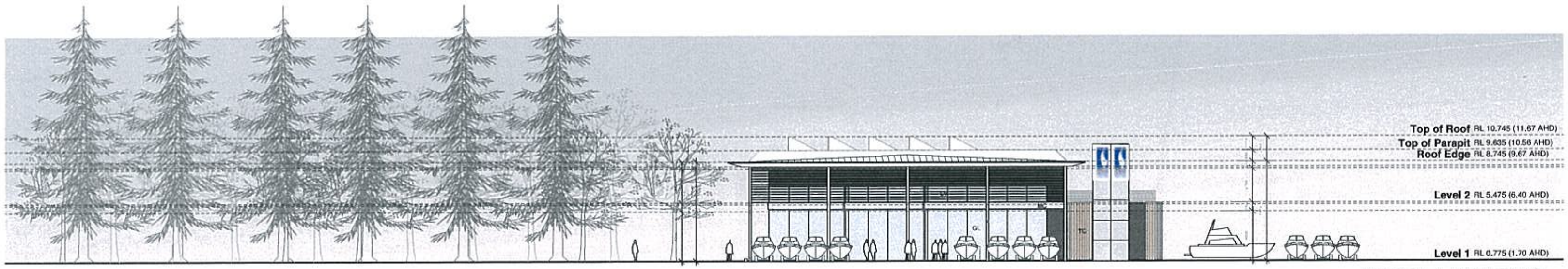

EAST ELEVATION

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revisions

no	amendment	date
B	Preliminary Issue to Consultants for Information	2/1/08
C	Preliminary Issue to Consultants	6/2/08
D	DA Issue	10/2/08
E	RLs to Zero Fort Denison Tide Gauge	16/3/09
E	ISSUE TO DEPARTMENT OF PLANNING	24/4/10

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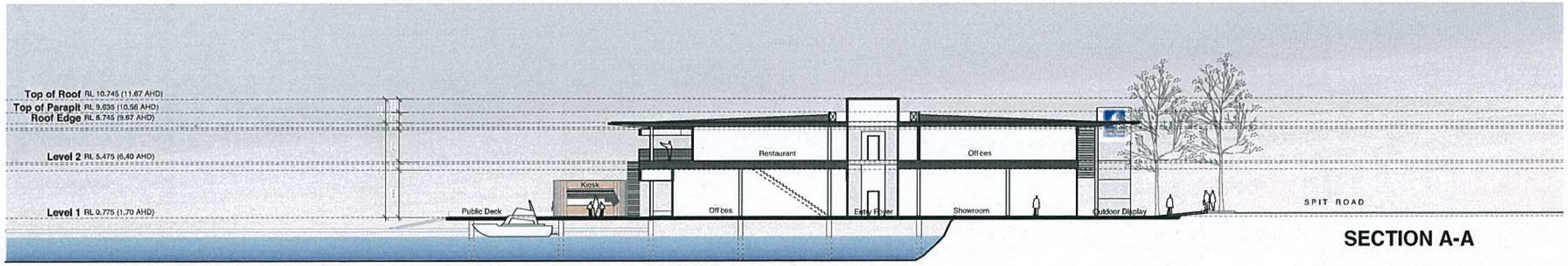
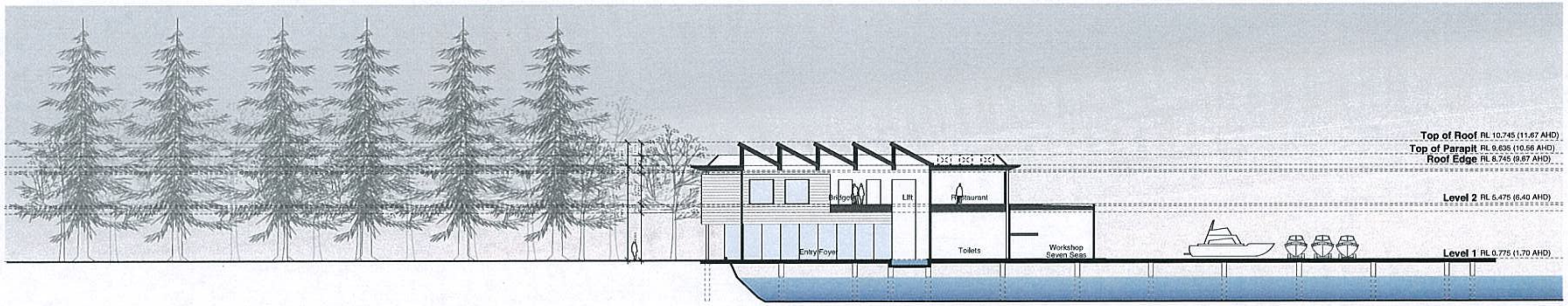


