

Memorandum

To:	Tiberius (Holroyd) Pty Ltd	Date:	29 September 2025
Attention:	Lucas Flecha	Project No.:	84770.07
Email:	lucas.flecha@acequity.com.au	Reference:	R.001.Rev1
Subject:	Groundwater Statement - Proposed Mixed-Use Precinct 1 Crescent Street, Holroyd		

1. Introduction

At the request of Tiberius (Holroyd) Pty Ltd, Douglas has prepared this memorandum in response to NSW DCCEE¹ letter attached (Ref.: OUT25/3167, dated 18 March 2025) in relation to the estimated annual volume of groundwater take due to aquifer interference activities during the development and service life of the proposed mixed-use precinct.

This letter has been prepared on behalf of Tiberius (Holroyd) Pty Ltd in association with a State Significant Development Application (**SSDA**) for a proposed mixed-use development at 1 Crescent Street, Holroyd (**the site**).

The letter responds to matters raised by the Department of Planning, Housing and Infrastructure (**DPHI**), Cumberland City Council, other State government authorities /agencies, utility service providers and the community during public exhibition of SSD-70283710.

The letter also assesses the proposed amendments to the original proposal, including changes to the following:

- Stage A – Mixed use podium, Buildings 1 to 3 and supporting infrastructure;
- Stage B – Buildings 4 and 5 and supporting infrastructure; and,
- Stage C – Buildings 6 and 7 and supporting infrastructure.

The proposed changes extend beyond minor refinements which can be accommodated via a Submissions Report. As a result, a combined Submissions and Amendment Report has been prepared and consent sought from DPHI to amend the SSDA as per section 37 of the *Environmental Planning and Assessment Regulation 2021* (**the Regulation**).

To understand the cumulative impact of the above design refinements, the project description has been updated to reflect the proposed amendments to the scheme as originally lodged with DPHI for assessment.

¹ Department of Climate Change, Energy, the Environment and Water

Douglas has prepared this response based on the information provided in the following documents:

- Geotechnical Investigation report by Douglas (Ref.: 84770.03.R.001; latest update dated October 2024);
- Detailed Contamination Site Investigation report by Douglas (Ref.: 84770.05.R.001; latest update dated October 2024);
- Remediation Action Plan by Douglas (Ref.: 84770.05.R.002, dated March 2024);
- Report on Sampling and Analysis Quality Plan – LFG Risk Assessment and Supplementary Assessment by Douglas (Ref.: 84770.05.R.004, dated July 2024);
- Architectural Drawing set by Woods Bagot (Project No.: 121784, dated 19 September 2025);
- SEARs for SSD-70283710 by NSW Department of Planning and Environment, dated 6 May 2024; and,
- Douglas's technical memorandum No. 84770.03.R.002.Rev1, dated 5 November 2025 to comment on the SEAR's groundwater requirements.

2. Proposed Development

The amended description is provided as follows:

- Site establishment works, tree removal, site preparation, earthworks and excavation, services augmentation, and remediation works;
- Development of seven residential buildings comprising four shop top housing buildings and three residential flat buildings as outlined below:
 - Buildings 1-3 are integrated with an eastern mixed-use podium building, while Building 4 is situated above mixed residential / commercial space, offering shop-top housing;
 - Buildings 5-7 consist of residential flat buildings;
- Delivery of 15% of the total floor space as affordable housing to be distributed across each of the 7 residential buildings, or within a consolidated building proposed proportionately as buildings are developed;
- Approximately 134,208 m² total floor space comprising:
 - A total of 2,496 m² retail GFA and approximately 2,710 m² commercial GFA;
 - 1,374 residential apartments;
 - Communal amenity facilities for residents;
 - Building services areas;
- Activation of Crescent Street through a mix of amenity areas and pockets of open space;
- Shared car parking for Buildings 1 to 3 and the commercial and retail tenancies within the podium;

- Shared car parking for Buildings 4 to 7 within the above ground parking structures adjoining Buildings 4 to 5 and 6 to 7;
- Landscaping and accompanying place making works including:
 - o Public open space, hard and soft landscape works;
 - o Ground and rooftop communal open space;
 - o Publicly accessible through-site links;
 - o At grade car parking for the park, forecourt and retail areas;
 - o Vehicle access via a new internal publicly accessible road and vehicle accessway;
 - o New pedestrian footpaths and access arrangements to the site;
 - o Café tenancy within park-side structure;
- Staged completion of a public park; and,
- Associated works involving the widening of Crescent Street and upgrades to the Crescent Street and Woodville Road intersection.

