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7 February 2024

WHF GROUP
1/ 27 Margaret Vella Drive, Paget
Mackay QLD 4740

CQU NORTH ROCKHAMPTON- NEW FACILITY
554- 700 YAAMBA ROAD, NORMAN GARDENS, QLD 4701
LOT 70 SP304746
CIVIL ENGINEERING SERVICES TECHNICAL MEMORANDUM
DEV2023/1463 MATERIAL CHANGE OF USE FOR EDUCATIONAL ESTABLISHMENT

Dear Dan,

Apropos the above project address and future development sought by Central Queensland University, SMCE wishes to provide the following summary of commentary on the provision of future development outcomes and infrastructure services.

Our civil design commentary has been based upon the proposed development plans developed with by BRD Group, and civil engineering design drawings by SMCE, Project 23162WH.

1. Development Proposal

The subject site is located at 554- 700 Yaamba Road, Norman Gardens, comprising of one allotment formally described as Lot 70 on SP304746.

The full allotment area is 132.2 hectares, with the proposed area of development works approximately 4,200m^2 (0.42 hectares)

The site benefits from direct frontage to an internal road network within CQU Campus Drive to the north and east, off street carparking facility further to the east, and an existing building to the south and west, described as Centre for Railway Engineering.

The area of works is currently undeveloped with a coverage of healthy ground cover and vegetation grading generally from the middle of the works area to each boundary. An existing building structure on a concrete slab will require demolition and removal as part of the future works

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There are existing open table drains along portions of the northern and eastern allotment boundaries that convey overland stormwater into the existing underground stormwater system.

A site level survey is included to this engineering memorandum.

Access to the proposed educational building layout will be via a new access driveway from the northern frontage roadway and the future building floor level is RL30.70m AHD.

Proposal plans have been produced by BRD Group and are also included to this engineering commentary.

This engineering services commentary seeks to summarise the infrastructure services for a future educational building use

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2. Earthworks

Existing surface levels to the subject works area vary from RL31.4m AHD at the location of the existing (to be demolished) building structure and concrete slab) towards the eastern, northern and western boundaries, down to RL30m AHD.

Per the development proposal layout and civil design package, most earthworks to be performed are filling operations. There will be obvious excavation operations during construction of the external concrete pavements, as well as the proposed infrastructure services installation. The civil design also has detailed requirements for Level 1 supervision, typical of local Council requirements and AS3798 for earthworks operations.

The overall earthworks strategy, however, is to minimize disturbance to existing batters or ground cover and promote the aspect of the building pad.

The development site is above RL20m AHD, so the project works are excluded from ASS/ PASS testing requirements

As part of the construction phase, a traffic management plan/ haulage route plan, and dilapidation report will be prepared and sent to the relevant Assessing Authorities for review and file.

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3. Stormwater Drainage (Quantity and Quality)

Generally the stormwater management strategy for the (overall) site is to leave the flow paths for the majority of the site as is, so as to cause no impact to the surrounding environment or networks.

Stormwater drainage runoff is overland towards the road boundaries where there are existing table drains and inlet underground stormwater infrastructure. This captured stormwater runoff would then continue internally within the internal CQU stormwater and road network.

This is the considered Lawful Point/s of Discharge.

Stormwater drainage runoff with the proposed development footprint proposes or maintains overland to the frontages and existing table drains and existing underground infrastructure.

By doing so there is nil change or nuisance by the development layout footprint.

In conjunction with the overland stormwater management solution, roof runoff is to be captured within roof gutters, conveyed via downpipes and minor underground drainage assets, also discharging to the existing table drainage systems that surround the development layout footprint.

By collecting development roof water, retaining for re-use then overflow volumes discharging to the internal road stormwater system, the first principles approach is consistent with the parameters listed within QUDM, Table 4.5.1.

A concept solution of this is detailed in 23162WH civil engineering design package.

A high-level assessment indicates that the quantum change from pre-development to post- development stormwater runoff volumes becomes nil change.

In terms of Stormwater Quality , the future development may trigger the requirements of the State Planning Policy 2017 (SPP) as the subject area is greater than 2,500m^2.

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To propose compliance with the requirements of this guidelines it is proposed that stormwater inlet pits are installed with Gross Pollutant Traps (trash rack inlet pit inserts) and that overland stormwater runoff is directed across turfed/ grassed areas (buffer strips). No additional stormwater quality improvement devices are proposed.

No site-specific MUSIC modelling has been undertaken as it is understood that the subject site area of 4,200m^2 is extremely small for the overall subject site catchment of approximately 130 hectares.

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4. Water Reticulation

The subject works area has existing frontage to the internal reticulated watermain within CQU Rockhampton Campus.

The development proposal is to make a new property services connection, with installations of a DN100 watermain. In addition to this reticulated water connection, the Hydraulic Consultant (BRW Hydraulics) also propose two new watermains connections to the internal fire main system. This is required for Building Approval purposes.

The above water reticulation services design is detailed in 20615- Hydraulics design package.

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5. Sewerage Reticulation

An existing reticulated CQU Rockhampton Campus gravity sewer-main is located towards the southwest corner of the subject area.

The development proposal is for the augmentation of this existing sewer connection and then by extension with a DN150 main to the proposed building footprint to service the areas required. All the sanitary drainage work is private asset; however the design and construction shall be to Local Council standards.

The above sewer reticulation services design is detailed in 20615- Hydraulics package.

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6. Roadway Layout and Access Driveways

The subject allotment has existing frontage to CQU Rockhampton Campus internal road network.

An upgraded driveway access is proposed from the external concrete pavements area, called up as the Outdoor Construction Space Zone, with the existing roadway towards the northern aspect of the project area.

A secondary upgraded concrete pavement access is proposed from the southern frontage to the existing internal roadways; however the purposes of this access is pedestrian.

Both of these concrete access pavements though will be designed to suit a fire appliance, in the event of a fire event.

No onsite or off-road parking bays are proposed by the development layout.

Proposal plans have been produced by BRD Group and are also included to this engineering commentary.

As part of the construction phase, a traffic management plan/ haulage route plan, and dilapidation report will be prepared and sent to the relevant Assessing Authorities for review and file.

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7. Utilities (Electrical & Telecommunications, Gas)

The current allotment has direct frontage to existing electrical and telecommunication utilities within.

This is verified by Dial Before You Dig (DBYD) searches, which are attachments to this memorandum.

Connection and possible upgrades with these existing assets will be performed once a specific development layout is confirmed and by Electrical Engineering design consultant.

All costs associated with connection and upgrade of existing utilities arrangements are the responsibility of the Developer.

We trust the above statement of facts for matters relating to the civil infrastructure services provide sufficient confidence or information to support the prepared Material Change of Use Application for an Educational Facility at 544- 700 Yaamba Road, Norman Gardens.

Please call Mr. Ryan McKenzie of the Townsville office on (07) 4724 4551 if you wish to discuss further.

Yours faithfully,

Mr. Ryan McKenzie
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