221 -227 and 289 – 317 Luddenham Road, Orchard Hills NSW, 'Portion of Lot 1 DP1099147 and Lot 242 DP1088991

PROPOSED INDUSTRIAL DEVELOPMENT BULK FILL IMPORT PROTOCOL

Prepared for HB+B Property Pty Ltd

Ref: 10791EV.P.68-R10

25 February 2021

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Contact Information	
Construction Sciences	ABN 74 128 806 735
Phone	+61 1300 165 769
Email	vipul.desilva@constructionsciences.net
Address	Unit 2, 4 Kellogg Road, Rooty Hill NSW 2766

DOCUMENT HISTORY

Version	Effective Date	Author	Reviewer	Project Manager
01	25.02.2021	Vipul de Silva	Craig Cowper	Beau Dubois

INFORMATION ABOUT THIS REPORT

LIMITATIONS

Scope of Services: The report has been prepared in accordance with the scope of services set out in CS's Proposal under CS's Terms of Engagement, or as otherwise agreed with the Client. The scope of services may have been limited and/or amended by a range of factors including time, budget, access and site constraints.

Specific Purpose: The report is provided for the specific development and purpose as described in the report. The report may not contain sufficient information for developments or purposes other than that described in the report.

Currency of Information: The information in this report is considered accurate at the date of issue with regard to the current conditions of the site.

Reliance on Information: In preparing the report, CS (and the report Certifier if applicable) have necessarily relied upon information provided by the Client and/or their Agents. Such data may include surveys, analyses, designs, maps and plans. CS has not verified the accuracy or completeness of the data except as stated in this report.

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GENERAL NOTES

Geotechnical and Environmental Reporting: Geotechnical and environmental reporting relies on the interpretation of factual information based on judgment and opinion and is far less exact than other engineering or design disciplines. Geotechnical and environmental reports are for a specific purpose, development and site as described in the report and may not contain sufficient information for other purposes, developments or sites (including adjacent sites) other than that described in the report.

Subsurface Conditions: Subsurface conditions can change with time and can vary between test locations. For example, the actual interface between the materials may be far more gradual or abrupt than indicated and contaminant presence may be affected by spatial and temporal patterns. Therefore, actual conditions in areas not sampled may differ from those predicted since no subsurface investigation, no matter how comprehensive, can reveal all subsurface details and anomalies. Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions and thus the continuing adequacy of a geotechnical report. CS should be kept informed of any such events and should be retained to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Groundwater: Groundwater levels indicated on borehole and test pit logs are recorded at specific times. Depending on ground permeability, measured levels may or may not reflect actual levels if measured over a longer time period. Also, groundwater levels and seepage inflows may fluctuate with seasonal and environmental variations and construction activities.

Interpretation of Data: Data obtained from nominated discrete locations, subsequent laboratory testing and empirical or external sources are interpreted by trained professionals in order to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions in accordance with any relevant industry standards, guidelines or procedures.

Soil and Rock Descriptions: Soil and rock descriptions are based on AS 1726 – 1993, using visual and tactile assessment except at discrete locations where field and / or laboratory tests have been carried out. Refer to the accompanying soil and rock terms sheet for further information.

Further Advice: CS would be pleased to further discuss how any of the above issues could affect a specific project. We would also be pleased to provide further advice or assistance including:

- Assessment of suitability of designs and construction techniques;
- Contract documentation and specification;
- Construction control testing (earthworks, pavement materials, concrete);
- Construction advice (foundation assessments, excavation support).

Contents

Appendices

1. Introduction

1.1 Overview

HB+B Property Pty Ltd commissioned Construction Sciences Pty Ltd (CS) to prepare a Bulk Fill Import Protocol (BFIP) for the proposed industrial development located at 221-227 and 289-317 Luddenham Road Orchard Hills NSW, legally defined as a portion of Lot 1 in DP1099147 and portion of Lot 242 in DP1088991 ('the site').

For the purposes of this report, the site excludes a triangular portion of land in the north west corner of Lot 1 in DP1099147, which is currently zoned E2: environmental conservation land, under the Penrith Local Environmental Plan 2010. The boundary of the site and exclusion zone is provided in the attached Figure 1.

