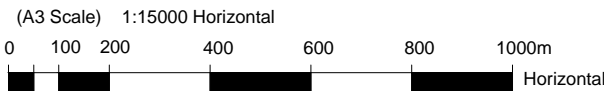


Appendix C: Geological Cross Sections



- Notes:**
1. Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
 2. Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
 3. No data available in top 1.2m due to services pre-drill.
 4. Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
 5. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
 6. Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).





































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SCALES (AT A3 SIZE)		
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Sheet 1 of 1		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
Geological Cross Section Location Plan

FIG. No.	C1	REV. 1
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- | | | | |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|  Sand, very loose |  Sand, silty, very loose |  Silt, clayey |  Sand, gravelly, very loose |
|  Sand, very loose to loose |  Sand, silty, very loose to loose |  Silt, very loose |  Sand, gravelly, very loose to loose |
|  Sand, loose |  Sand, silty, loose |  Silt, loose to very loose |  Sand, gravelly, loose |
|  Sand, loose to medium dense |  Sand, silty, loose to medium dense |  Silt, loose |  Sand, gravelly, loose to medium dense |
|  Sand, medium dense |  Sand, silty, medium dense |  Silt, sandy, very loose |  Sand, gravelly, medium dense |
|  Sand, medium dense to dense |  Sand, silty, medium dense to dense |  Silt, sandy, very loose to loose |  Sand, gravelly, medium dense to dense |
|  Sand, dense |  Sand, silty, dense |  Silt, sandy, loose |  Sand, gravelly, dense |
|  Sand, dense to very dense |  Sand, silty, dense to very dense | |  Gravel, very dense |

 Inferred material boundary
 Datum RL 0m

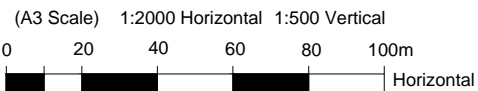
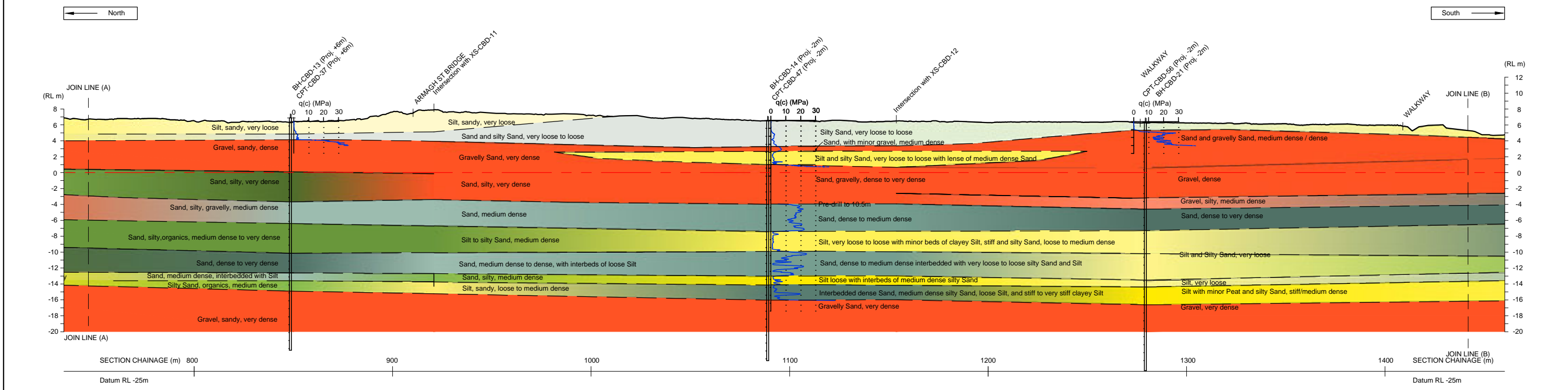
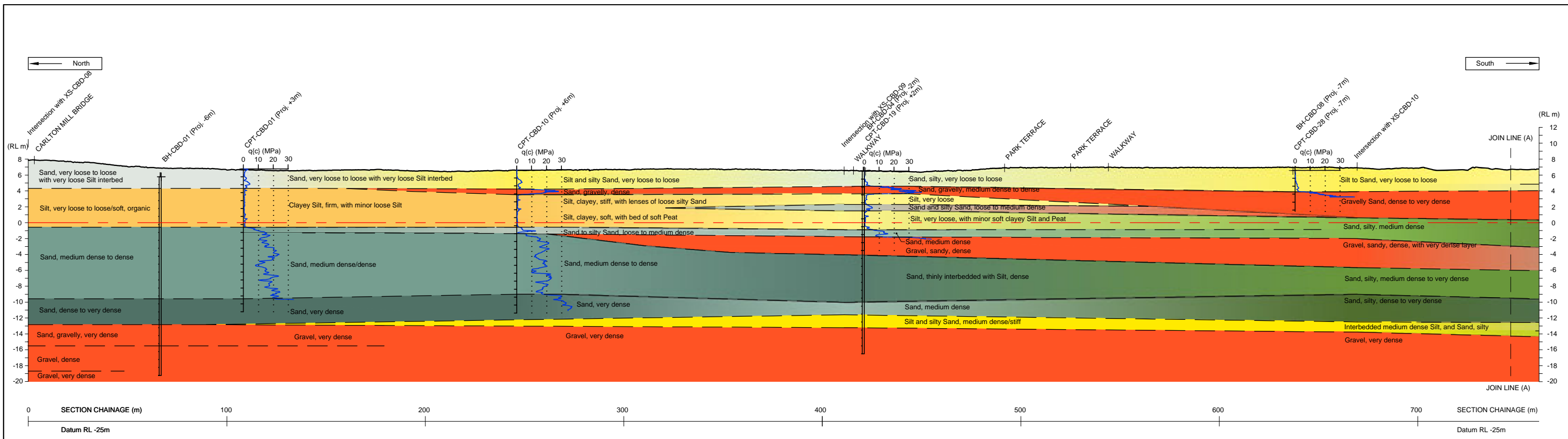


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CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT

SECTION LEGEND

REV. 0



Notes:

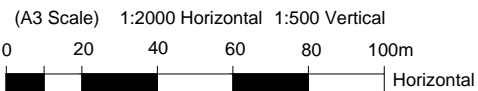
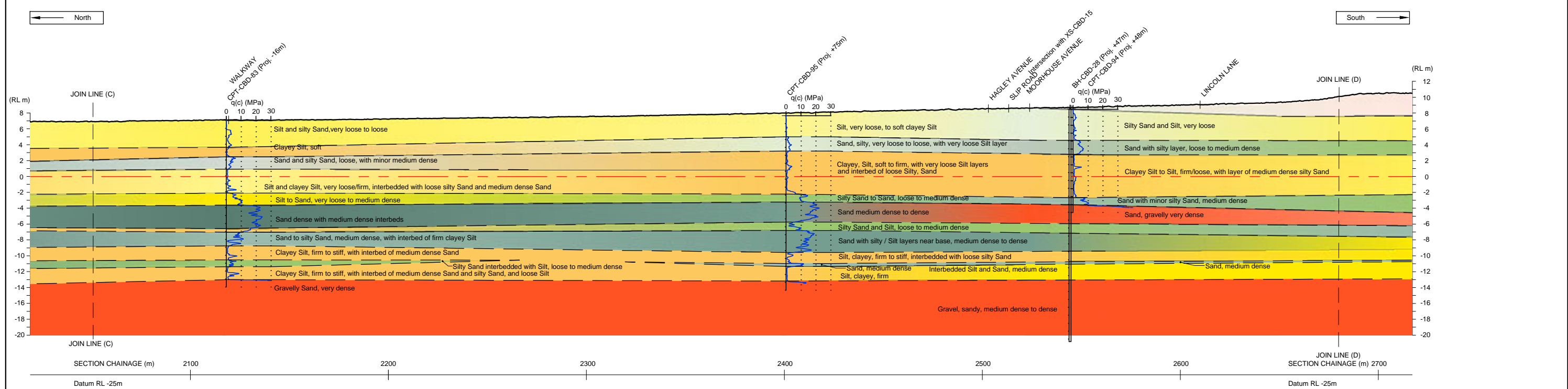
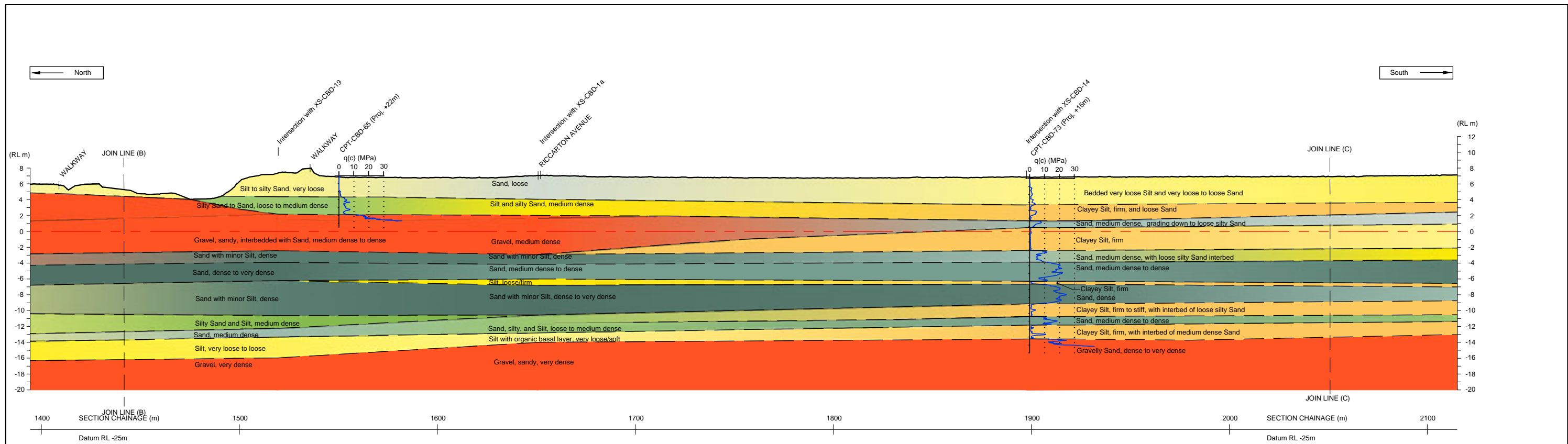
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3. No data available in top 1.2m due to services pre-drill.
4. Ground surface profile inferred from LiDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
5. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
6. Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



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Sheet 1 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-1 (Park Terrace / Rolleston Avenue)		FIG. No. C2	REV. 1
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XGS-CBD-01 Final.dwg 9/12/2011 12:38:30 p.m.



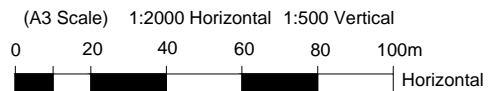
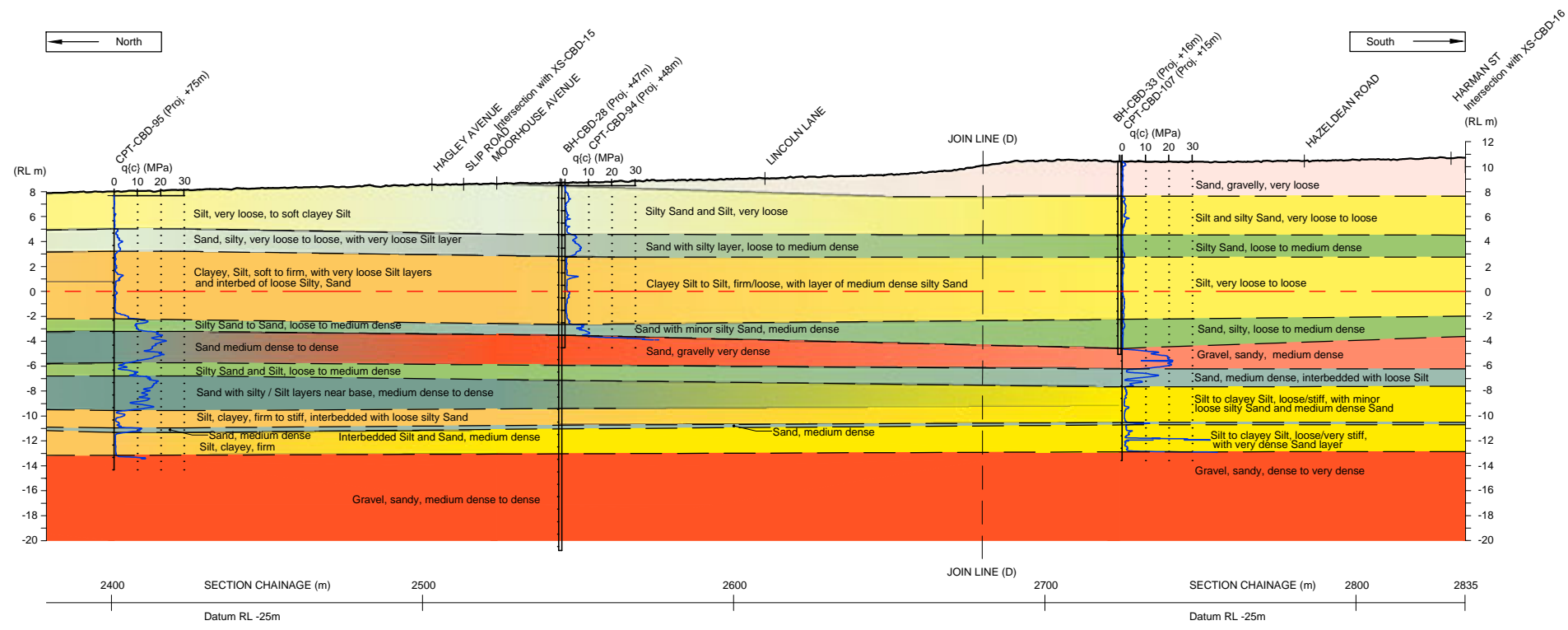
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- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsoils away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
- Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
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SCALES (AT A3 SIZE)		
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Sheet 2 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GX-S-CBD-1 (Park Terrace / Rolleston Avenue)		FIG. No. C2	REV. 1
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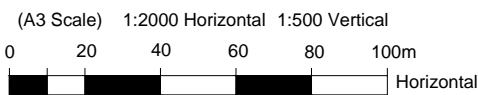
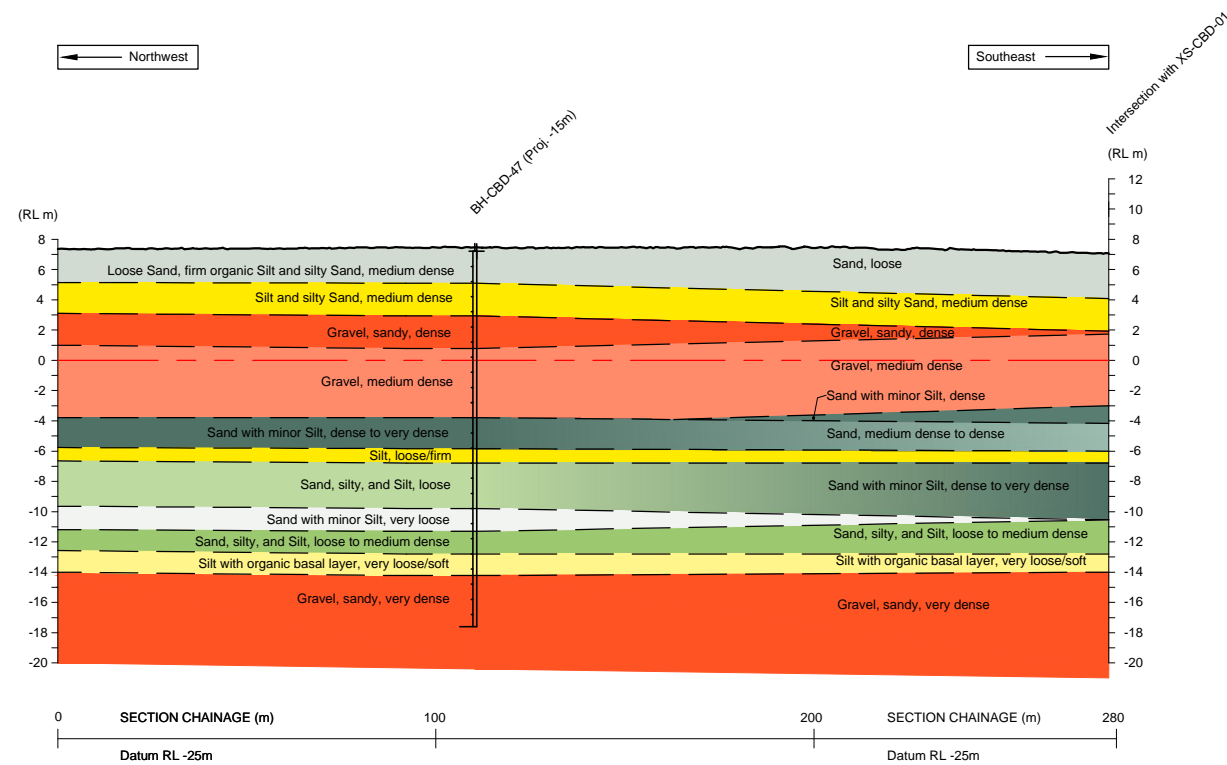
Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsoils away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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1:500 Vertical		
Sheet 3 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-1 (Park Terrace / Rolleston Avenue)		FIG. No. C2	REV. 1
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Notes:

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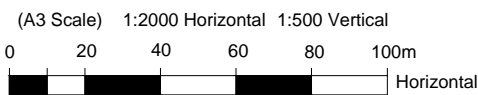
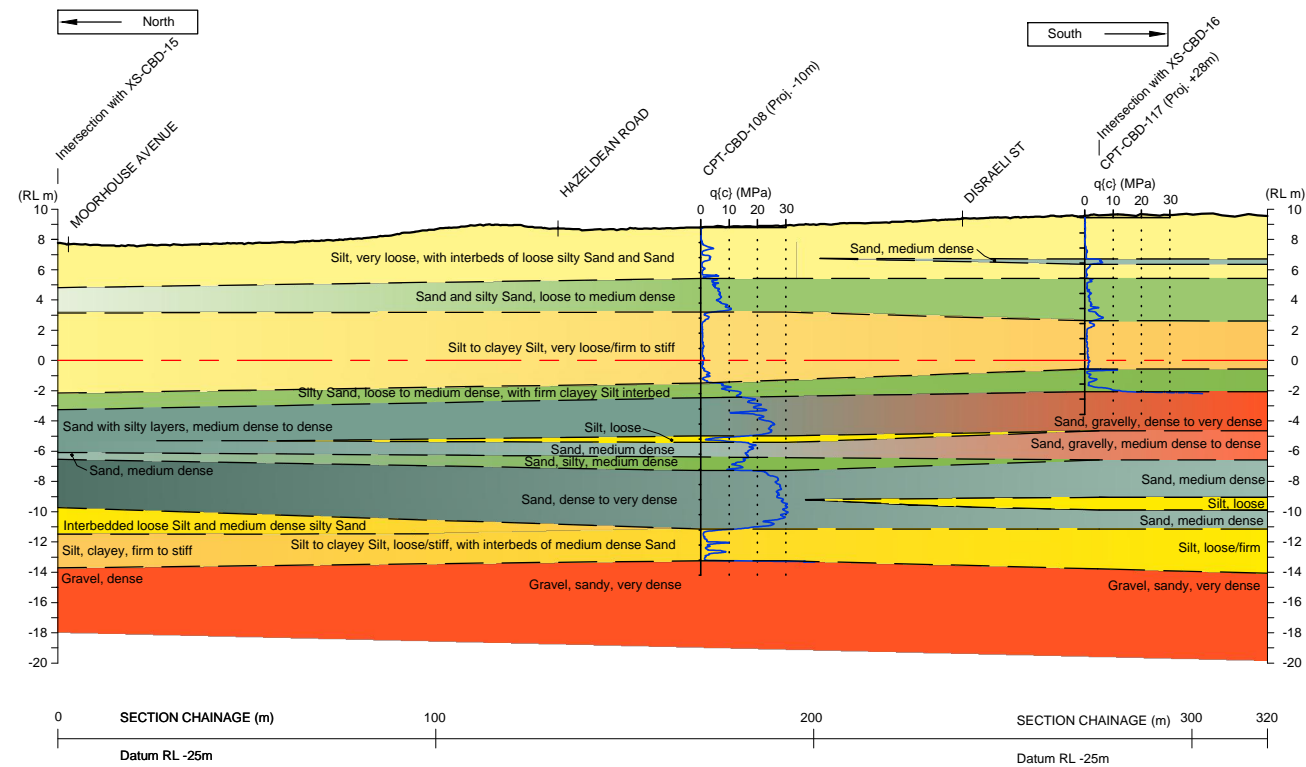
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GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-01a (Riccarton Avenue / Christchurch Hospital)

FIG. No.

C3

REV. 1



Notes:

1. Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsoils away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
2. Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
3. No data available in top 1.2m due to services pre-drill.
4. Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
5. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
6. Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).

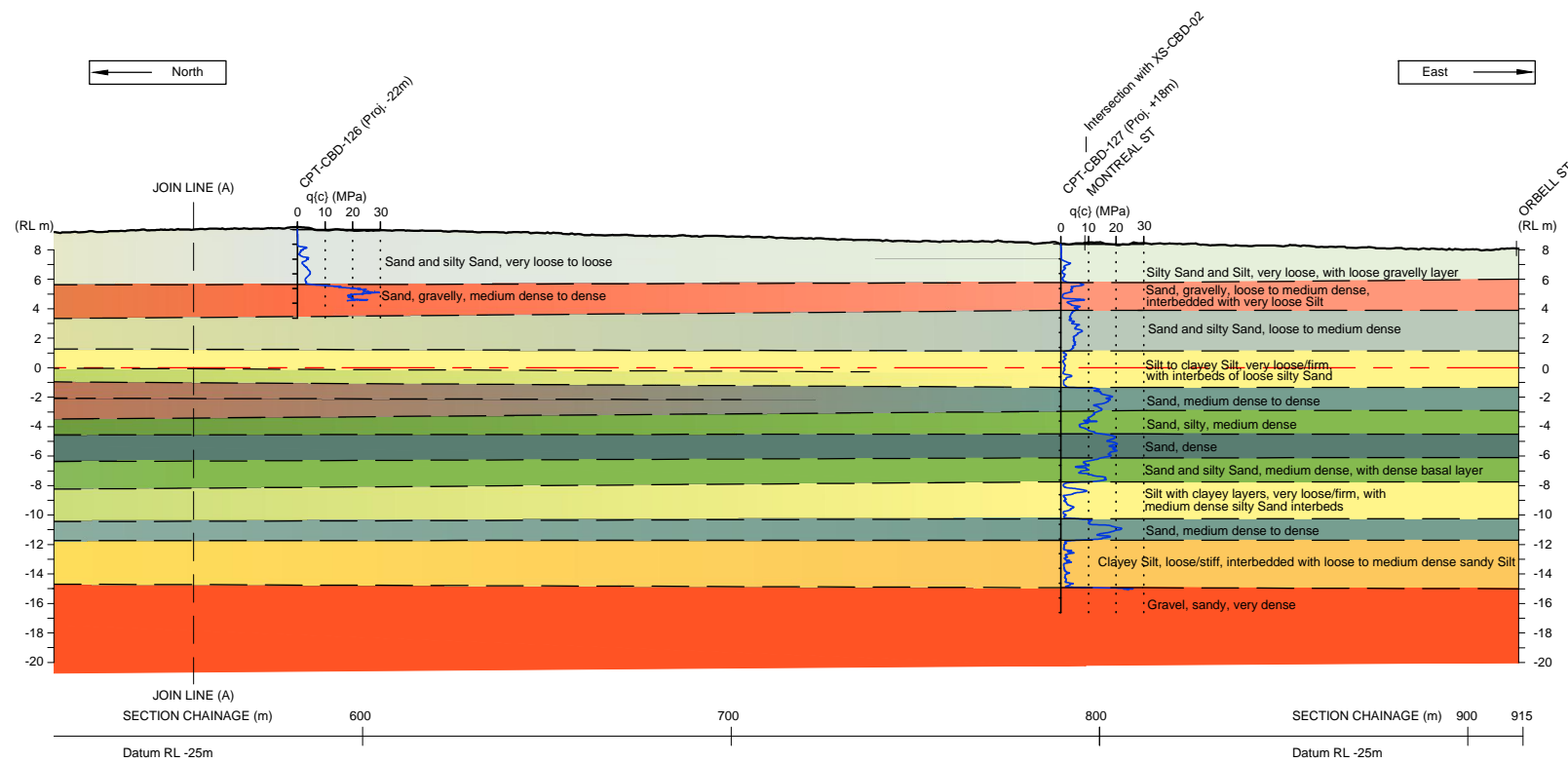
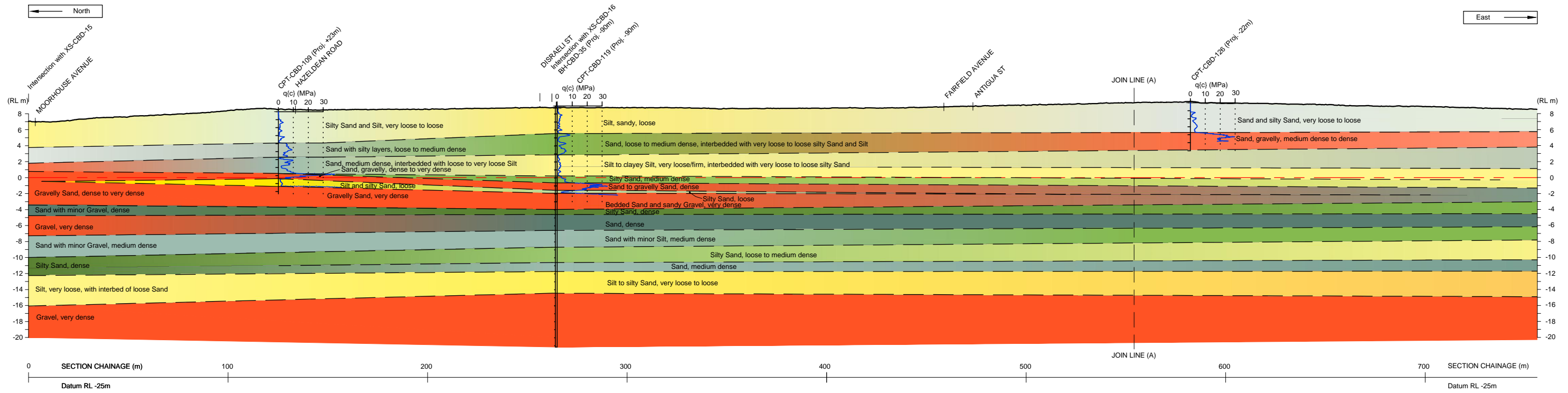


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<p>CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-01B (Selwyn Street)</p>	<p>FIG. No. C 4</p>	<p>REV. 1</p>
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XS-CBD-01b Final.dwg 9/12/2011 2:37:42 p.m.



(A3 Scale) 1:2000 Horizontal 1:500 Vertical



Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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- CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
- Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



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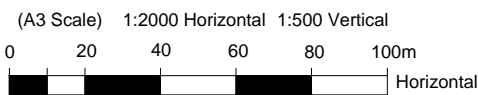
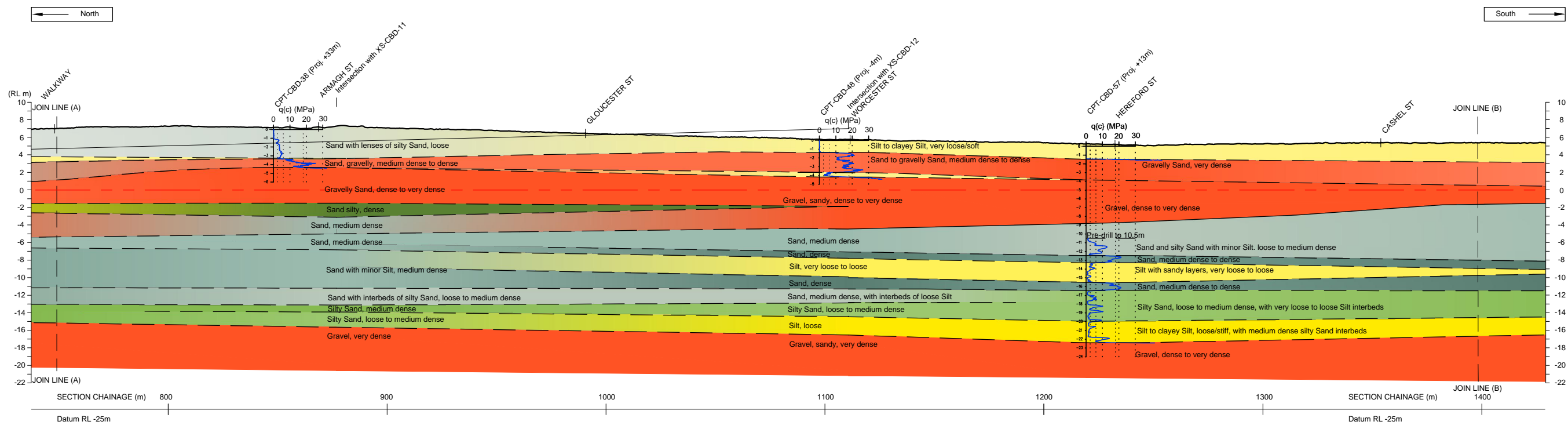
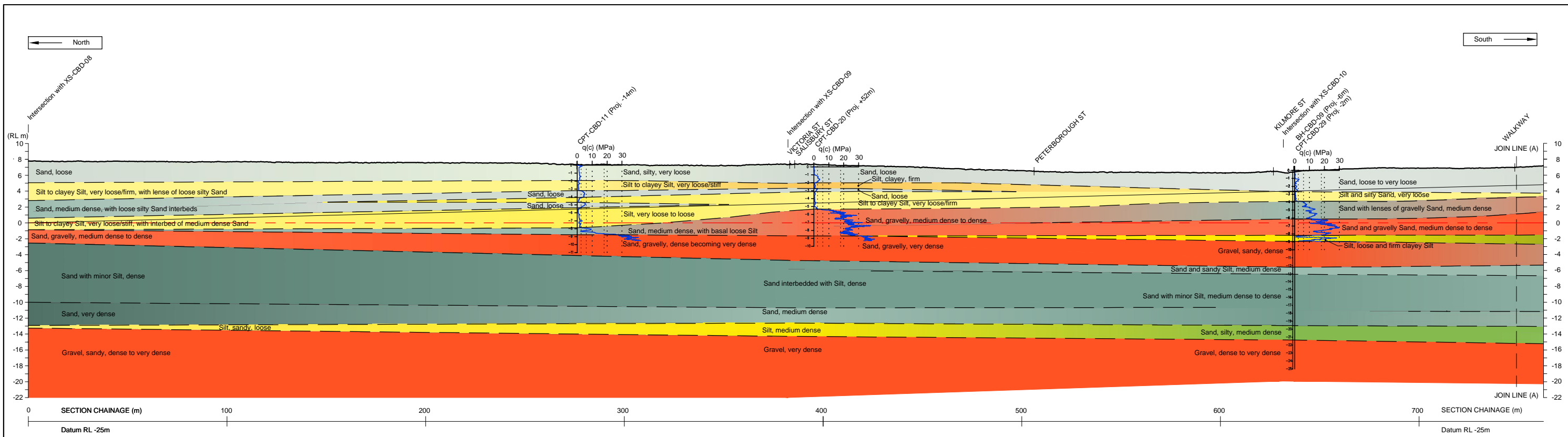
Sheet 1 of 1

FIG. No.

CHRISTCHURCH CITY COUNCIL
 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GX-S-CBD-1C (Antigua Street)

C 5

REV. 1



Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
- Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
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- Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
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- Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



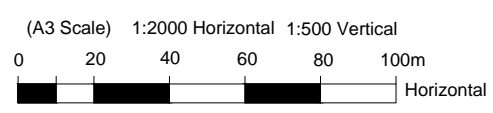
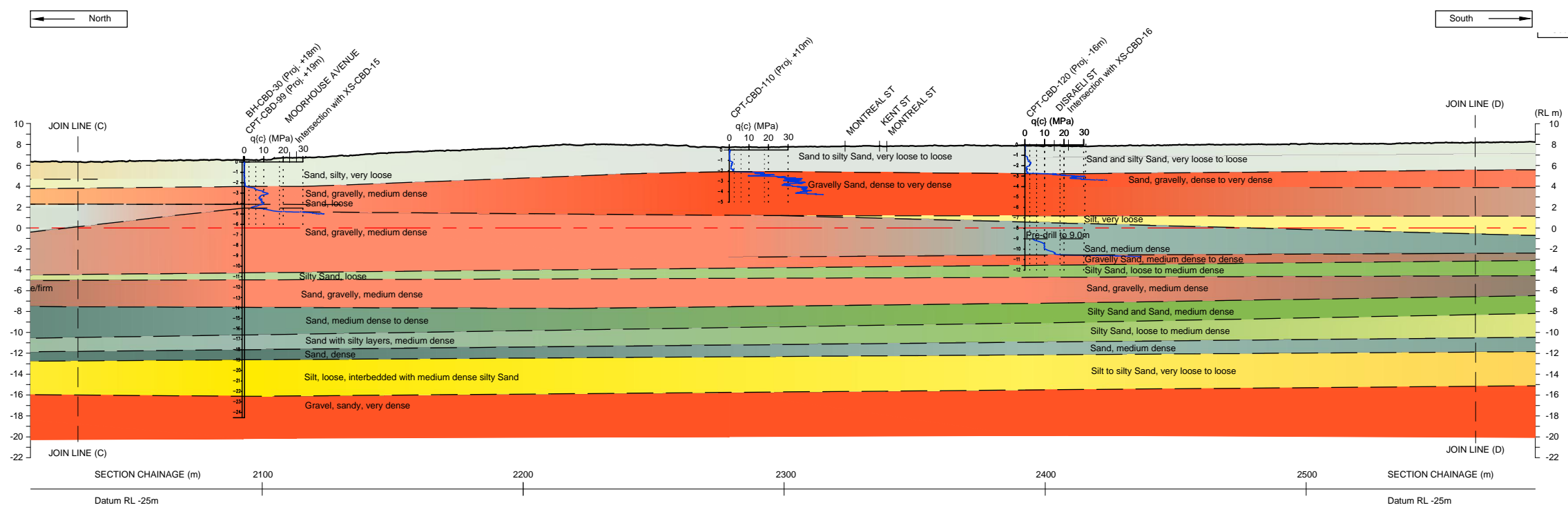
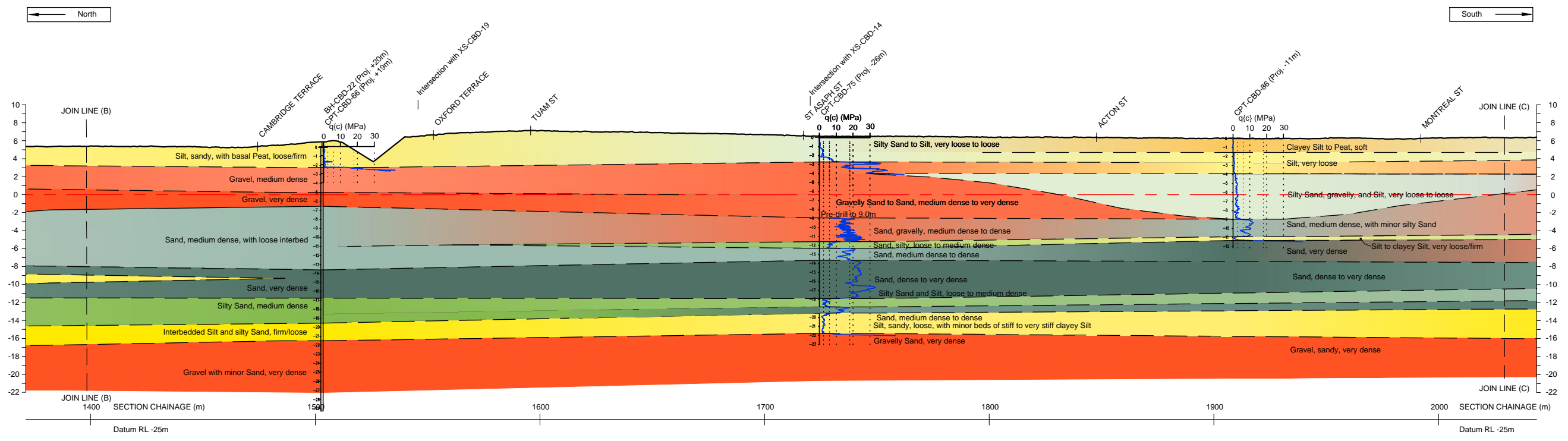
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Sheet 1 of 3		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-02 (Montreal Street)

FIG. No. **C 6**

REV. **1**

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Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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- Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).