SECTION A-A



SECTION B-B

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no	amendment	date
B	Preliminary Issue to Consultants for Information	22/1/08
C	Preliminary Issue to Consultants	6/2/08
D	DA Issue	10/3/08
E	RLs to Zero Fort Denison Tide Gauge	10/3/09
E	ISSUE TO DEPARTMENT OF PLANNING	24/4/10

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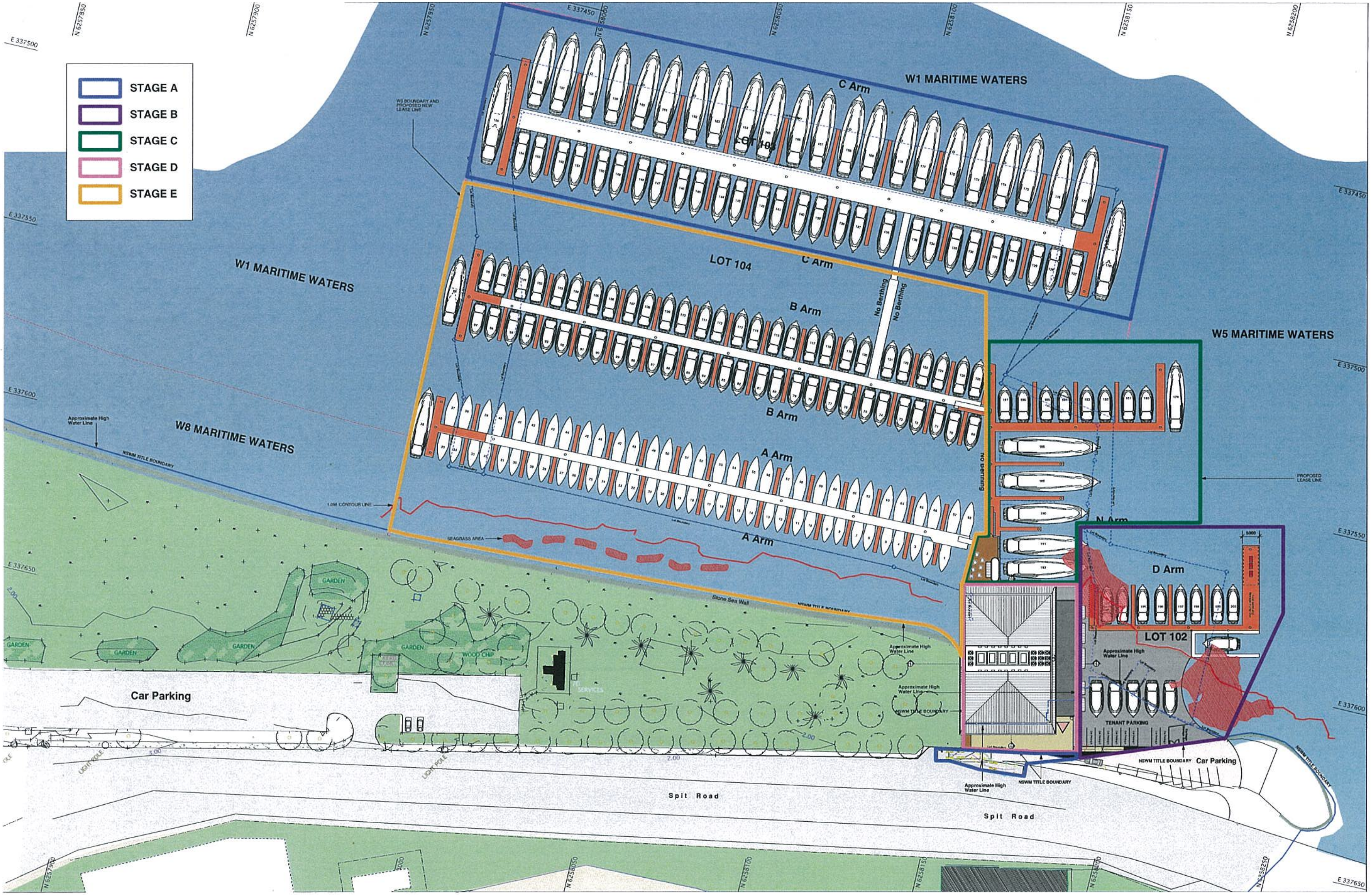

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