Based on the provided architectural drawings it is understood that the proposed development includes the construction of seven mixed-use towers. The designed lower ground is typically at RL 13.0 m AHD, with some lower levels at RL 11.0 m AHD, mostly close to the frontage of Crescent Street.

The overall lower ground plan is shown in Figure 1. This figure also shows the location of proposed OSD tanks and lift pits across the footprint of the development. It is understood that the lowest levels of the proposed OSD tanks and lift pits are designed at RL 11.0 m AHD and RL 9.8 m AHD respectively. Other minor and localised excavations for services trenches and pile caps are expected.

The general topography of the site slopes gently down from RL 12.5 m AHD to RL 10 m AHD in a northerly direction.

Minor bulk excavations would be required at localised areas for site preparation and level grading. Deeper localised excavations for the proposed lift pits and three OSD tanks will be required, which are expected to be limited to 3 m depth (approximately).

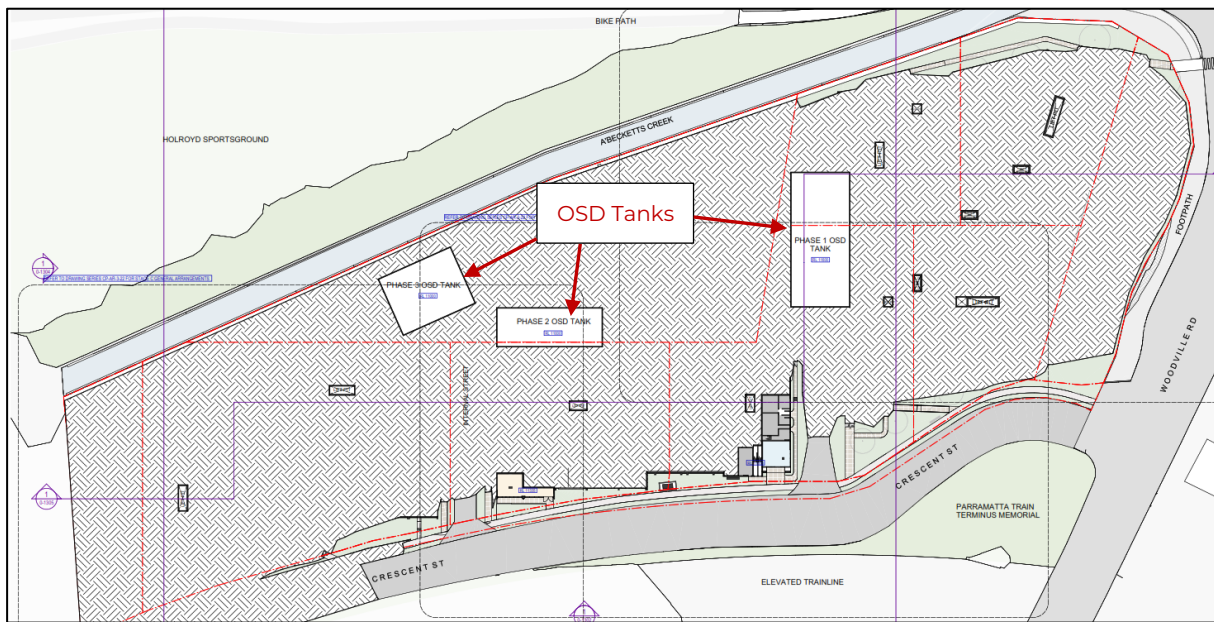


Figure 1: Overall Lower Ground Floor Plan (W-B, 121784, CP-AR-0-12LG E)

Table 1 below identifies the relevant matters raised by DCCEEW and DPHI, and sets out relevant sections of Douglas' current letter as responses to these submissions.