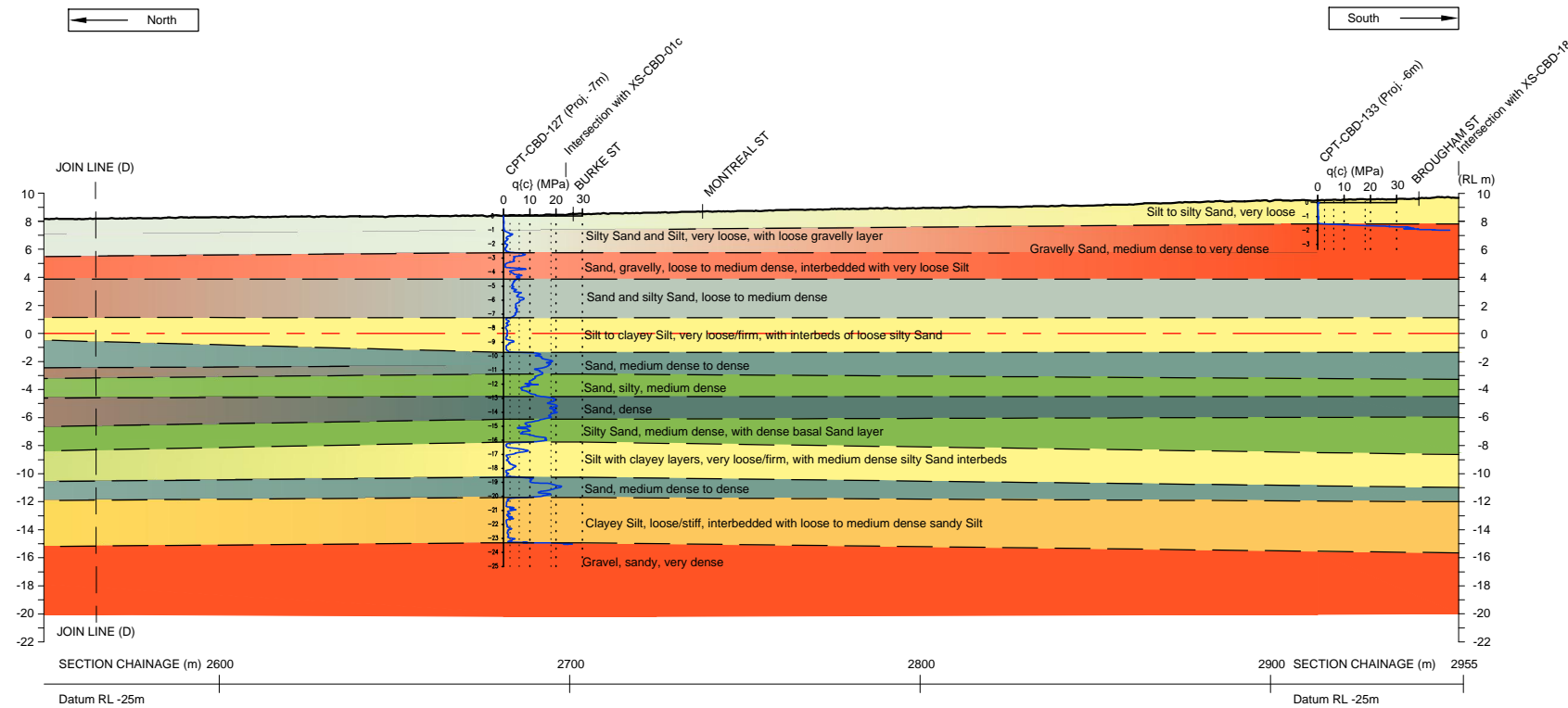


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Sheet 2 of 3		

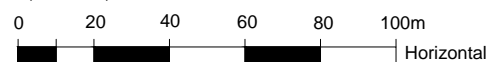
CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-02 (Montreal Street)

FIG. No. **C 6**

REV. **1**



(A3 Scale) 1:2000 Horizontal 1:500 Vertical



Notes:

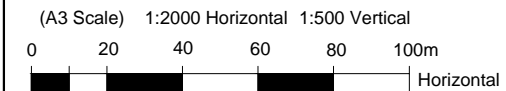
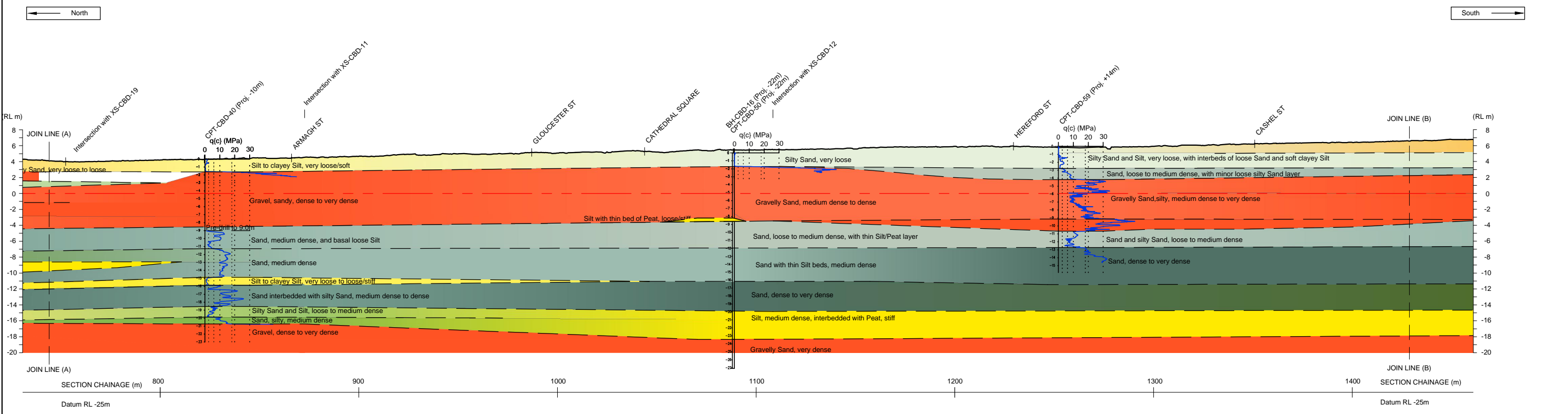
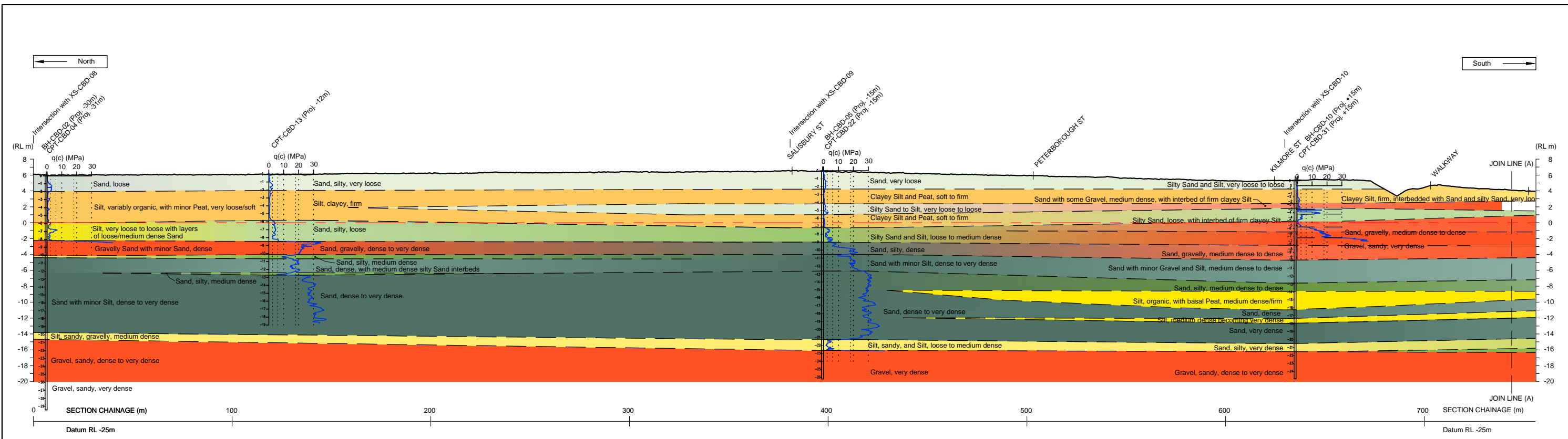
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Sheet 3 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-02 (Montreal Street)		FIG. No. C 6	REV. 1
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Notes:

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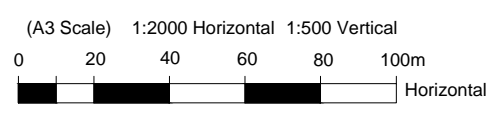
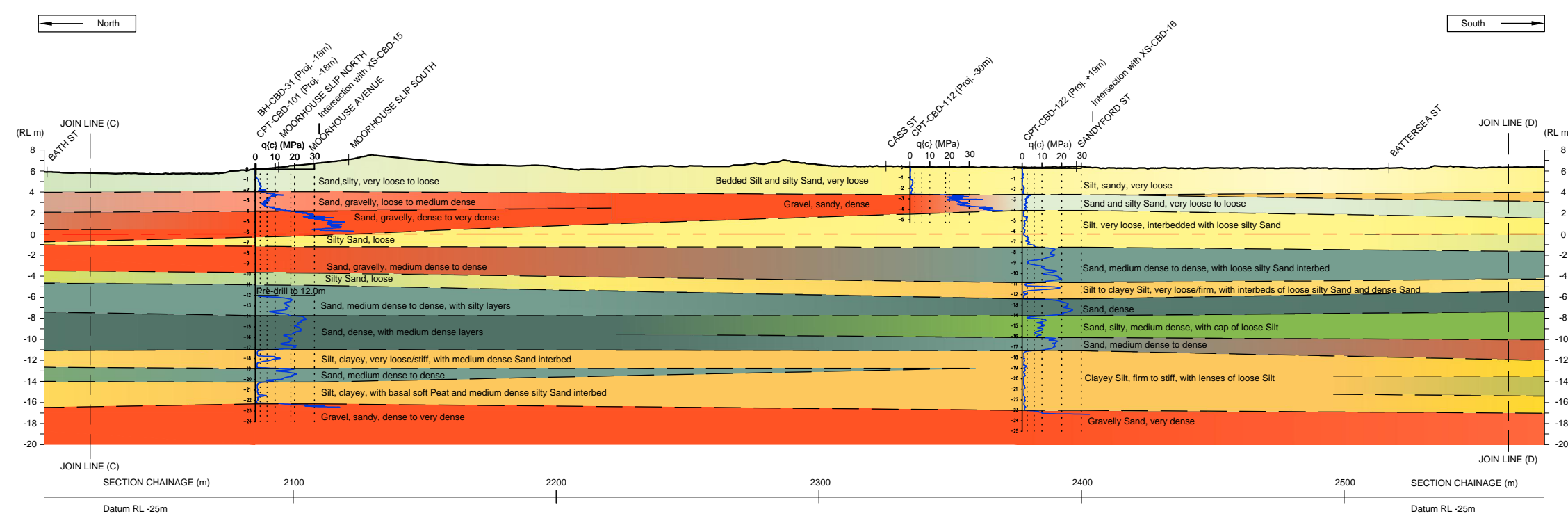
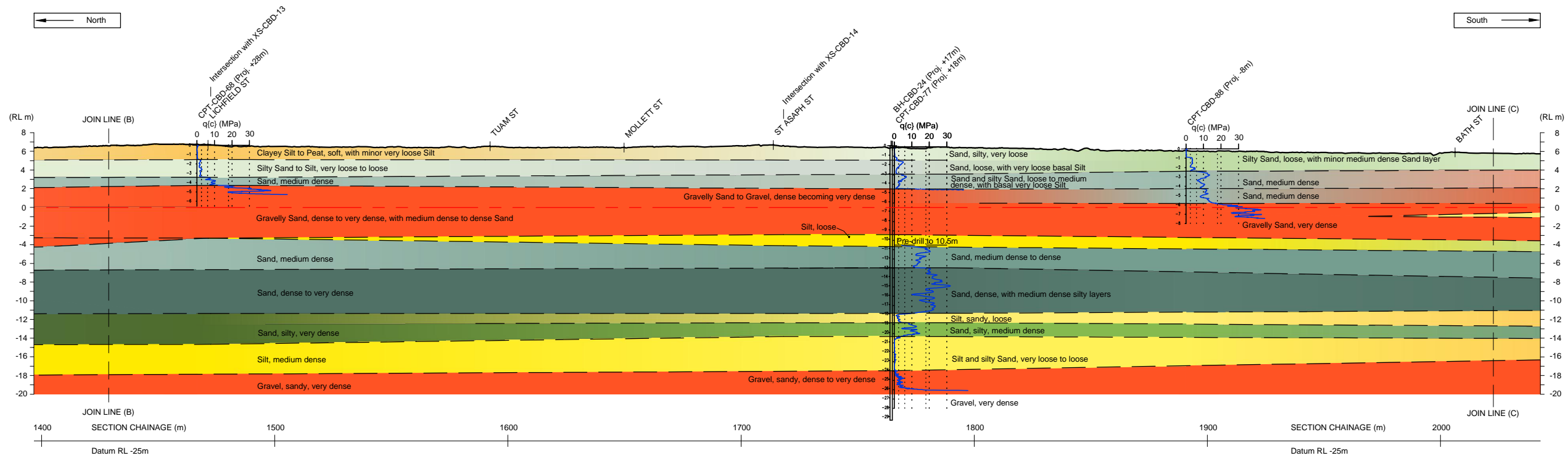
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	1:500 Vertical	
Sheet 1 of 3		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-03 (Colombo Street)

FIG. No. **C 7**

REV. **1**

XS-CBD-03 Final.dwg 9/12/2011 2:27:08 p.m.



Notes:

1. Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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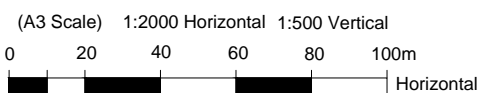
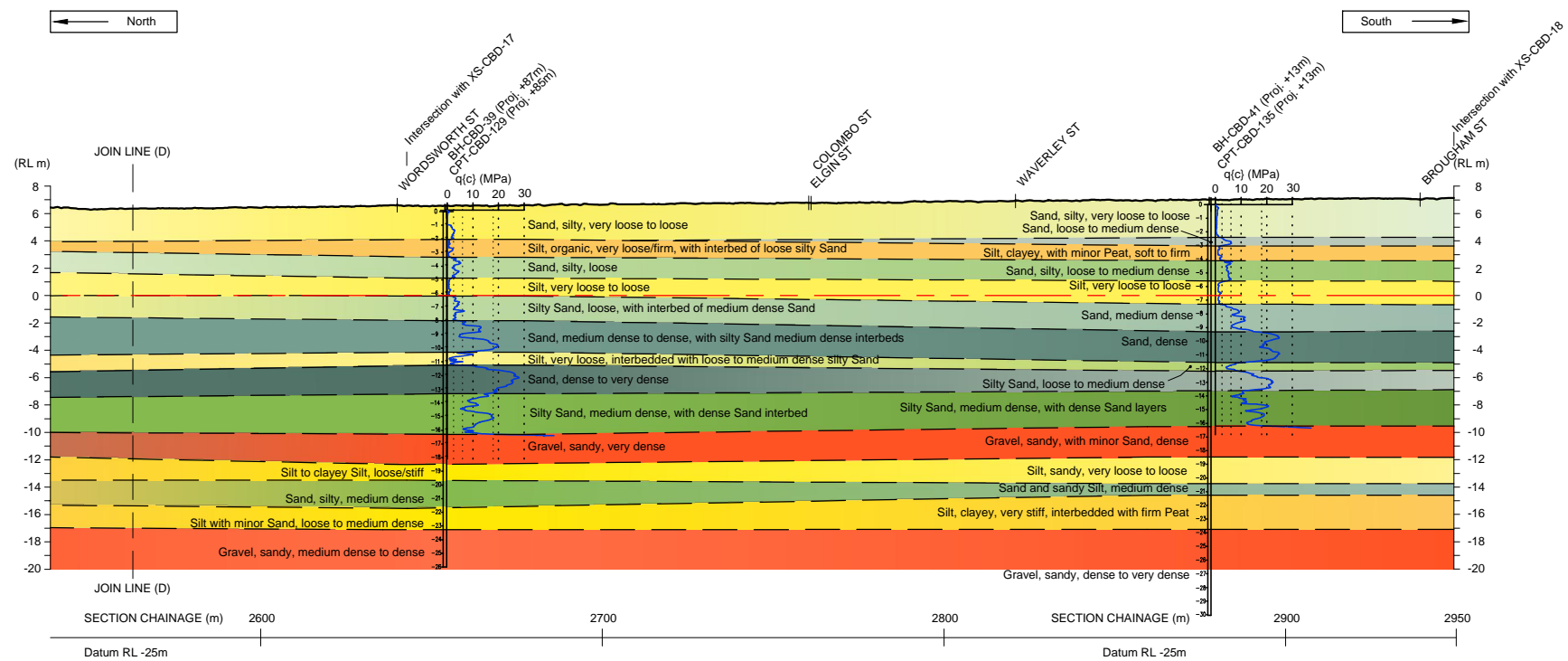


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CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-03 (Colombo Street)

FIG. No. **C 7**

REV. **1**



Notes:

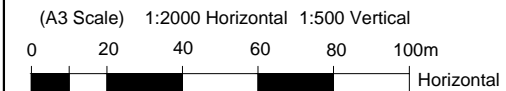
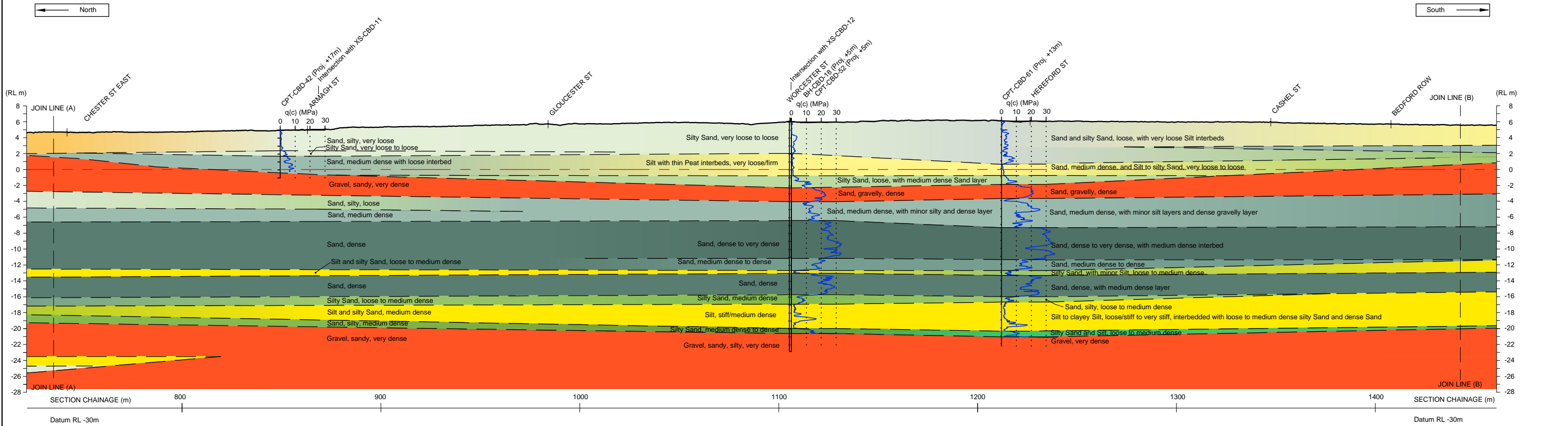
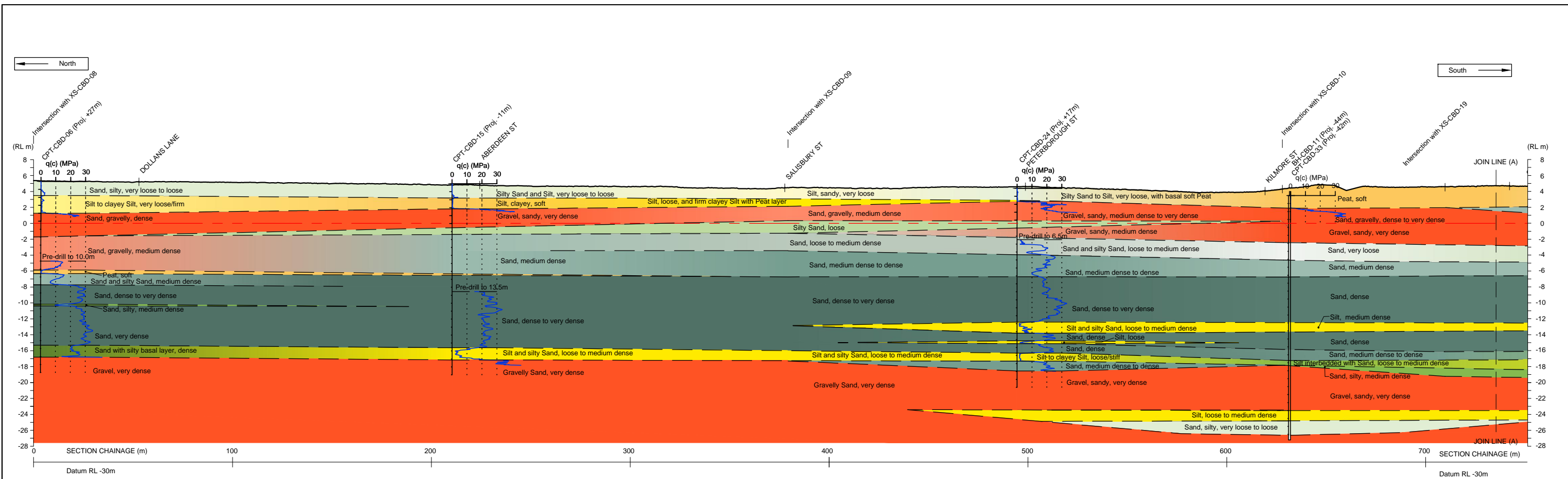
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3. No data available in top 1.2m due to services pre-drill.
4. Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
5. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
6. Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



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Sheet 3 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-03 (Colombo Street)		FIG. No. C 7	REV. 1
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- Notes:**
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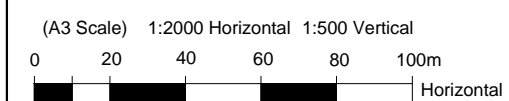
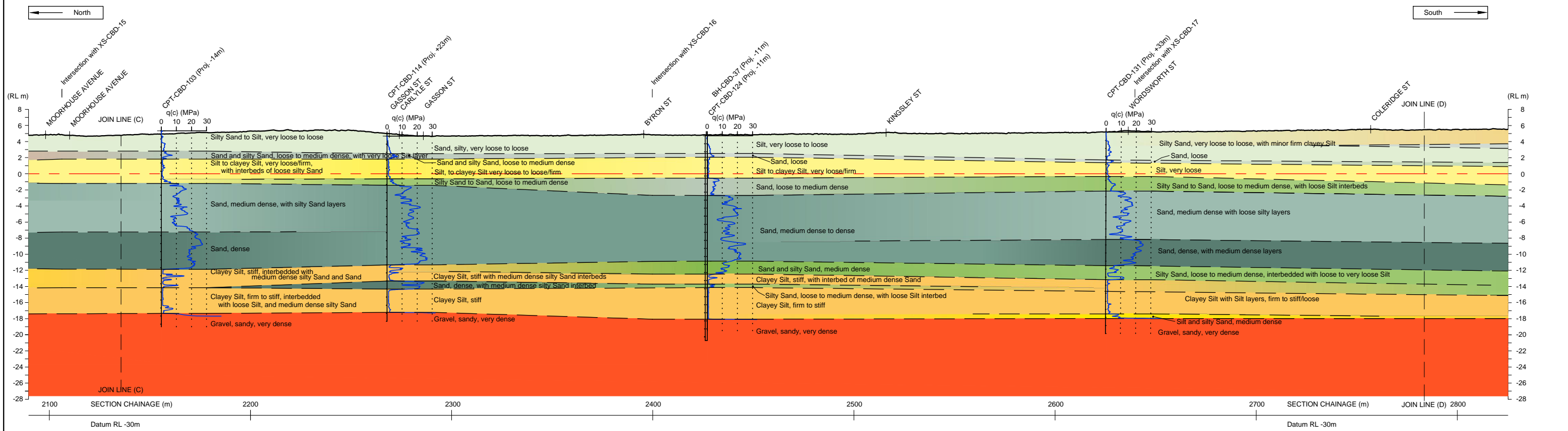
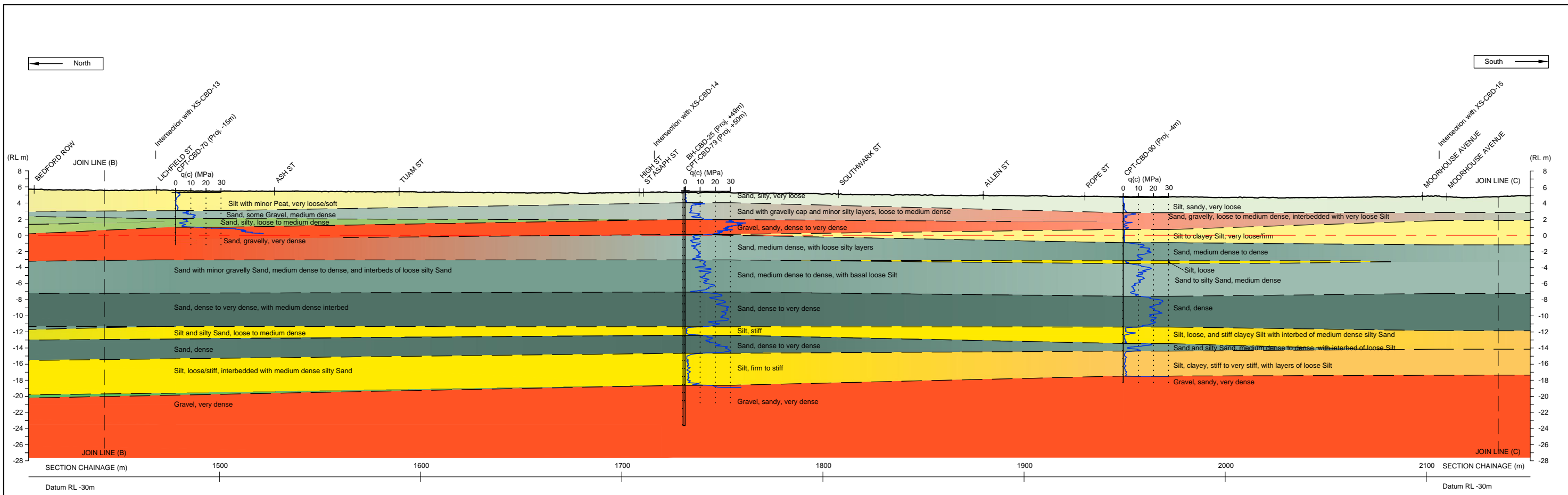
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Sheet 1 of 3		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GX5-CBD-04 (Madras Street)

FIG. No. **C 8**

REV. **1**

XS-CBD-04 Final.dwg 9/12/2011 2:24:51 p.m.



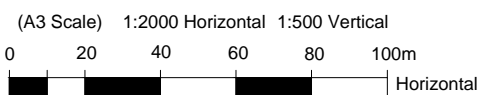
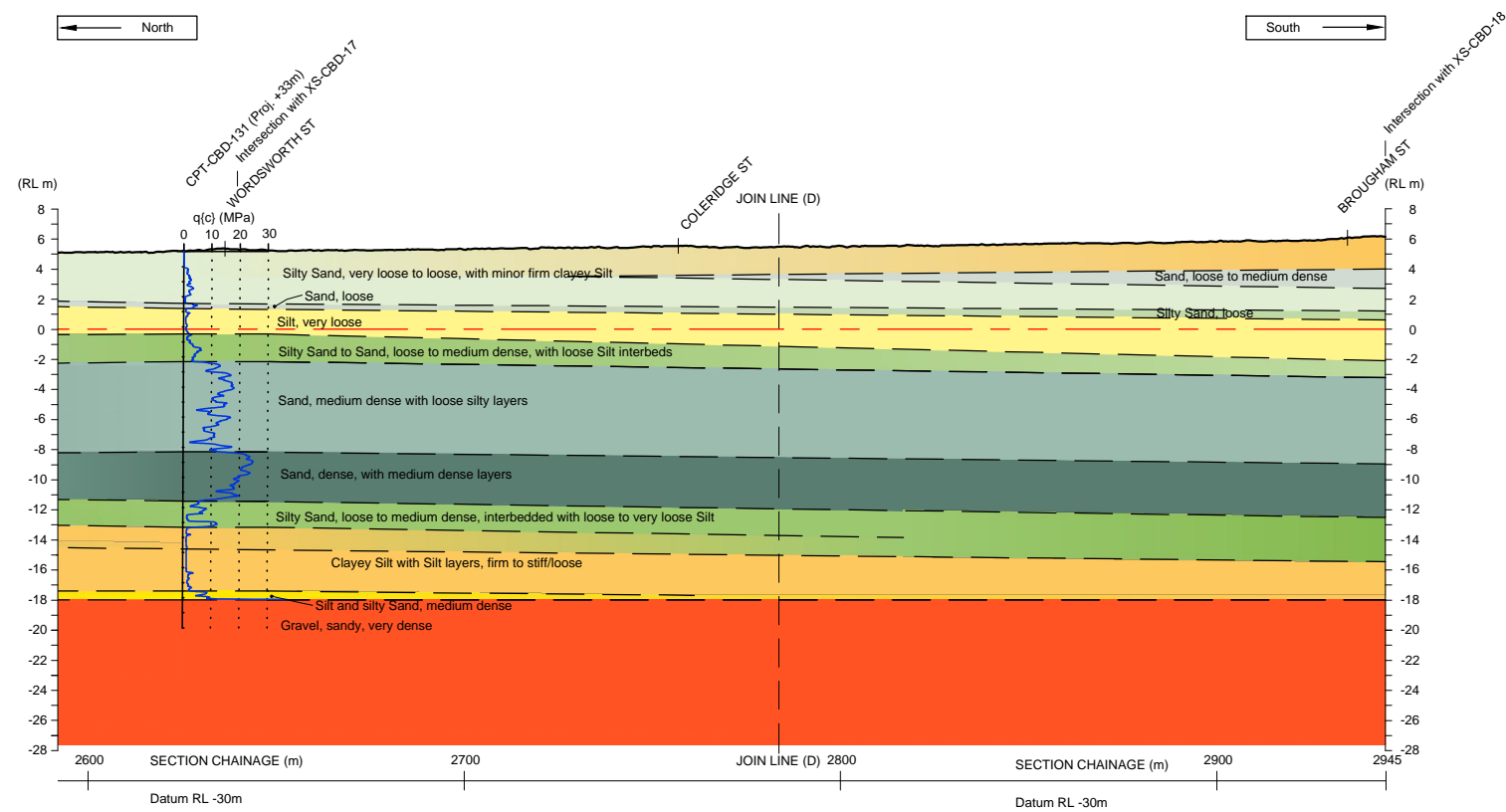
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Sheet 2 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GX-S-CBD-04 (Madras Street)		FIG. No. C 8	REV. 1
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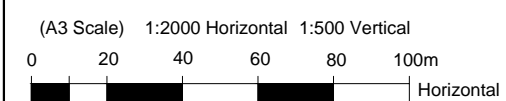
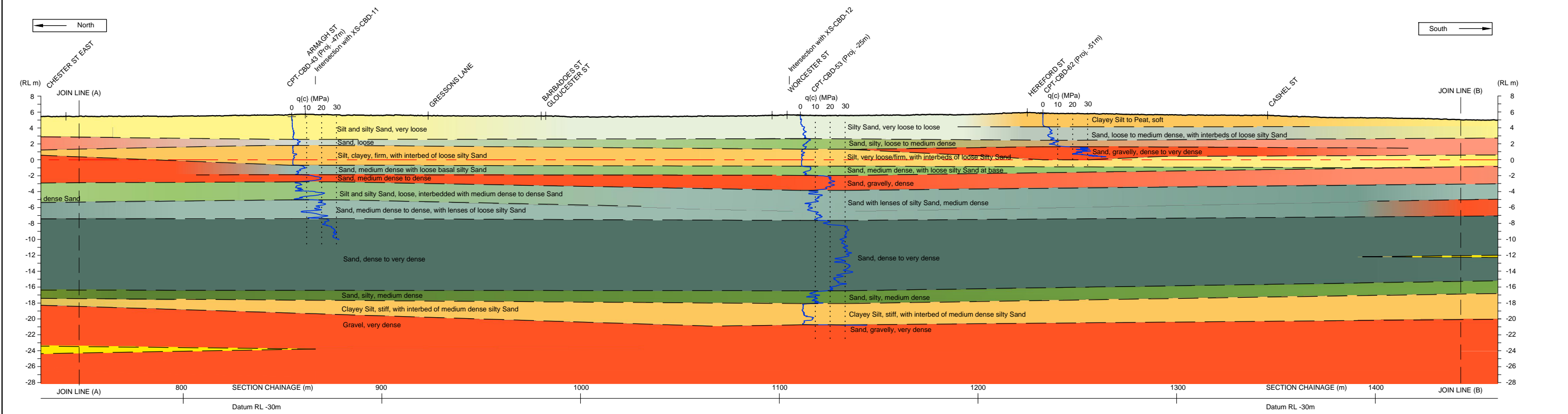
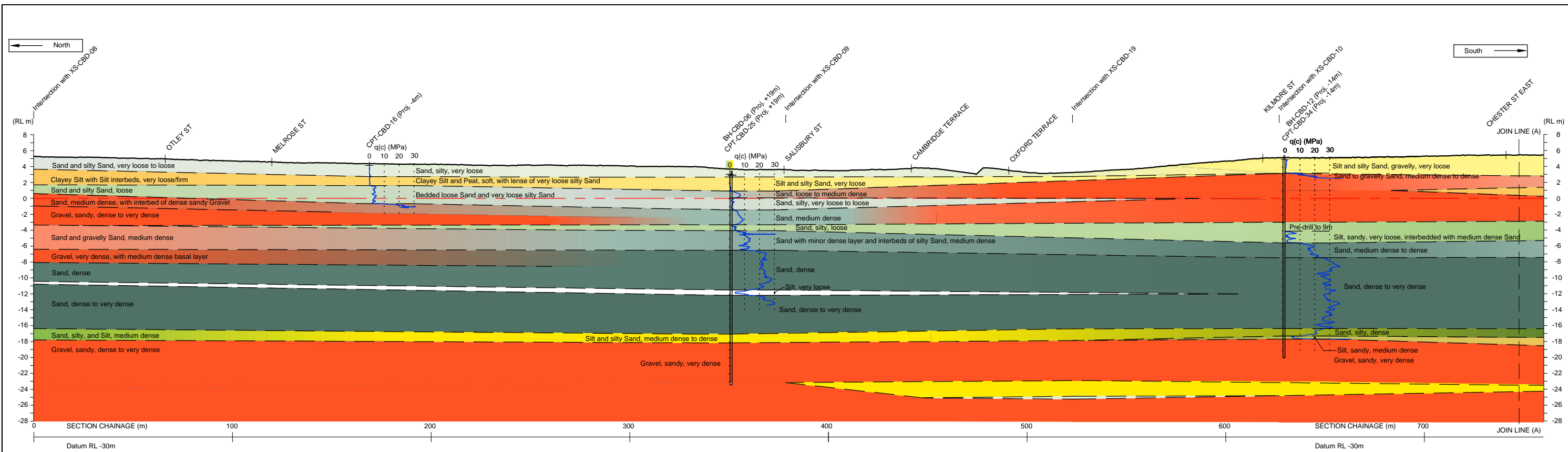
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Sheet 3 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-04 (Madras Street)		FIG. No. C 8	REV. 1
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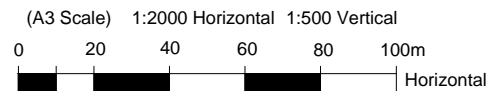
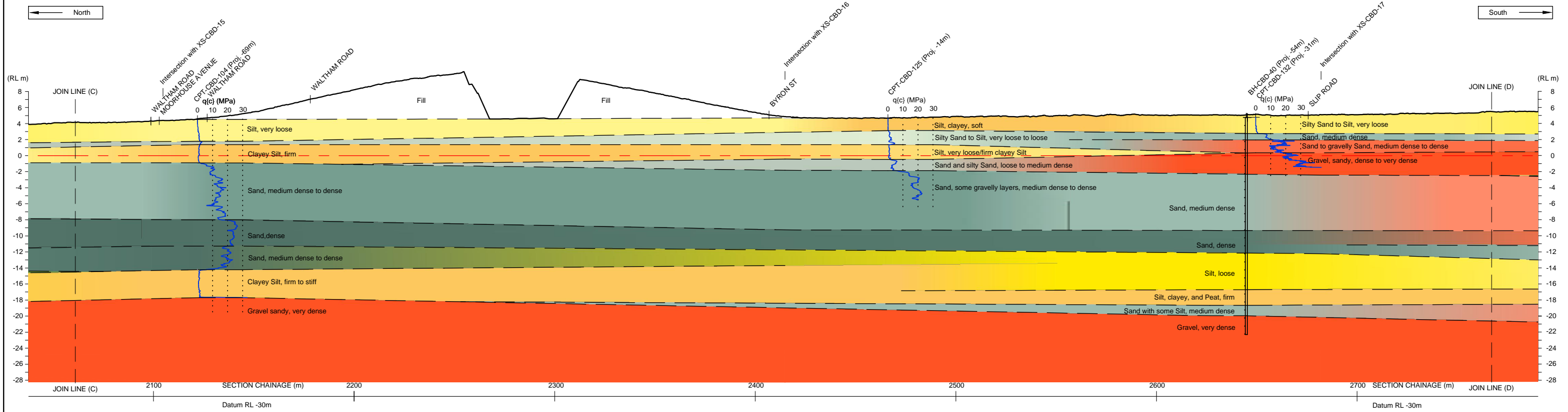
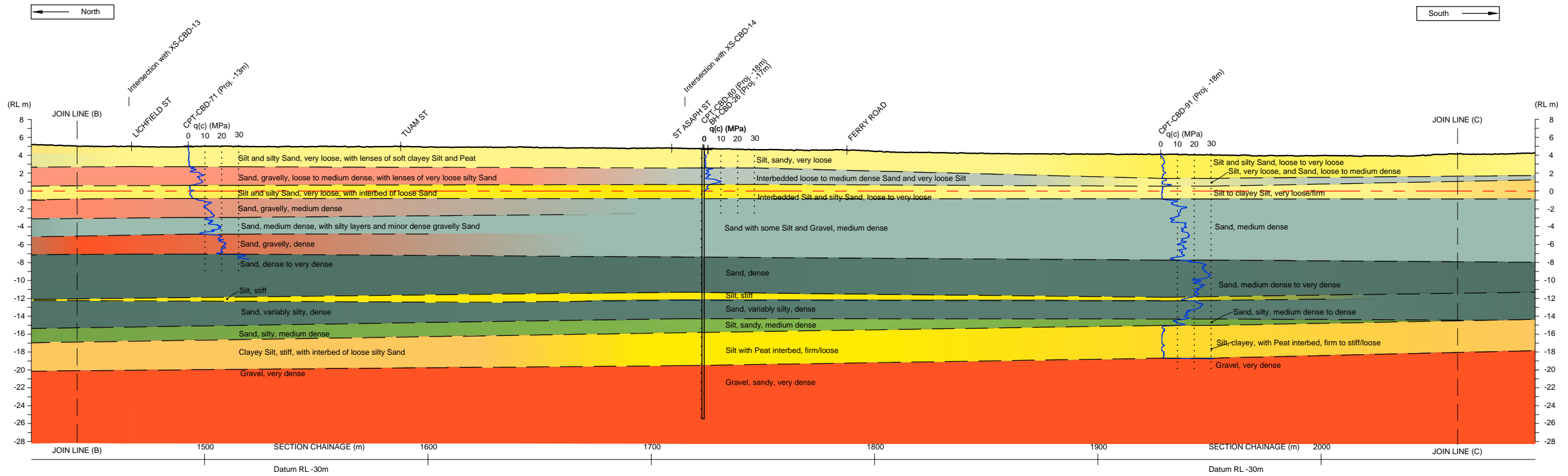
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Sheet 1 of 3		

