SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**1**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 30: Located on the boundary of Blocks 1 & 21 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.3 m then dry to moist hard, medium plasticity sandy clay to 0.7 m overlying medium to high strength, moderately weathered rhyodacite rock to the refusal depth of 1.0 m.

Test Pit 31: Located on the boundary of Blocks 20 & 21 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, hard, medium plasticity sandy clay to 0.4 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.6 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**2**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

SUBSURFACE CONDITIONS:

Test Pit 30: Located on the boundary of Blocks 1 & 21 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.3 m then dry to moist hard, medium plasticity sandy clay to 0.7 m overlying medium to high strength, moderately weathered rhyodacite rock to the refusal depth of 1.0 m.

Test Pit 41: Located on the boundary of Blocks 2 & 3 of Section 8. Dry to moist dense clayey gravelly sand to 1.2 m overlying low to high strength, highly to slightly weathered rhyodacite rock to the refusal depth of 1.4 m.

SITE CLASSIFICATION: **Class M (moderately reactive)** based on the worse case soil profile from limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). Most of the block would be equivalent to Class S conditions. Should the subsurface profile change by excavation or filling, reassessment of the site classification must be undertaken with the possibility of a Class P site. Reference should be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for Class M sites. Footing systems are to be confirmed by a structural engineer.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to construction should include removal of all vegetation, topsoil, any uncontrolled filling and any softened foundation material due to ponding of rainwater.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

Douglas Partners
Geotechnics / Environment / Groundwater

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**3**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

SUBSURFACE CONDITIONS:

Test Pit 40: Located on the boundary of Blocks 3 & 4 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then hard, dry to moist gravelly sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 1.2 m.

Test Pit 41: Located on the boundary of Blocks 2 & 3 of Section 8. Dry to moist dense clayey gravelly sand to 1.2 m overlying low to high strength, highly to slightly weathered rhyodacite rock to the refusal depth of 1.4 m.

SITE CLASSIFICATION: **Class M (moderately reactive)** based on the worse case soil profile from limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). Most of the block would be equivalent to Class S conditions. Should the subsurface profile change by excavation or filling, reassessment of the site classification must be undertaken with the possibility of a Class P site. Reference should be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for Class M sites. Footing systems are to be confirmed by a structural engineer.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to construction should include removal of all vegetation, topsoil, any uncontrolled filling and any softened foundation material due to ponding of rainwater.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

Douglas Partners

Geotechnics / Environment / Groundwater

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	4	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 39: Located on the boundary of Blocks 5 & 6 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.7 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 0.9 m.

Test Pit 40: Located on the boundary of Blocks 3 & 4 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then hard, dry to moist gravelly sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 1.2 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	5	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 39: Located on the boundary of Blocks 5 & 6 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.7 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 0.9 m.

Test Pit 40: Located on the boundary of Blocks 3 & 4 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then hard, dry to moist gravelly sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 1.2 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**6**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 39: Located on the boundary of Blocks 5 & 6 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.7 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 0.9 m.

Test Pit 40: Located on the boundary of Blocks 3 & 4 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then hard, dry to moist gravelly sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 1.2 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	7	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 38: Located on the boundary of Blocks 7 & 8 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity, sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the limit of investigation depth of 1.6 m.

Test Pit 39: Located on the boundary of Blocks 5 & 6 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.7 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the refusal depth of 0.9 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	8	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 37: Located on the boundary of Block 9 & 10 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.15 m, overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

Test Pit 38: Located on the boundary of Blocks 7 & 8 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity, sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the limit of investigation depth of 1.6 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings*,' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**9**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 37: Located on the boundary of Block 9 & 10 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.15 m, overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

Test Pit 38: Located on the boundary of Blocks 7 & 8 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.2 m then dry to moist, very stiff, medium plasticity, sandy clay to 0.9 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the limit of investigation depth of 1.6 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings*,' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**10**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 36: Located on the boundary of Blocks 11 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.1 m dry to moist, medium dense, low plasticity gravelly sandy clay to 0.4 m overlying medium to high strength moderately weathered rhyodacite rock to the refusal depth of 0.8 m.

Test Pit 37: Located on the boundary of Block 9 & 10 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.15 m, overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**11**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 36: Located on the boundary of Blocks 11 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.1 m dry to moist, medium dense, low plasticity gravelly sandy clay to 0.4 m overlying medium to high strength moderately weathered rhyodacite rock to the refusal depth of 0.8 m.

Test Pit 37: Located on the boundary of Block 9 & 10 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.15 m, overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings*,' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**12**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 35: Located on the boundary of Blocks 12 & 13 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m dry to moist, dense, fine to coarse grained clayey gravelly sand to 0.3 m overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

Test Pit 36: Located on the boundary of Blocks 11 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.1 m dry to moist, medium dense, low plasticity gravelly sandy clay to 0.4 m overlying medium to high strength moderately weathered rhyodacite rock to the refusal depth of 0.8 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	13	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 34: Located on the boundary of Blocks 14 & 15 of Section 8. Dry to moist silty sand topsoil filling to 0.15 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.8 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the slow progress depth of 1.4 m.