Table 1: Response to Submissions Table

No.	Issue Raised	Refer to Section
DCCEEW-1	Water supply, take and licensing Recommendation - Pre-determination That the proponent quantifies the maximum annual volume of water take due to aquifer interference activities and demonstrates the ability to acquire sufficient water entitlement unless an exemption applies. Explanation Insufficient information has been provided to confirm the potential groundwater inflow volumes. NSW DCCEEW Water Group notes that the groundwater table will potentially be intercepted. Maximum excavation depths for this project are up to 1.5m. The quoted data indicate that groundwater will be deeper than the deepest excavation, however there is commentary regarding seepage while piling and seepage of perched groundwater. The proponent has not presented sufficient information and analysis on inflows during the construction and ongoing operation of the site. Quantification of maximum potential inflow volumes is required.	Sections 4 & 5
DCCEEW-2	Water supply, take and licensing Recommendation - Post Approval The proponent should ensure a water access licence (WAL) is	Section 5

	obtained to account for the maximum predicted water take for construction and operation activities unless an exemption applies under the Water Management (General) Regulation 2018. Explanation Under the Water Management Act 2000, if groundwater is intercepted a WAL must be obtained prior to any water take occurring unless an exemption under Clause 7 of Schedule 4 of the Water Management (General) Regulation 2018 applies. An exemption may be available if water take is less than or equal to 3 ML per water year, subject to the development meeting other exemption requirements, such as: -the water is not taken for consumption or supply; -the person claiming the exemption keeps a record of the water taken under the exemption and provides this to the Minister within 28 days of the end of the water year; and -the records are kept for 5 years. Further information on these requirements and other information on licensing and approvals and exemptions, including a form to report and record water taken can be found at: https://water.dpie.nsw.gov.au/licensing-and-trade and https://water.dpie.nsw.gov.au/our-work/licensing-and-trade/water-access-licences-and-approvals/exemptions-for-water-licences-and-works-and-or-use-approvals	
DCCEEW-3	Groundwater impacts and dewatering requirements Recommendation - Pre-determination If the take of groundwater is found to be greater than 3 ML per year, the proponent must assess the impacts due to aquifer interference activities in accordance with the NSW Aquifer Interference Policy and framework (2012). These documents are available at: https://water.dpie.nsw.gov.au/_data/assets/pdf_file/0005/151772/NSW-Aquifer-Interference-Policy.pdf https://water.dpie.nsw.gov.au/_data/assets/pdf_file/0007/171097/Aquifer-Interference-Assessment-Framework.pdf Explanation Although groundwater take is not anticipated to be significant, as per Recommendation 1.1 above, the EIS has not provided a volumetric quantification of groundwater take. Additionally, the EIS has not provided an assessment of impacts to groundwater due to construction or operation of the project. Although a comprehensive groundwater study prior to determination is unnecessary given the perceived low level of risk, NSW DCCEEW Water Group notes that without groundwater take estimations it is difficult to assess	Section 5

	the level of risk. Therefore, the proponent should determine the estimated take volume.	
DPHI-B-20	Confirm the maximum annual volume of water take, demonstrate sufficient water entitlement and assess the proposal against the Aquifer Interface Policy and Framework 2019 (if applicable).	Section 5

3. Available Groundwater Monitoring Data

Douglas has previously installed eleven groundwater monitoring wells during the previous Geotechnical and Contamination investigations on site. The locations of the installed wells are shown in Drawings 1 and 2 attached. A summary of the measured groundwater levels is provided in Table 2.

Table 2: Summary of Groundwater Level Measurements

ID	Elevation	Measured Groundwater Depth (m, bgl) [Groundwater Level (m, AHD)]			
		September 2025	November 2024	August 2024	March 2023
BH201	11.6	4.9 [RL 6.7]	Not Measured	Not Measured	4.6 [RL 7.0]
BH204	12.1	2.2 [RL 9.9]			2.4 [RL 9.7]
BH207	13.8	3.7 [RL 10.1]			3.6 [RL 10.2]
BH501	11.8	5.4 [RL 6.4]	5.6 [RL 6.2]	5.6 [RL 6.2]	Did not Exist
BH502a	11.8	0.9 [RL 10.9]	0.6 [RL 11.2]	1.1 [RL 10.7]	
BH506	12.0	1.4 [RL 10.6]	1.4 [RL 10.6]	Not Measured	
BH504	11.5	3.8 [RL 7.7]	3.9 [RL 7.6]		
BH505b	12.5	3.1 [RL 9.4]	3.8 [RL 8.7]		
BH512	12.2	2.5 [RL 9.7]	3 [RL 9.2]		
BH516	11.5	4.1 [RL 7.4]	3.9 [RL 7.6]		

BH518	11.1	2.4 [RL 8.7]	4.2 [RL 6.9]		
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The measurement results show the maximum and minimum groundwater level across the site varies between RL 6.2 m and RL 11.2 m, AHD. The average groundwater level at each monitoring point is calculated to be between RL 6.3 m and RL 10.9 m, AHD.