CHRISTCHURCH CITY COUNCIL
 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GX5-CBD-05 (Barbadoes Street)

FIG. No. C 9

REV. 1

XS-CBD-05 Final.dwg XS-CBD-05 9/12/2011 2:17:40 p.m.



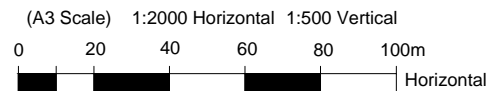
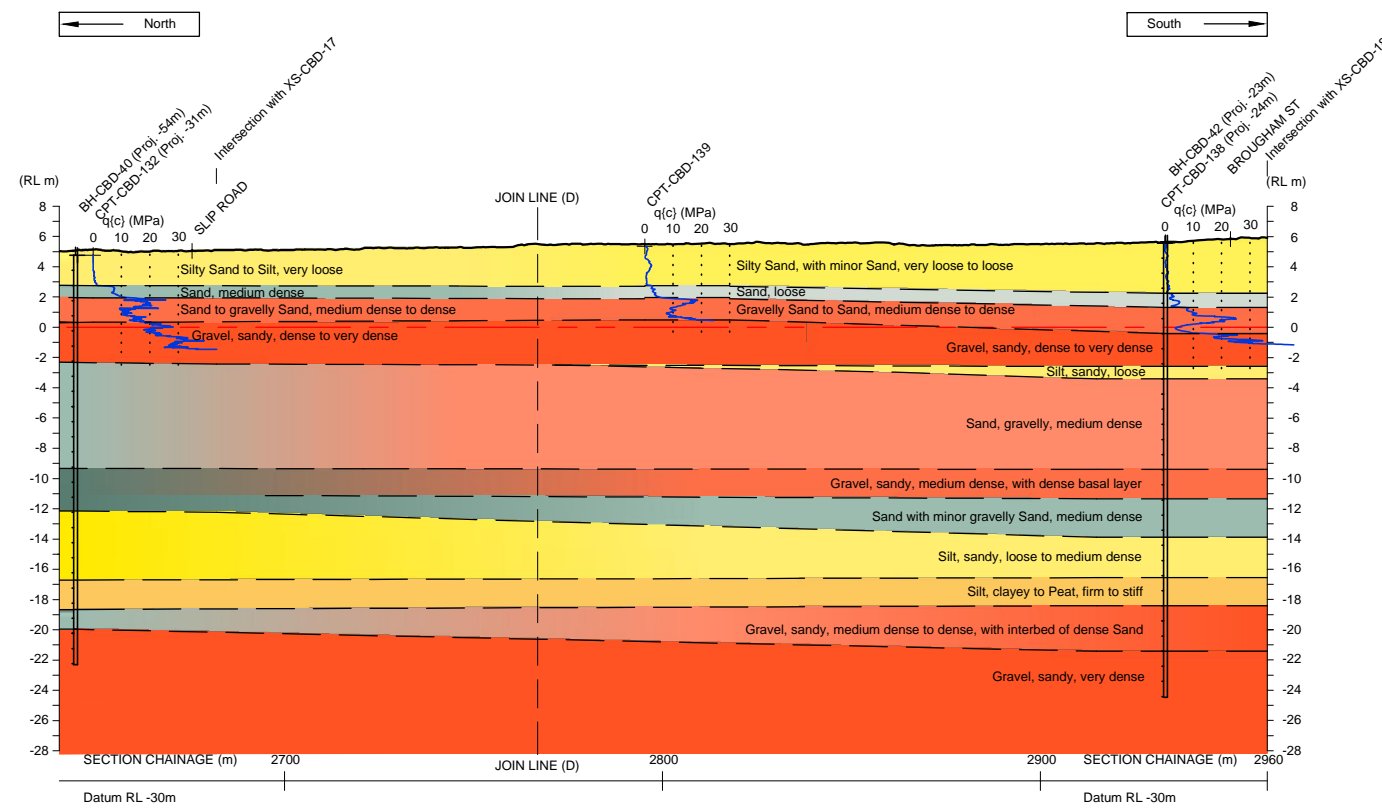
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Sheet 2 of 3		

CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-05 (Barbadoes Street)		FIG. No.	C 9	REV. 1
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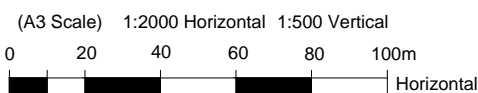
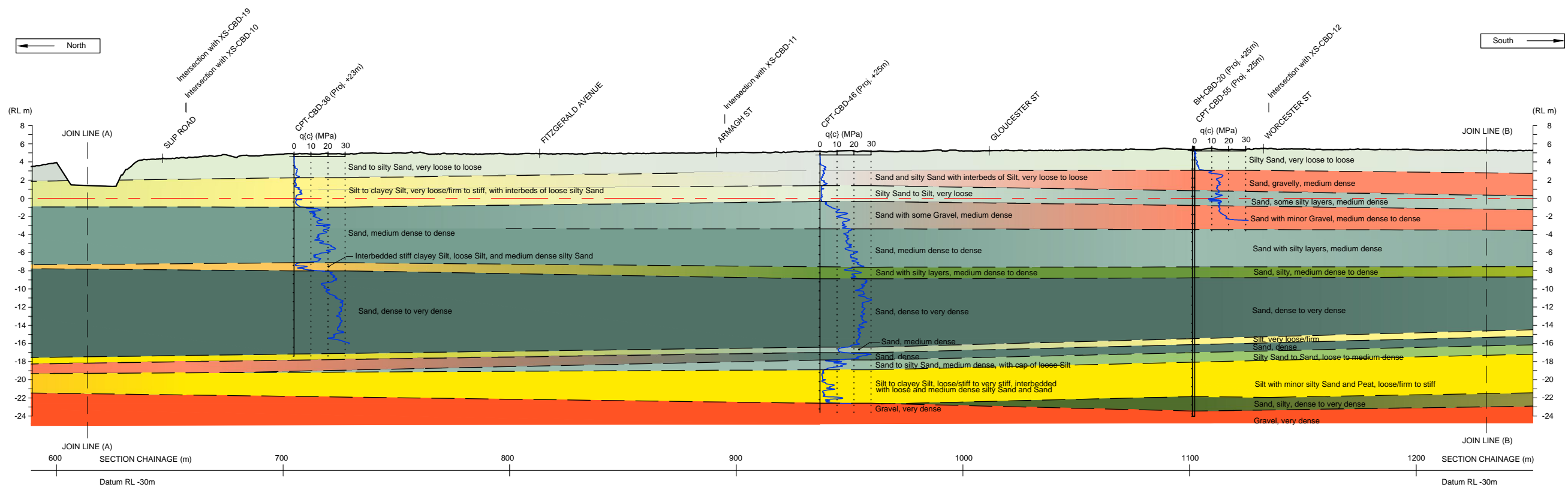
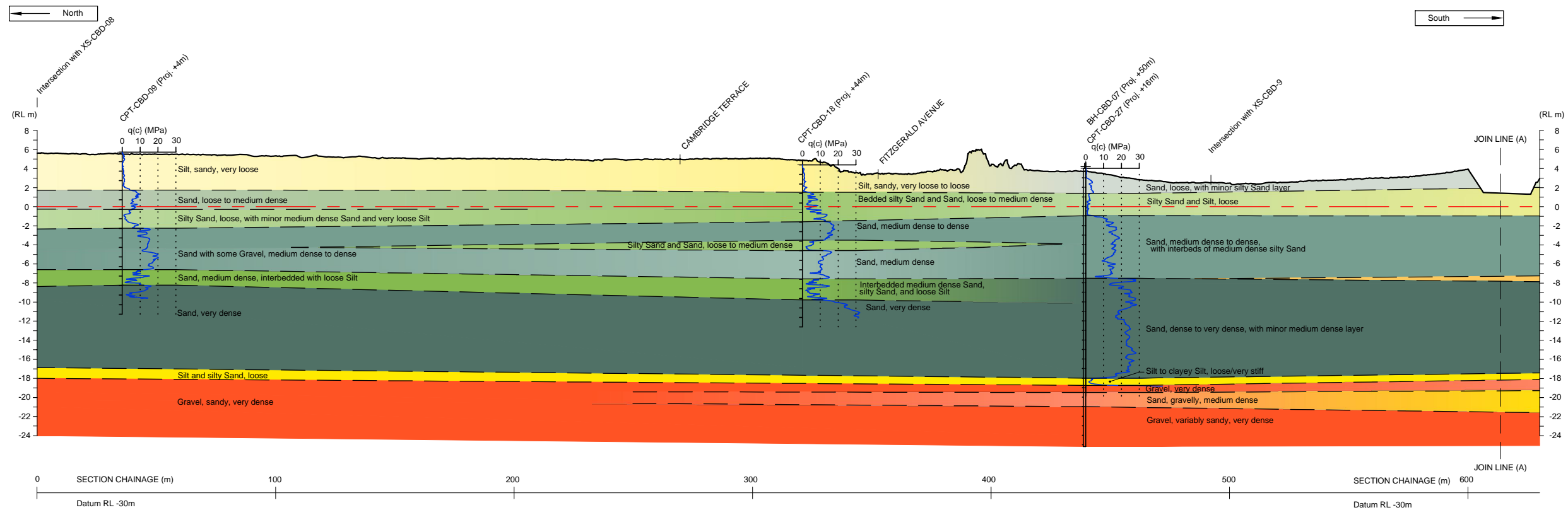


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Sheet 3 of 3		

<p>CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-05 (Barbadoes Street)</p>	<p>FIG. No. C 9</p>	<p>REV. 1</p>
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XS-CBD-06 Final.dwg 9/12/2011 2:06:59 p.m.

- Notes:**
- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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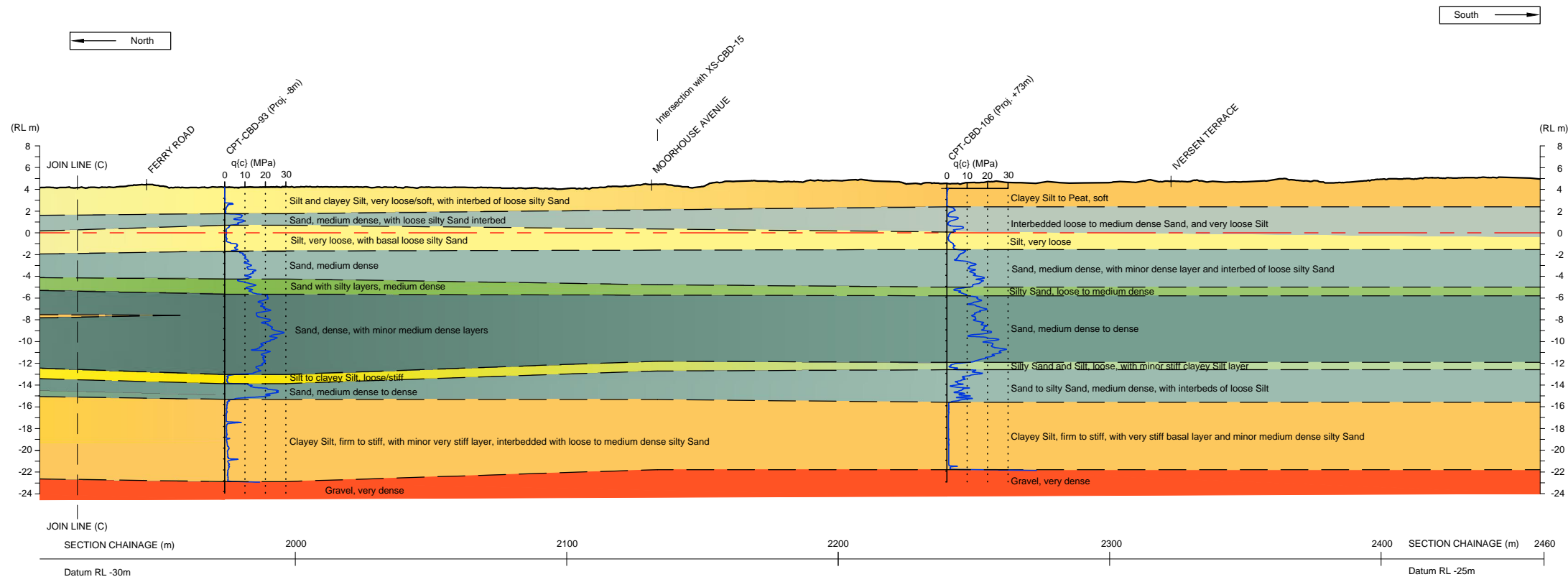
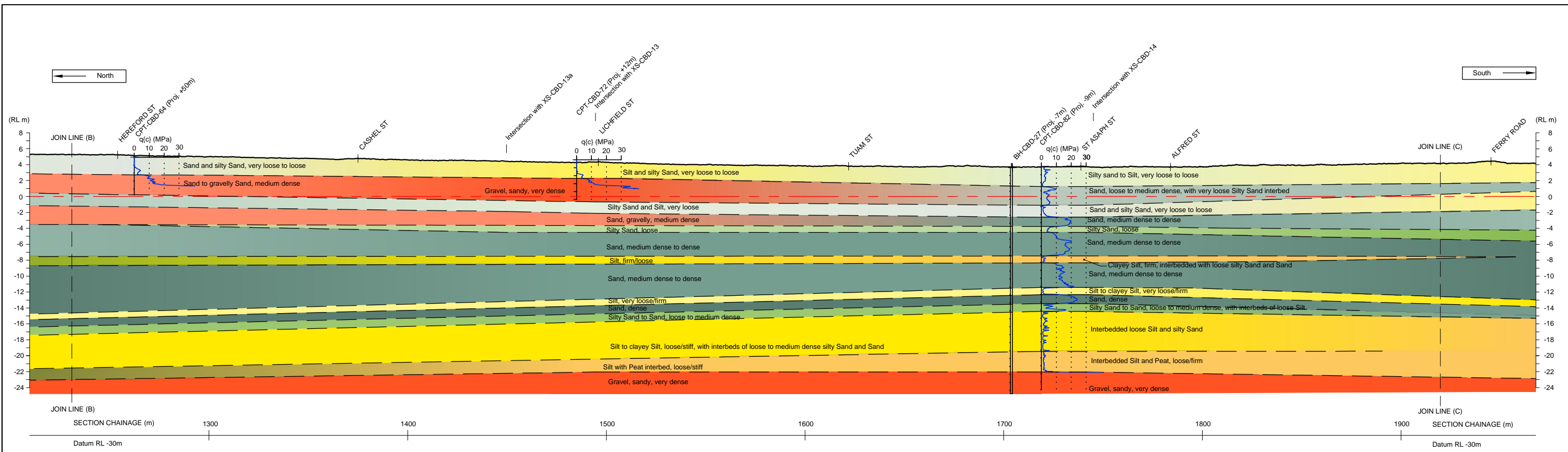