Test Pit 35: Located on the boundary of Blocks 12 & 13 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m dry to moist, dense, fine to coarse grained clayey gravelly sand to 0.3 m overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**14**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 34: Located on the boundary of Blocks 14 & 15 of Section 8. Dry to moist silty sand topsoil filling to 0.15 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.8 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the slow progress depth of 1.4 m.

Test Pit 35: Located on the boundary of Blocks 12 & 13 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m dry to moist, dense, fine to coarse grained clayey gravelly sand to 0.3 m overlying extremely low to medium strength, extremely to moderately weathered rhyodacite rock to the limit of investigation depth of 1.7 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**15**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 33: Located on the boundary of Blocks 16 & 17 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, dense clayey gravelly sand to 0.3 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.2 m.

Test Pit 34: Located on the boundary of Blocks 14 & 15 of Section 8. Dry to moist silty sand topsoil filling to 0.15 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.8 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the slow progress depth of 1.4 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**16**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 33: Located on the boundary of Blocks 16 & 17 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, dense clayey gravelly sand to 0.3 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.2 m.

Test Pit 34: Located on the boundary of Blocks 14 & 15 of Section 8. Dry to moist silty sand topsoil filling to 0.15 m then dry to moist, very stiff, medium plasticity gravelly sandy clay to 0.8 m overlying low to medium strength, highly to moderately weathered rhyodacite rock to the slow progress depth of 1.4 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings*,' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	17	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 32: Located on the boundary of Blocks 18 & 19 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.5 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the refusal depth of 1.1 m.

Test Pit 33: Located on the boundary of Blocks 16 & 17 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, dense clayey gravelly sand to 0.3 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.2 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	18	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 32: Located on the boundary of Blocks 18 & 19 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.5 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the refusal depth of 1.1 m.

Test Pit 33: Located on the boundary of Blocks 16 & 17 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, dense clayey gravelly sand to 0.3 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.2 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**19**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 31: Located on the boundary of Blocks 20 & 21 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, hard, medium plasticity sandy clay to 0.4 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.6 m.

Test Pit 32: Located on the boundary of Blocks 18 & 19 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.5 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the refusal depth of 1.1 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings*,' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	**20**	**SECTION:**	**8**	**SUBURB:**	**Denman Prospect**
JOB No:	**46231.63**			**DATE:**	**March 2016**
CLIENT:	**Indesco Consulting Engineers**				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 31: Located on the boundary of Blocks 20 & 21 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, hard, medium plasticity sandy clay to 0.4 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.6 m.

Test Pit 32: Located on the boundary of Blocks 18 & 19 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.5 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the refusal depth of 1.1 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

SITE CLASSIFICATION REPORT SUMMARY

BLOCK:	21	**SECTION:**	8	**SUBURB:**	Denman Prospect
JOB No:	46231.63			**DATE:**	March 2016
CLIENT:	Indesco Consulting Engineers				

CLASSIFICATION PROCEDURES:

EXISTING SUBSURFACE CONDITIONS:

Test Pit 30: Located on the boundary of Blocks 1 & 21 of Section 8. Dry to moist gravelly sandy silt topsoil filling to 0.1 m, dry to moist, dense clayey gravelly sand to 0.3 m then dry to moist hard, medium plasticity sandy clay to 0.7 m overlying medium to high strength, moderately weathered rhyodacite rock to the refusal depth of 1.0 m.

Test Pit 31: Located on the boundary of Blocks 20 & 21 of Section 8. Dry to moist silty sand topsoil filling to 0.1 m then dry to moist, hard, medium plasticity sandy clay to 0.4 m overlying extremely low up to high strength, extremely to moderately weathered rhyodacite rock to the slow progress depth of 1.6 m.

SITE CLASSIFICATION: **Class S (slightly reactive)** based on limited subsurface information and determined in general accordance with the requirements of AS2870-2011 (Ref 1). If the building pad is founded entirely on weathered rock, a Class A classification may be appropriate. Therefore the classification must be reassessed should the soil profile change either by adding fill or removing soil from the block and/or if the presence of service trenches or retaining walls are within the zone of influence of the block with the possibility of a Class P site. Reference must be made to the comments provided below.

FOOTING SYSTEMS: Reference must be made to AS2870-2011 (Ref 1) which indicates footing systems that are appropriate for each site classification. All footings must found within a uniform bearing stratum of suitable strength/material, below the zone of influence of any service trenches, backfill zones, retaining walls or underground structures. Masonry walls should be articulated in accordance with current best practice. Footing systems must be confirmed by a structural engineer taking into consideration any onsite or offsite constraints.

MAINTENANCE GUIDELINES: CSIRO Sheet BTF 18 'Foundation Maintenance & Footing Performance' (attached). Refer to comments about gardens, landscaping and trees on the performance of foundation soils.

COMMENTS/ LIMITATIONS:

Development specific geotechnical investigations must be undertaken.

Additional topsoils / filling may have been spread subsequent to the investigation.

Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

All new filling must be placed under controlled conditions (AS 3798-2007).

Some variability in subsurface conditions must be anticipated.

Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction.

Hard rock excavation must be anticipated.

It is recommended that footing excavations be inspected by a geotechnical engineer.

This report must be read in conjunction with the attached notes "About this Inspection Report".

REFERENCES:

1. AS 2870-2011 '*Residential Slabs and Footings,*' Standards Association of Australia.

Douglas Partners
Geotechnics / Environment / Groundwater