Upon Douglas' recent site visit on 10 September 2025, five data loggers were installed within wells 201, 204, 207, 501 and 512 to allow for long term monitoring across the site. The monitoring will be continued for minimum period of three months.

4. Discussions

The measured groundwater levels across the site show minimal variation between the measurement times spanning over two years (2023 – 2025). The measured groundwater levels on site are believed to be of perched nature at different levels within the refuse fill (mostly clayey). It should be noted that the groundwater levels are affected by climatic conditions, soil and rock permeability and other factors and will vary with time and may temporarily rise following prolonged heavy rainfall. However, the effects of such events are commonly short term and excess ephemeral seepage dissipates shortly after such events.

Based on the results of Douglas' geotechnical investigation, it is expected that excavations on site will mostly expose clayey fill. Douglas has not completed any permeability tests for the purpose of this assessment, however, based on our experience it is expected that the clay fill will have a very low hydraulic conductivity, possibly in a range of 1E-9 to 1E-7 m/s.

The deepest proposed excavations for the development are localised to the OSD tanks and lift pits (which will ultimately be tanked water-tight structures). The average groundwater levels are mostly below the designed levels for the proposed OSD tanks and lift pits, and the risk of significant water seepage during the bulk and localised excavations due to aquifer interference is considered to be negligible. Any seepage during construction is expected to be manageable by sump and pump methods.

It is possible that the localised excavations will require temporary shoring systems (e.g. shoring boxes or sheet piles for OSD tanks), which could further reduce the risk of water seepage during construction. It is expected the OSD and lift pit structures will be suitably watertight for the service life of the development.

The buildings are proposed to be supported by piles founded into the underlying bedrock. Continuous Flight Auger (CFA) piles or cast-in-situ bored piles with temporary casing are recommended. In the case of the CFA method, there is no delay between drilling the pile and concreting, which minimises the water extraction during the process. The concrete for bored piles should be poured with minimum delay after drilling using tremie pipes to reduce the adverse impacts to pile performance. The extraction of groundwater during piling is expected to be limited.

5. Conclusion

The qualitative assessment of the proposed development in relation to the available results of groundwater measurements and the existing subsurface profile suggest that the total groundwater take during the construction for the entire site to be relatively minor and well below 3ML/year. Therefore, it is understood that the development may benefit from the Water Access License exemption, subject to DCEEW approval. Permanent dewatering will not be required.

It is recommended to carry on with the continuous groundwater monitoring, which has recently started on site, to better understand the groundwater fluctuations in long term.

It should be noted that this memorandum reflects the current design scheme as referenced in the introduction. The advice provided herein do not account for any future changes in the proposed design. Any subsequent design changes that may impact groundwater extraction should be reviewed accordingly.

We believe this satisfies your current requirements. Please feel free to contact the undersigned should you have any questions.

Douglas Partners Pty Ltd



Arash Afzali
Associate

Reviewed by



Peter Oitmaa
Principal

Limitations:

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at 1 Crescent Street, Holroyd in line with Douglas' email proposal dated 3 September 2025 and acceptance received from Mack Beardsell of JLL, Project and Development Services acting on behalf of Lucas Flecha of Tiberius (Holroyd) Pty Ltd dated 4 September 2025. The work was carried out under the previously executed agreement between Tiberius and Douglas (No. 800012.1). This report is provided for the exclusive use of Tiberius (Holroyd) Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the geotechnical and groundwater components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. Douglas cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by Douglas. This is because this report has been written as advice and opinion rather than instructions for construction.

This report provides specialist advice only and no part of it is considered a Regulated Design under the Design and Building Practitioner Act 2020 (NSW).

The scope of work for this report did not include the assessment of surface or sub-surface materials or groundwater for contaminants, within or adjacent to the site. Should evidence of fill of unknown origin be noted in the report, and in particular the presence of building demolition materials, it should be recognised that there may be some risk that such fill may contain contaminants and hazardous building materials.