1.2 Objective

The objective of this BFIP is to manage fill importation so that all fill received from outside complies with the Bulk Earthworks Specifications, Development Consent and other Council requirements.

1.3 Scope

This BFIP details the procedures for selection of fill materials for bulk earthworks, validation of fill sources and importation to the site.

Selection and importation of pavement construction materials is not covered by this BFIP.

This BFIP has been based on Penrith City Council specifications for subdivision work. This BFIP may be revised based on any site-specific Development Consent conditions which may be imposed by the Council at a later date.

1.4 Stake Holders

Principal: HB+B Property Pty Ltd. (HB+B). HB+B may act as or appoint another agency to oversee and administer the earthworks construction in accordance with the drawings and specifications

Contractor: A Principal Contractor responsible for implementing the works in accordance with Technical Specifications and Drawings. The reference to Contractor also means any subcontractor engaged for any specific item of work.

Environmental Consultant (EC): Construction Sciences Pty Ltd is the Environmental Consultant (EC). The EC is responsible for the preparation of this BFIP and has the discretion to:

a) Amend the BFIP to achieve design outcomes.

b) Endorse acceptance of materials that do not fully comply with the BFIP.

Geotechnical Inspection and Testing Authority (GITA): The Principal or the Bulk Earthworks Principal Contractor may appoint a GITA to carry out supervision and testing of bulk earthworks. The GITA is responsible to ensure the materials imported to the site comply with fill validation reports endorsed by the EC.

2. Materials

All imported fill material validation reports will be endorsed by the EC.

- **HOLD Point**: All fill sources will be endorsed by the EC prior to importation of material from a nominated source.

- **Release of Hold Point**: EC provide written endorsement of the selected source after review of documentation supplied.

2.1 Virgin Excavated natural materials.

Virgin Excavated Natural materials (VENM) will meet the definition of Virgin Excavated natural material under Protection of the Environment Operation Act 1997 and defined in NSW EPA 2014, Waste Classification Guidelines: Part 1;

a) That has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities, and

b) That does not contain sulfidic ores or soils or any other waste.

On that basis, topsoil, or soil containing organic matter (e.g. grass / roots / rootlets) may not be classifiable VENM.

2.2 Excavated Natural materials

Excavated natural materials (ENM) is defined in the excavated natural material order and exemption 2014, as naturally occurring rock, soil (including but not limited to materials such as sandstone, shale clay and soil) that has:

a) been excavated from the ground, and

b) contains at least 98% of natural materials, and

c) does not meet the definition of virgin excavated natural materials.

Excavated Natural Materials does not include materials located in a hotspot that has been processed; or that contains asbestos, Acid Sulfate Soils (ASS) or Potential Acid Sulfate Soils (PASS or sulfidic ores.

On that basis, topsoil, or soil containing organic matter (e.g. grass / roots / rootlets) may not be classifiable ENM.

2.3 Materials Meeting Resource Recovery Exemptions (Other than ENM)

Materials meeting the requirements of a relevant NSW EPA Resource Recovery Order and Exemption may be imported to the site, subject to the endorsement of the EC, if permitted in the Development Consent, and the imported material is used in a manner that is consistent with the limitations set out in the relevant Order and Exemption.

2.4 General requirements for all fill materials

All fill materials will meet the following requirements:

a) Maximum particle size will be less than 150mm.

b) Not more than 30% of the materials will be retain on 37.5mm sieve.

c) Deleterious materials, as defined by "Type III: rubber, plastic, bitumen, paper, cloth, paint, wood, and other vegetable matter, will be less than 0.05% on average and 0.10% maximum.

The GITA will visually assess material stockpiles (site won) or truck loads (imported fill) and reject loads suspected of not meeting these general requirements. Where the GITA is unable to visually assess an imported load, it will be stockpiled separately for testing by the GITA prior to incorporation in fill. If the material is not suitable, it will be removed from the site. The rejected material may require classification for offsite disposal, prior to it being removed from the site.

- **Hold Point**: Fill materials will be inspected and endorsed by the GITA.

- **Release of Hold Point**: The GITA will include certification in the weekly interim report that the materials used on site meet the general requirements.