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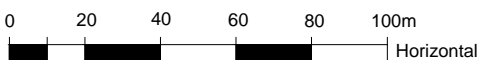
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Sheet 1 of 2		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-06 (Fitzgerald Avenue)

FIG. No.	C 10	REV.	1
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(A3 Scale) 1:2000 Horizontal 1:500 Vertical



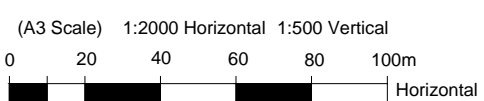
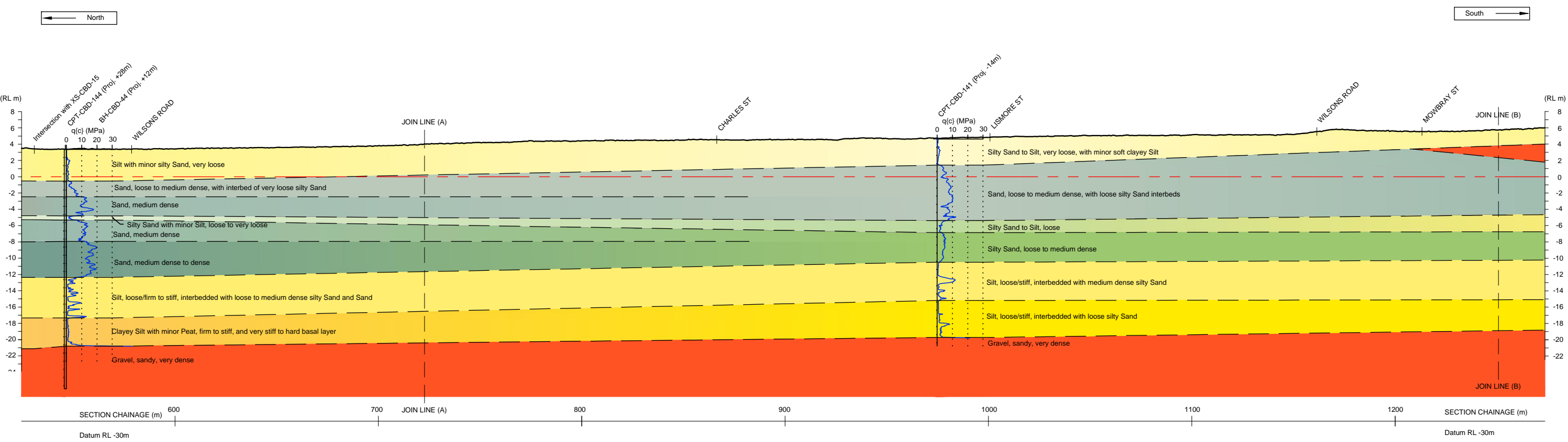
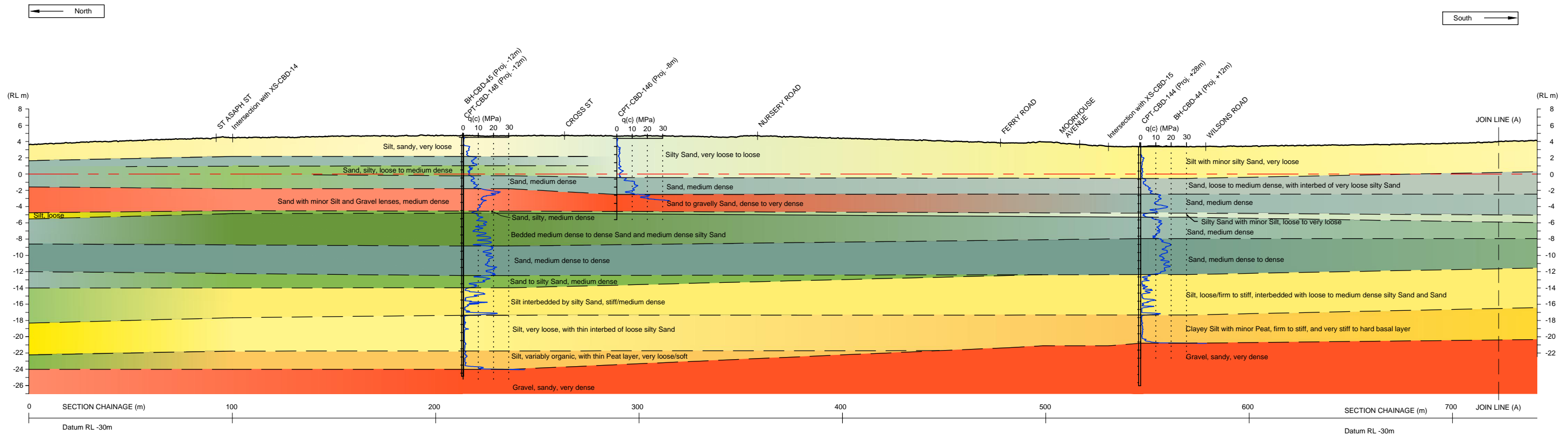
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Sheet 2 of 2		FIG. No.

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-06 (Fitzgerald Avenue)

C 10
 REV. 1



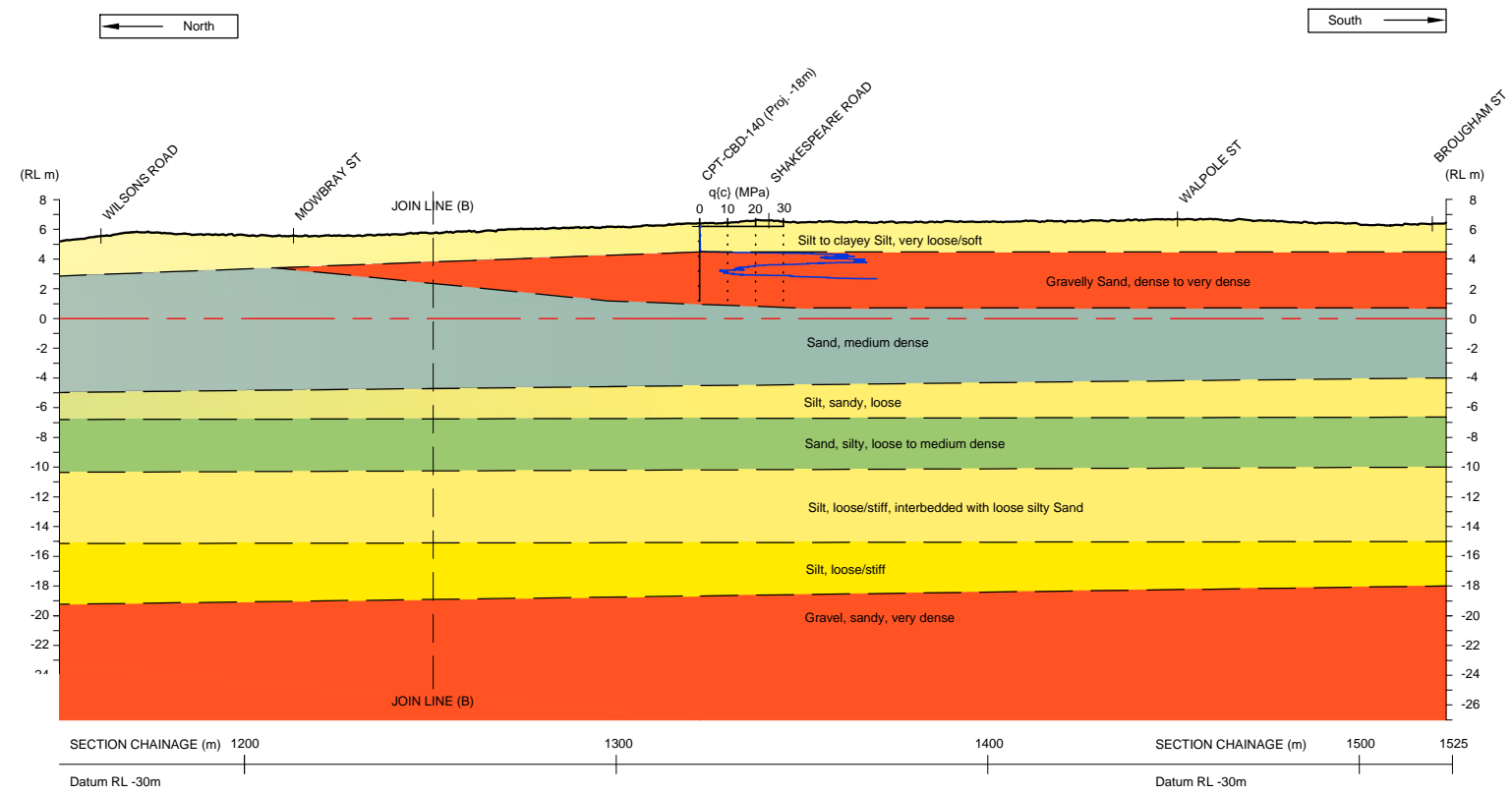
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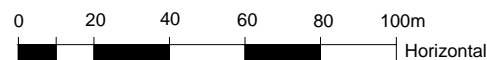
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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GX5-CBD-07 (Nursery Road-Wilsons Road)		FIG. No. C 11	REV. 1
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XS-CBD-07 Final.dwg XS-CBD-07 9/12/2011 2:05:19 p.m.



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Notes:

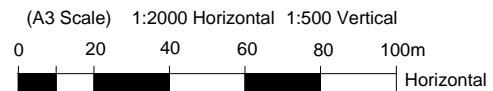
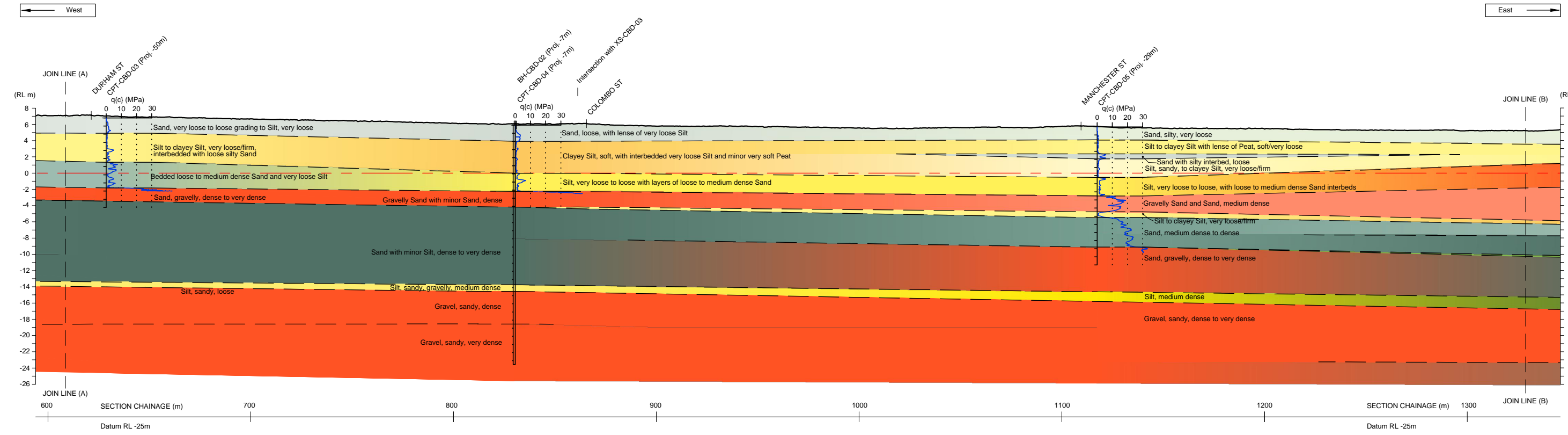
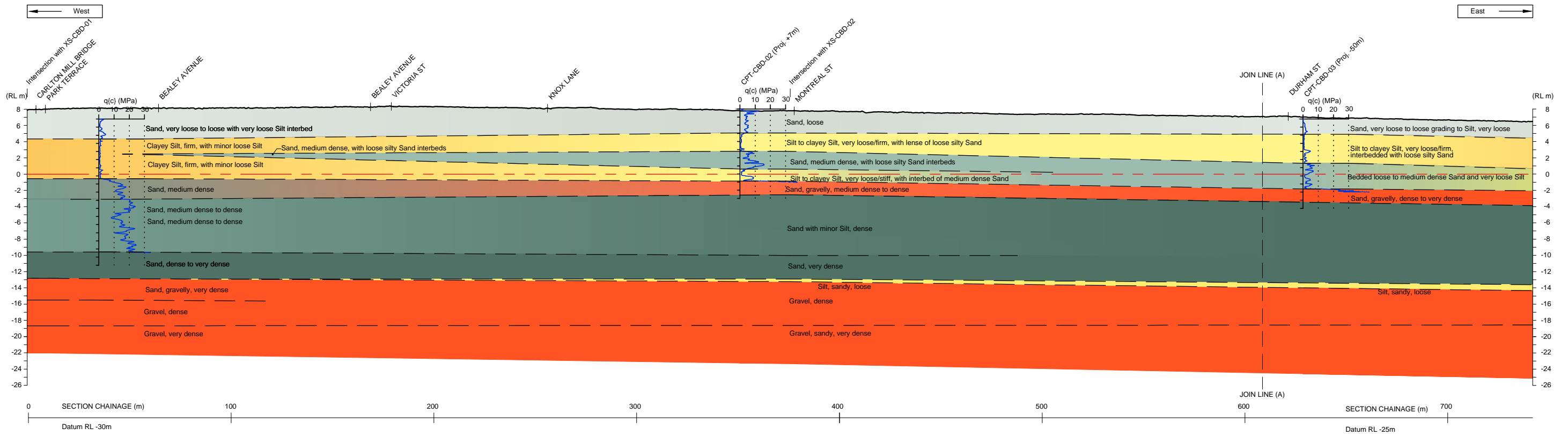
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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-07 (Nursary Road-Wilsons Road)	FIG. No. C 11	REV. 1
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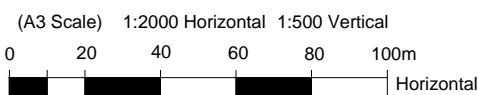
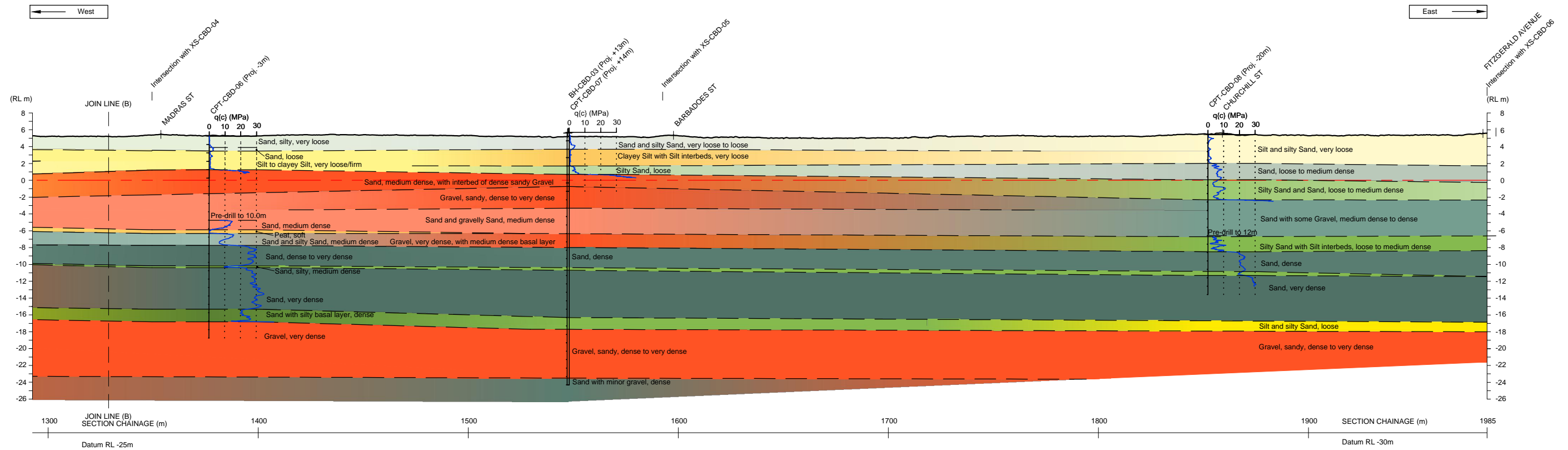
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GEOLOGICAL INTERPRETATIVE REPORT	
CHRISTCHURCH CENTRAL CITY	
GXS-CBD-08 (Bealey Avenue)	
FIG. No.	C 12
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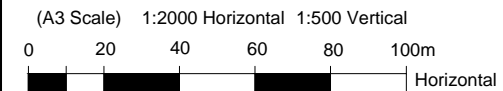
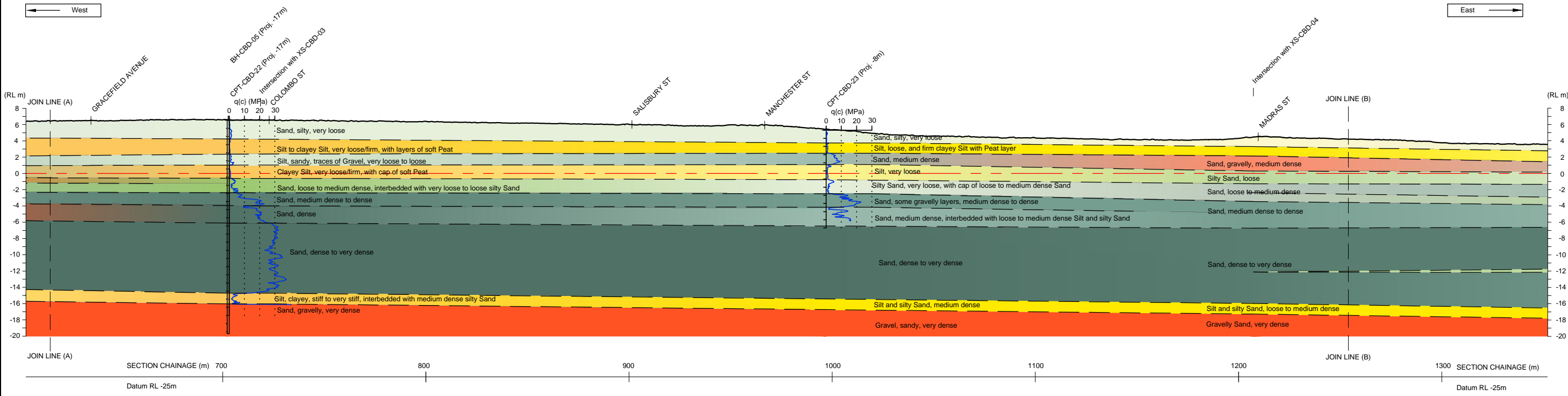
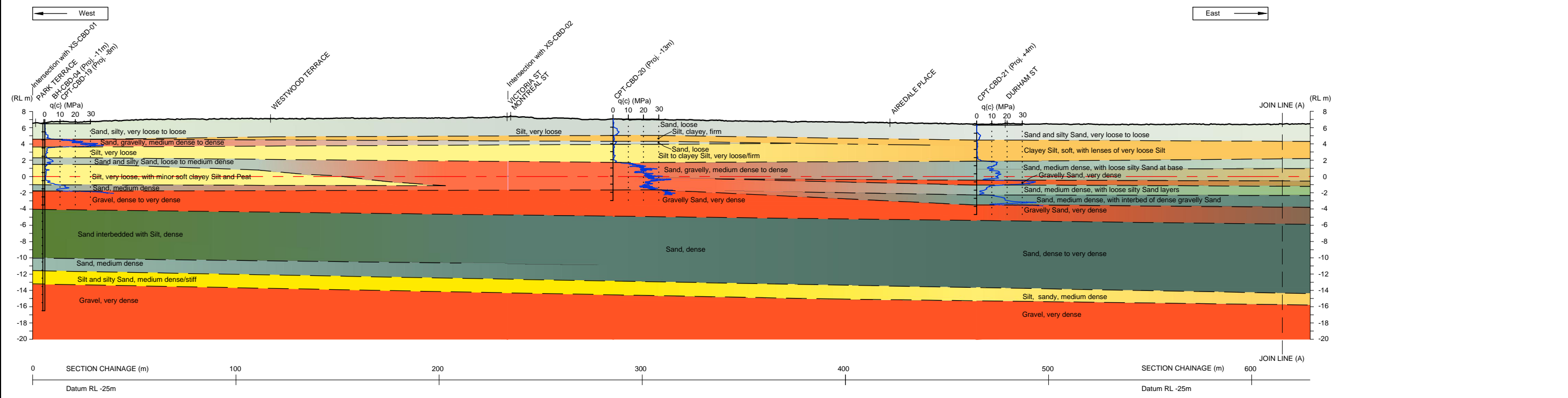
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Sheet 2 of 2		