Attachments:

- About this Report
- Groundwater Wells Location Plan (Drawings 1 and 2)
- NSW DCCEEW letter (Ref.: OUT25/3167, dated 18 March 2025)

Introduction

These notes have been provided to amplify Douglas' report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

Douglas' reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Engagement Terms for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather

changes. They may not be the same at the time of construction as are indicated in the report; and

- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, Douglas will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, Douglas cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, Douglas will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, Douglas requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

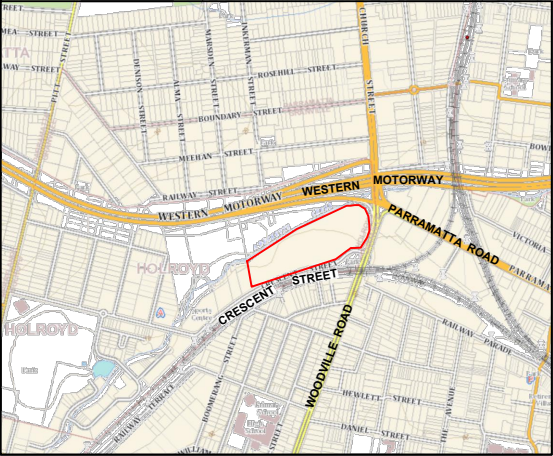
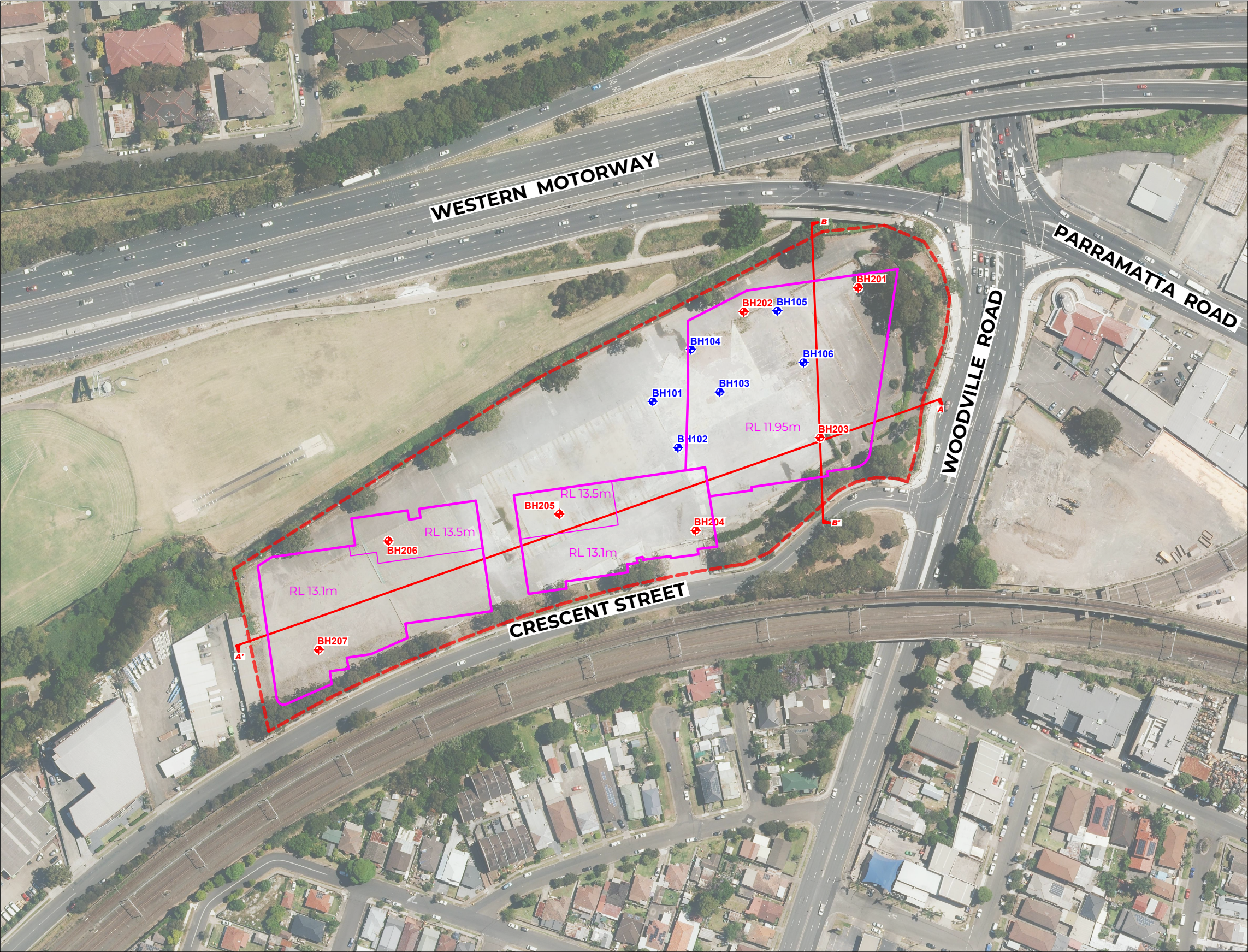
Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. Douglas would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