3. Fill Validation

3.1 Virgin Excavated Natural Material

Validation of VENM will include, as a minimum,

a) A brief history of the source site

b) A description of subsurface profile of the site

c) Results of contamination testing carried out and a statement to show the number of samples tested is adequate based on the site history, subsurface profile and the volume of the materials involved

d) Certification to state that the material meets the definition of VENM.

3.2 ENM and other materials conforming to resource recovery orders.

The report will include, as a minimum:

a) Name of the Resource Recovery Order and a copy of the Order and Exemption, or a link to the NSW EPA website where the Order and Exemption can be found.

b) Tonnage or area of materials assessed.

c) Sample test results as required in the Exemption.

d) A statement of compliance that the requirements of the Order have been met.

3.3 Soil Salinity

All fill imported to the site will be non-saline or slightly saline as defined in the Western Sydney Regional Organisation of Councils Salinity Code of Practice. Imported soil will meet the following criteria:

a) Minimum of 10 soil samples will be tested per source and for larger volumes 1 sample per 2000m^3. Soil sampling and testing frequency of the source site will be not less than that given in Department of Land and water Conservation (DLWC) Site Investigation for Urban Salinity (2002) for projects mapped at 1:10,000 scale

b) Electrical conductivity of saturated pore space (EC_o) will be in the range 0 to 4.0dS/m.

c) pH measured in 1:5 soil water mixture in the range 5.5 to 8.0 pH units.

3.4 Approval of fill sources.

The following procedure shall be followed for approval of fill sources.

a) The Principal or the Contractor provide source documentation to the EC at least 48 hours prior to import of fill.

b) EC review the documentation provided and endorse or reject importation of fill.

c) If EC has any doubts on the documentation supplied, the EC may elect to visit the site prior to endorsement and/or collect confirmatory samples for subsequent analysis.

4. Gate Records

A Gate Keeper will be appointed by the Principal earthworks Contractor to manage importation of fill to the site. The gate keeper will be competent or be provided with sufficient training by earthworks contractor to identify VENM, ENM and geotechnical requirements for materials imported.

A record of truck movement must be maintained by the gate keeper for trucks carrying materials imported to the site. The following information should be recorded:

a) Time and date of arrival and Truck registration number

b) Name of the haulage company and the drivers name

c) Source of the material

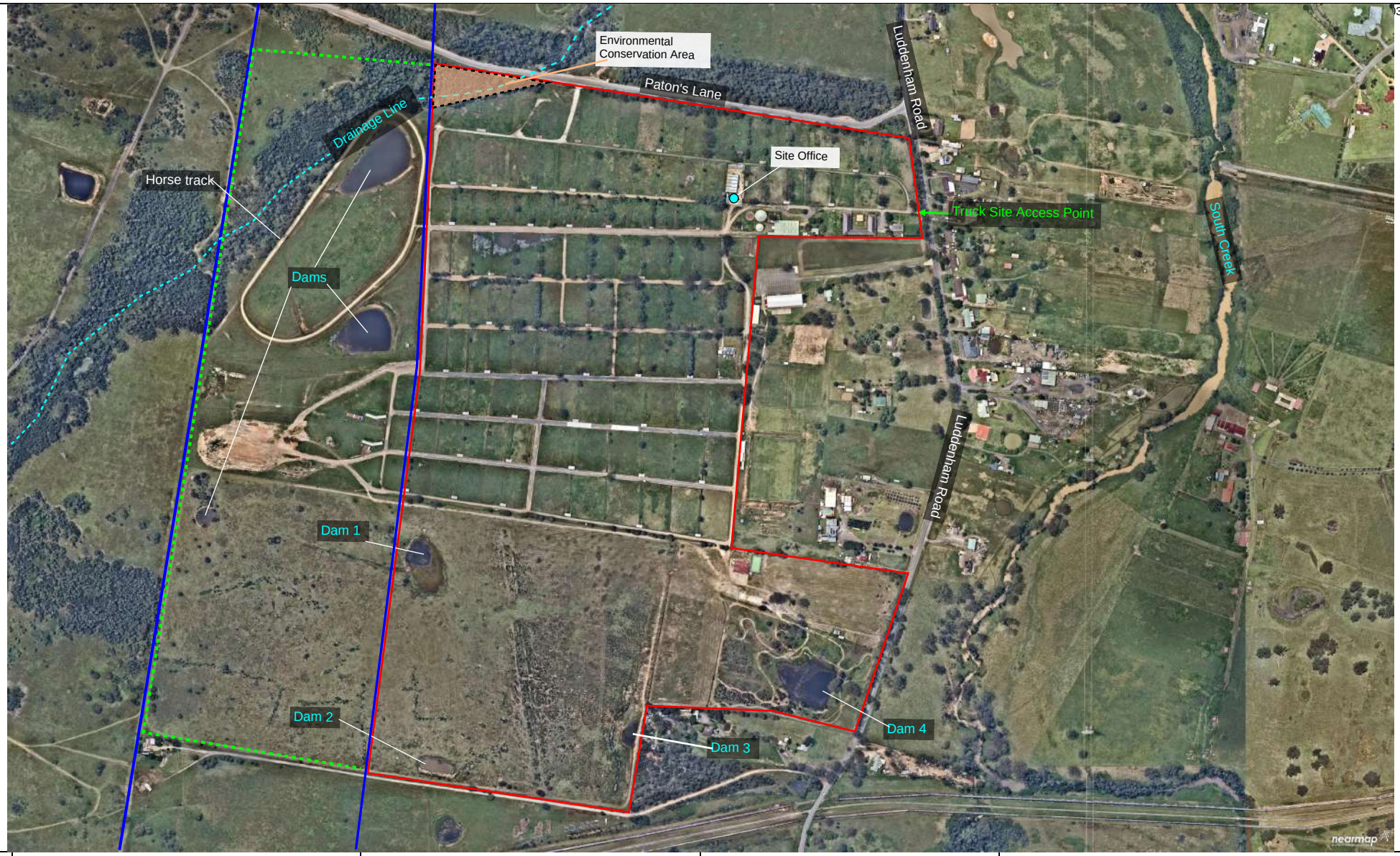
d) Visual assessment of material compared with the endorsed source materials

e) A tally of the volume of material imported from each source

f) The location of site the material will be placed.

The contractor is responsible to check the volume of materials imported is consistent with the volume endorsed by the EC. Additional material volumes to be imported will require specific endorsement from the EC.

Appendix A
FIGURES



LEGEND:

- Approximate Site Boundary
- Proposed Orbital Corridor Boundary
- Portion of the Property, Outside the Site
- Exclusion Zone
- Site Office

Construction Sciences

2/4 Kellogg Rd,
Rooty Hill, NSW, 2766
Tel: (02) 9854 1700

Web: www.constructionsciences.net

Scale(m) 0 150 300	Client: HB+B Property Pty Ltd
Date: 25/02/2021	Project: Bulk Fill Import Protocol
Drawn By: BD	Location: 221-227 and 289-317 Luddenham Road, Orchard Hills, NSW, 2745 (Portion of Lot 1 DP1099147 and Lot 242 DP1088991)
Drawing No: 10791EV.P.68-R10 - Figure 1	Sheet: **Site Layout**

Located across Australia and New Zealand

QLD
Airlie
Beenleigh
Brisbane (Acacia Ridge)
Brisbane (Beenleigh)
Brisbane (Brendale)
Brisbane (Petrie)
Cairns
Emerald
Gladstone
Gold Coast
Mackay
Moranbah
Rockhampton
Petrie
Sunshine Coast
Toowoomba
Townsville

NSW
Ballina
Coffs Harbour
Grafton
Lynwood
Newcastle
Sydney (Glendenning)
Sydney (Seven Hills)
Sydney (St Peters)
Taree
Wollongong

VIC
Ararat
Bendigo
Echuca
Melbourne (Chadstone)
Melbourne (Keysborough)
Melbourne (Pakenham)
Melbourne (Oaklands Junction)
Melbourne (Sunshine West)
Traralgon

WA
Bunbury
Kalgoorlie
Newman
Perth
Port Hedland

SA
Adelaide
Port Augusta

NT
Darwin

ACT
Canberra

NZ
Wellington

Ph 1300 165 769 E info@constructionsciences.net W constructionsciences.net

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