CHRISTCHURCH CITY COUNCIL	
GEOLOGICAL INTERPRETATIVE REPORT	
CHRISTCHURCH CENTRAL CITY	
GXS-CBD-08 (Bealey Avenue)	
FIG. No.	C 12
REV.	1



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- Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



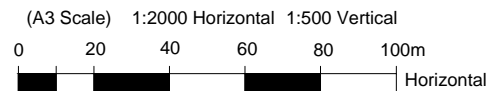
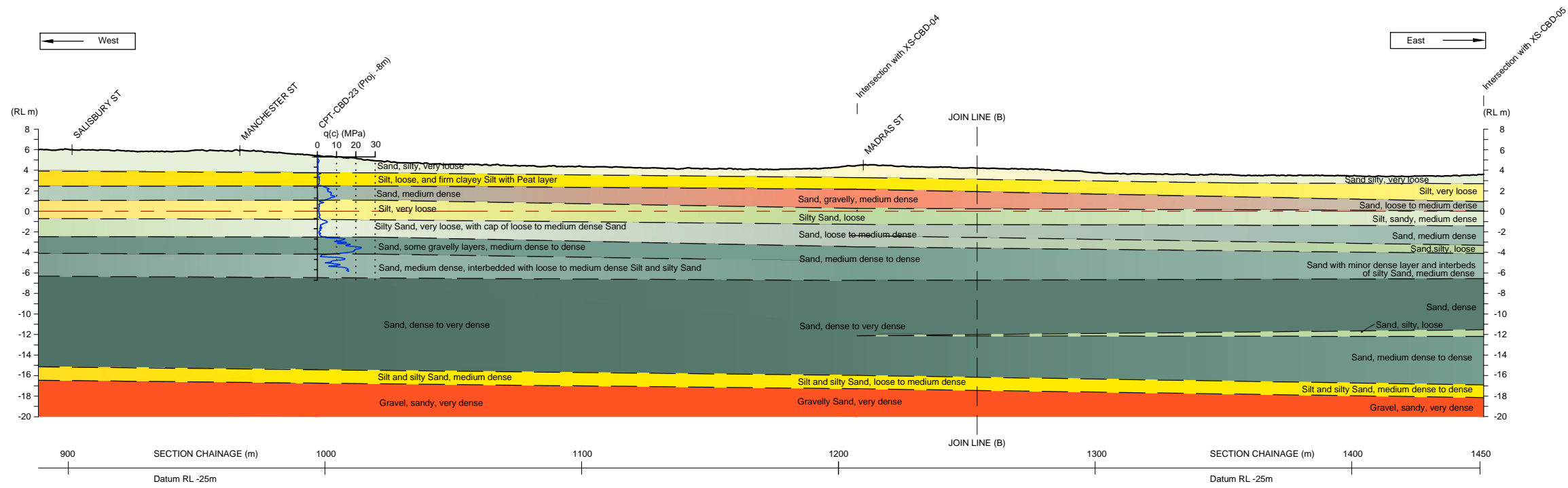
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Sheet 1 of 2		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-09 (Salisbury Street)

FIG. No. **C 13**

REV. **1**

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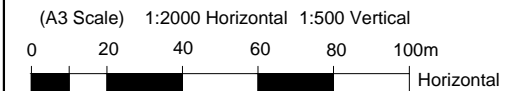
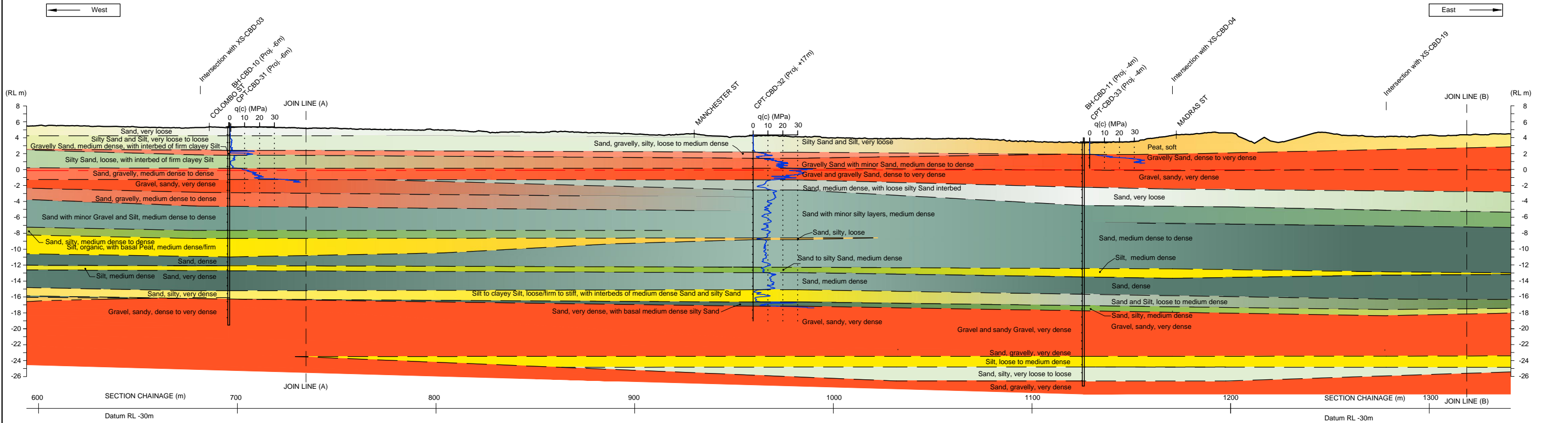
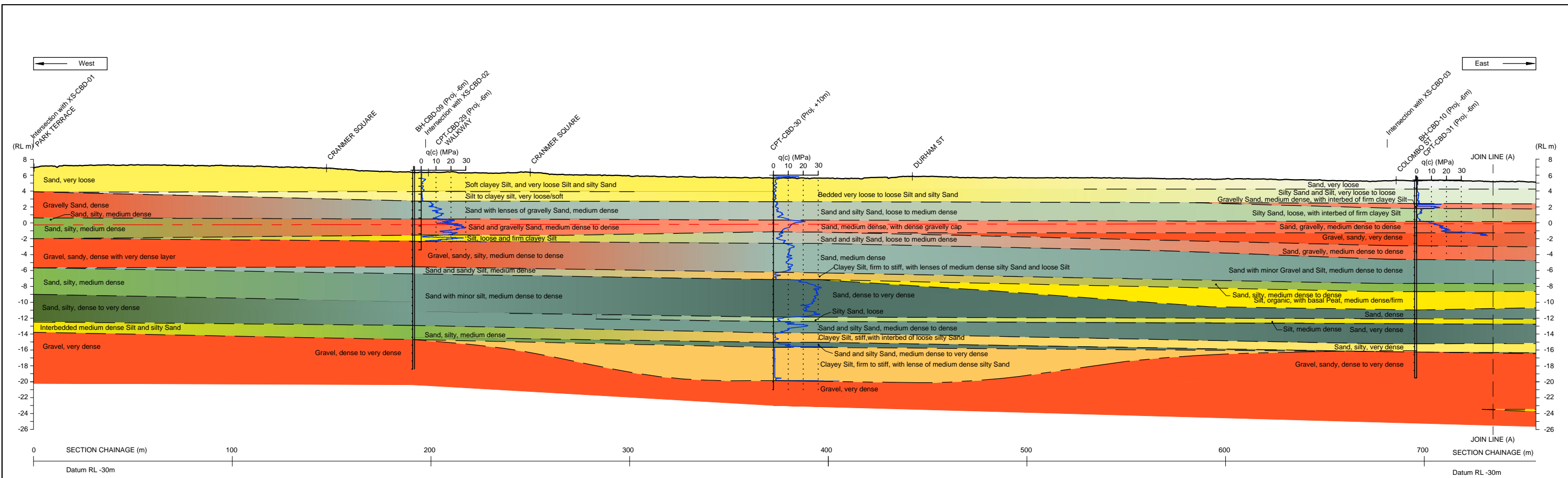
Notes:

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4. Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
5. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
6. Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-09 (Salisbury Street)		FIG. No. C 13	REV. 1
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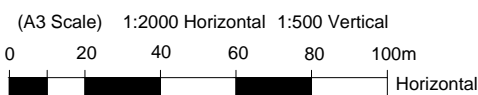
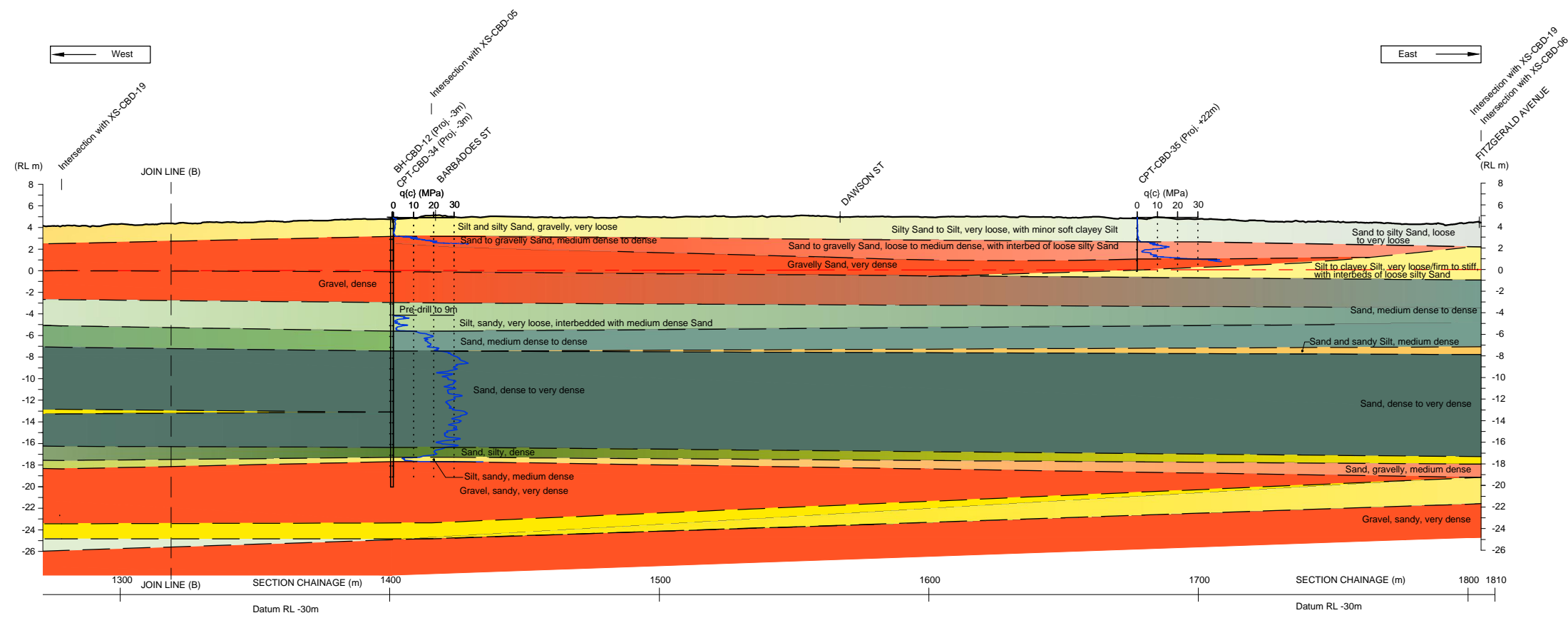
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CHRISTCHURCH CITY COUNCIL	
GEOLOGICAL INTERPRETATIVE REPORT	
CHRISTCHURCH CENTRAL CITY	
GX-CBD-10 (Kilmore Street)	
FIG. No.	C 14
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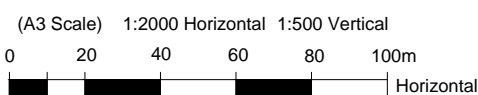
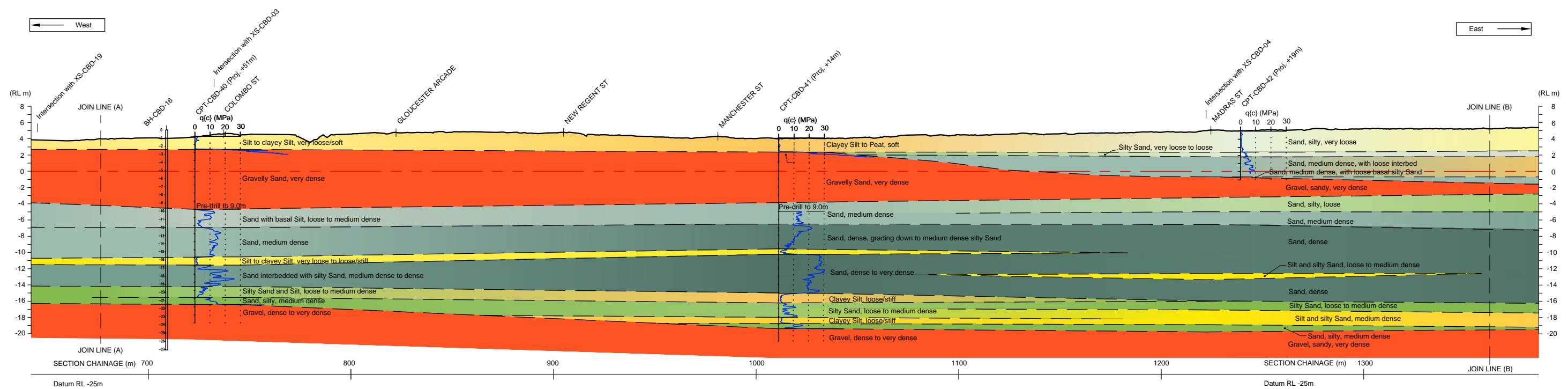
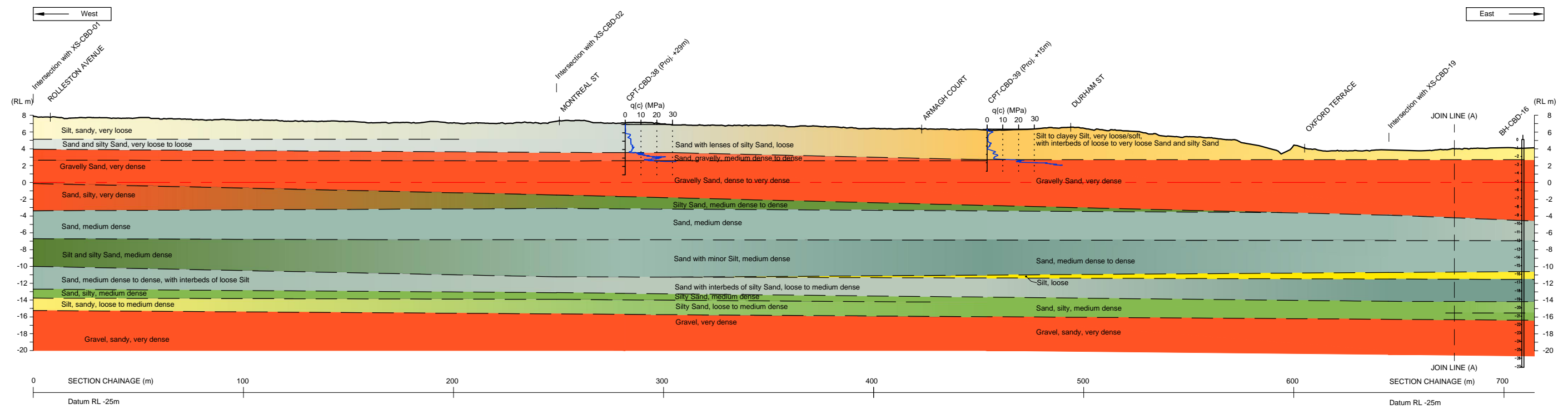