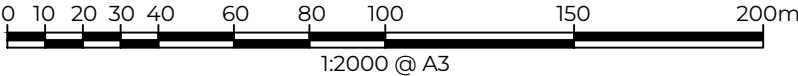
The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

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Locality Plan

NOTE:
1. Base image from MetroMap (Dated 11.12.2022)
2. Lower ground outlines are from Woods Bagot, Project No.121784, Sheet No. DA-0-12LG, Revision B (Dated 20.11.2024)



LEGEND

- Borehole Location
- Approximate DP's Previous Borehole Location (1995)
- Lower Ground B Outline
- Site Boundary
- Geological Cross Section



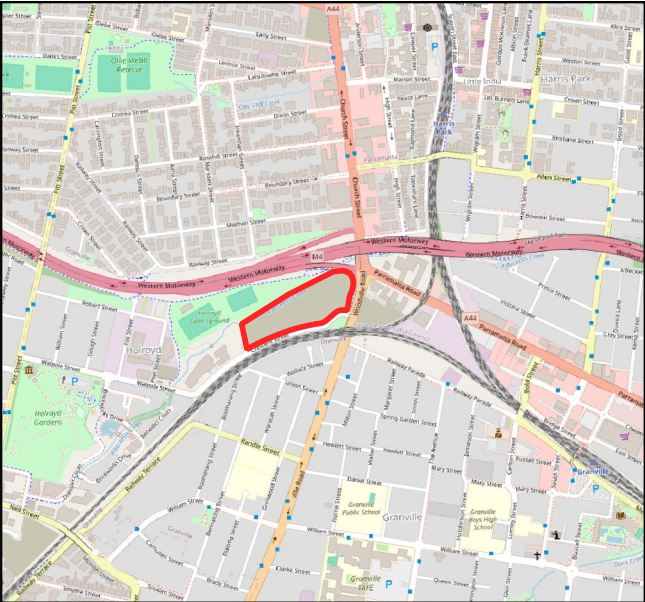
CLIENT: Tiberius (Holroyd) Pty Ltd AFT Holroyd Unit Trust
OFFICE: Sydney
SCALE: 1:2000 @ A3

DRAWN BY: MN
DATE: 21.11.2024

TITLE: **Test Location Plan**
Proposed Crescent Parklands
1 Crescent Parklands, Holroyd



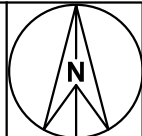
PROJECT No: 84770.03
DRAWING No: 1
REVISION: 1



LOCALITY MAP

Notes:
1. Drawing projection GDA2020 / MGA zone 56
2. Latest available aerial imagery sourced from metromap.com

- Legend**
- Site Boundary
 - Former A'Beckett Creek
 - Current Borehole
 - Current Borehole / Well
 - Current Test Pit
 - Current Soil Vapour Pin
 - Existing Monitoring Well
 - Geotechnical borehole / well (DP, 2023)
- Areas of Potential Environmental Concern**
- Possible waste burial cell
 - Former gasometer ring
 - Former gasometer structures
 - Previously identified landfill areas
 - Former substation
 - Former above ground diesel and waste oil store
 - Former above ground lab stores
 - Former above ground stores
 - LPG / distillate refilling area
 - Possible former naptha AST
 - Possible former petrol UST
 - Raised fill platform



Our ref: OUT25/3167

Andy Nixey
Planning Group
NSW Department of Planning, Housing and Infrastructure
Email: andy.nixey@planning.nsw.gov.au

18/03/2025

Subject: Crescent Parklands - SSD-70283710 – Environmental Impact Statement (EIS)

Dear Andy,

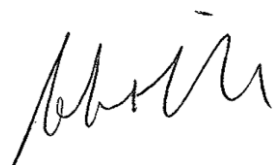
I refer to your request for advice sent on 5 February 2025 to the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) Water Group about the above matter.

The proposal is for the redevelopment of 1 Crescent Street, Holroyd for a mixed-use development comprising residential uses with supporting retail, commercial and community land uses.

NSW DCCEEW Water Group has reviewed the Environmental Impact Statement and has recommendations regarding water supply, take and licensing. Please see **Attachment A** for more detail.

Should you have any further queries in relation to this submission please do not hesitate to contact the Water Assessments team at water.assessments@dpie.nsw.gov.au.

Yours sincerely



Rob Brownbill,
Manager, Water Assessments, Knowledge Division
NSW Department of Climate Change, Energy, the Environment and Water

Attachment A

Detailed advice to DPHI Planning & Assessment regarding the Crescent Parklands - SSD-70283710 – EIS

1.0 Water supply, take and licensing

1.1 Recommendation – pre-determination

That the proponent quantifies the maximum annual volume of water take due to aquifer interference activities and demonstrates the ability to acquire sufficient water entitlement unless an exemption applies.

Explanation

Insufficient information has been provided to confirm the potential groundwater inflow volumes. NSW DCCEE Water Group notes that the groundwater table will potentially be intercepted. Maximum excavation depths for this project are up to 1.5m. The quoted data indicate that groundwater will be deeper than the deepest excavation, however there is commentary regarding seepage while piling and seepage of perched groundwater. The proponent has not presented sufficient information and analysis on inflows during the construction and ongoing operation of the site. Quantification of maximum potential inflow volumes is required.

1.2 Recommendation – post approval

The proponent should ensure a water access licence (WAL) is obtained to account for the maximum predicted water take for construction and operation activities unless an exemption applies under the Water Management (General) Regulation 2018.

Explanation

Under the *Water Management Act 2000*, if groundwater is intercepted a WAL must be obtained prior to any water take occurring unless an exemption under Clause 7 of Schedule 4 of the Water Management (General) Regulation 2018 applies. An exemption may be available if water take is less than or equal to 3 ML per water year, subject to the development meeting other exemption requirements, such as:

- the water is not taken for consumption or supply;
- the person claiming the exemption keeps a record of the water taken under the exemption and provides this to the Minister within 28 days of the end of the water year; and
- the records are kept for 5 years.

Further information on these requirements and other information on licensing and approvals and exemptions, including a form to report and record water taken can be found at:

<https://water.dpie.nsw.gov.au/licensing-and-trade> and <https://water.dpie.nsw.gov.au/our-work/licensing-and-trade/water-access-licences-and-approvals/exemptions-for-water-licences-and-works-and-or-use-approvals>

2.0 Groundwater impacts and dewatering requirements

2.1 Recommendation – pre-determination

If the take of groundwater is found to be greater than 3 ML per year, the proponent must assess the impacts due to aquifer interference activities in accordance with the NSW Aquifer Interference Policy and framework (2012). These documents are available at:

- https://water.dpie.nsw.gov.au/_data/assets/pdf_file/0005/151772/NSW-Aquifer-Interference-Policy.pdf
- https://water.dpie.nsw.gov.au/_data/assets/pdf_file/0007/171097/Aquifer-Interference-Assessment-Framework.pdf

Explanation

Although groundwater take is not anticipated to be significant, as per Recommendation 1.1 above, the EIS has not provided a volumetric quantification of groundwater take. Additionally, the EIS has not provided an assessment of impacts to groundwater due to construction or operation of the project. Although a comprehensive groundwater study prior to determination is unnecessary given the perceived low level of risk, NSW DCCEE Water Group notes that without groundwater take estimations it is difficult to assess the level of risk. Therefore, the proponent should determine the estimated take volume.

End Attachment A