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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-10 (Kilmore Street)		FIG. No. C 14	REV. 1
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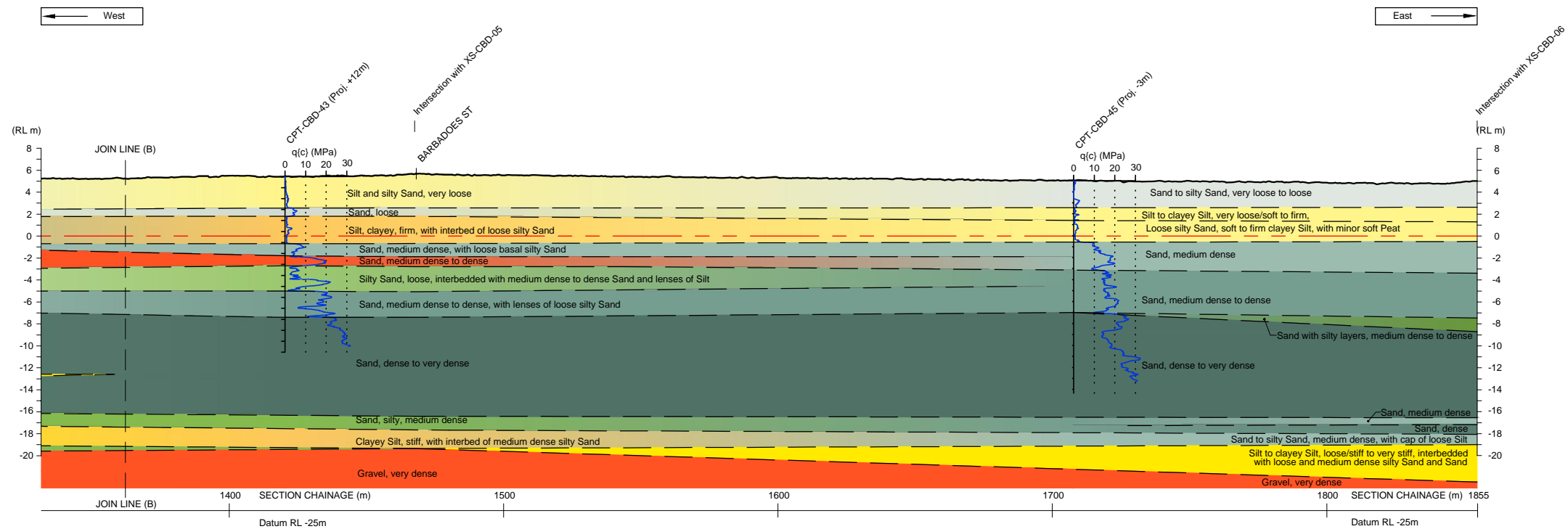
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CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GX-CBD-11 (Armagh Street)

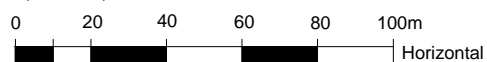
FIG. No.

C 15

REV. 1



(A3 Scale) 1:2000 Horizontal 1:500 Vertical



Notes:

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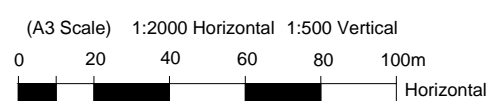
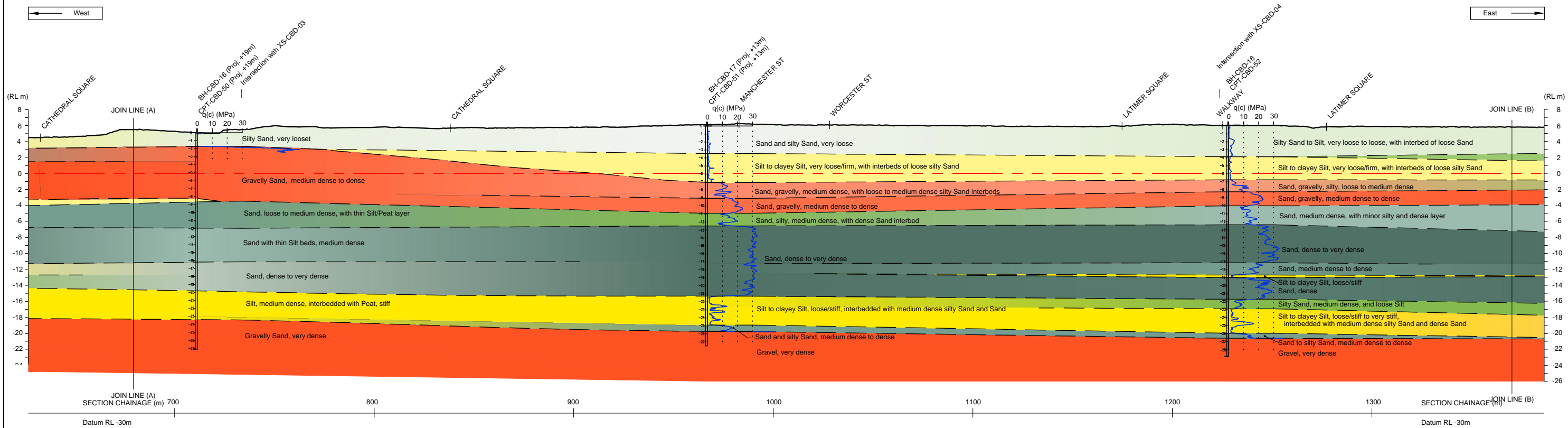
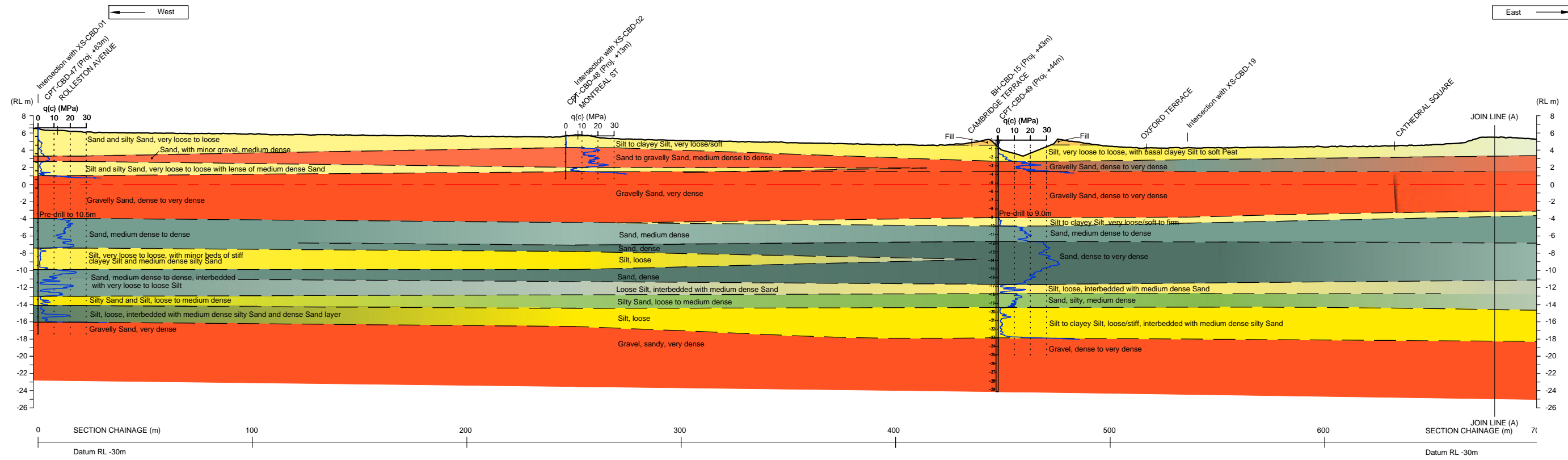
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Sheet 2 of 2

CHRISTCHURCH CITY COUNCIL
 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GXS-CBD-11 (Armagh Street)

FIG. No.	C 15	REV.	1
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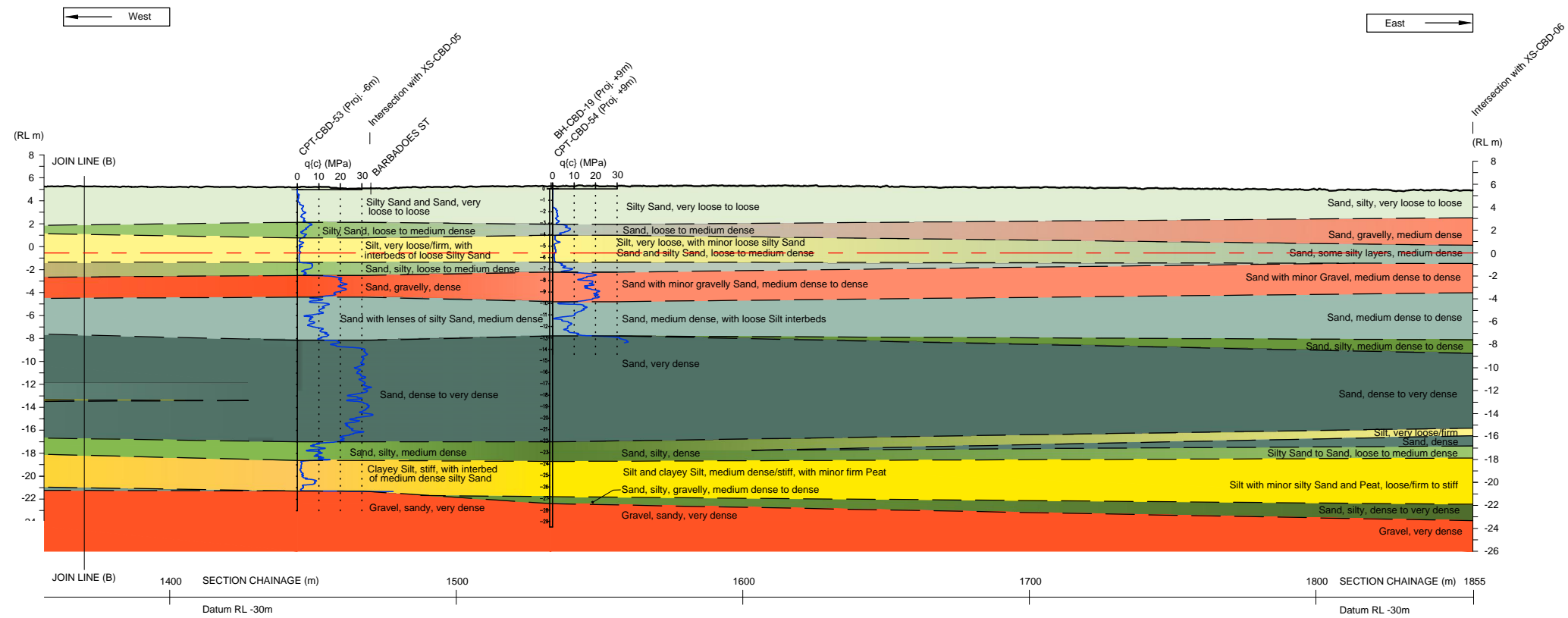
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CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-12 (Worcester Street)

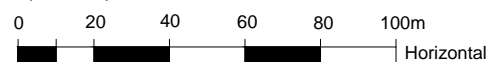
FIG. No. **C 16**

REV. **1**

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(A3 Scale) 1:2000 Horizontal 1:500 Vertical



Notes:

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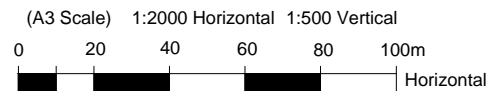
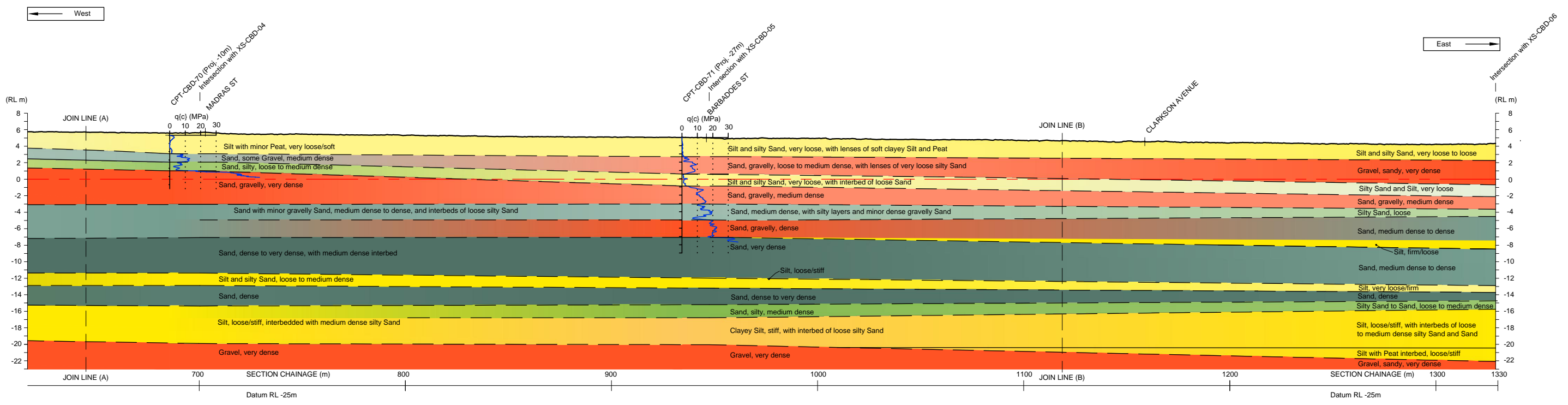
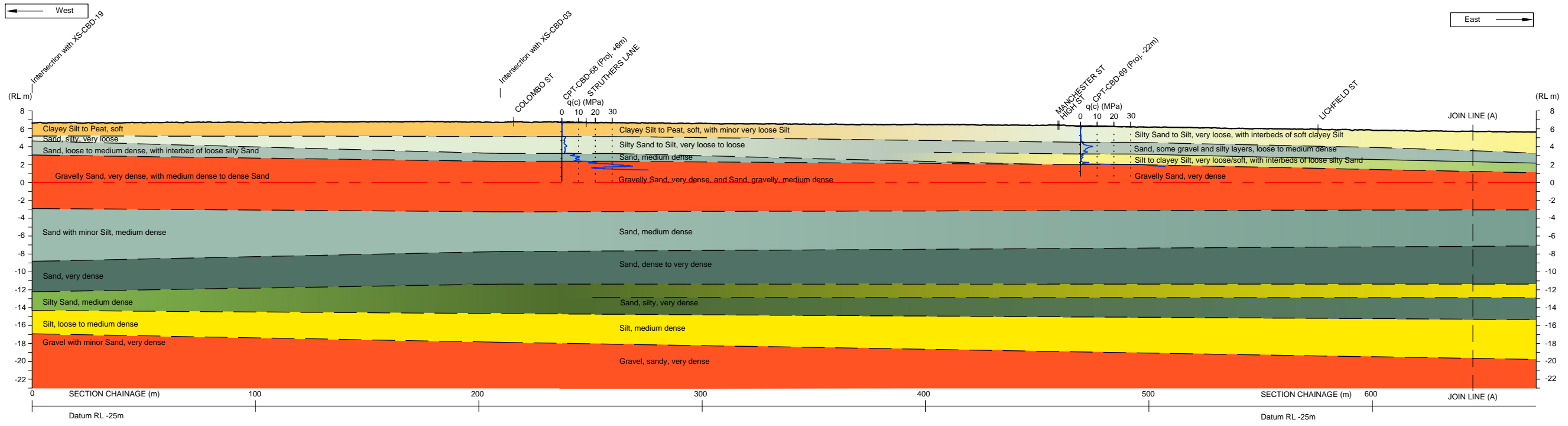
Sheet 2 of 2

FIG. No.

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-12 (Worcester Street)

C 16

REV.
1



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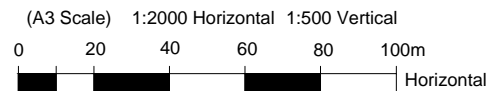
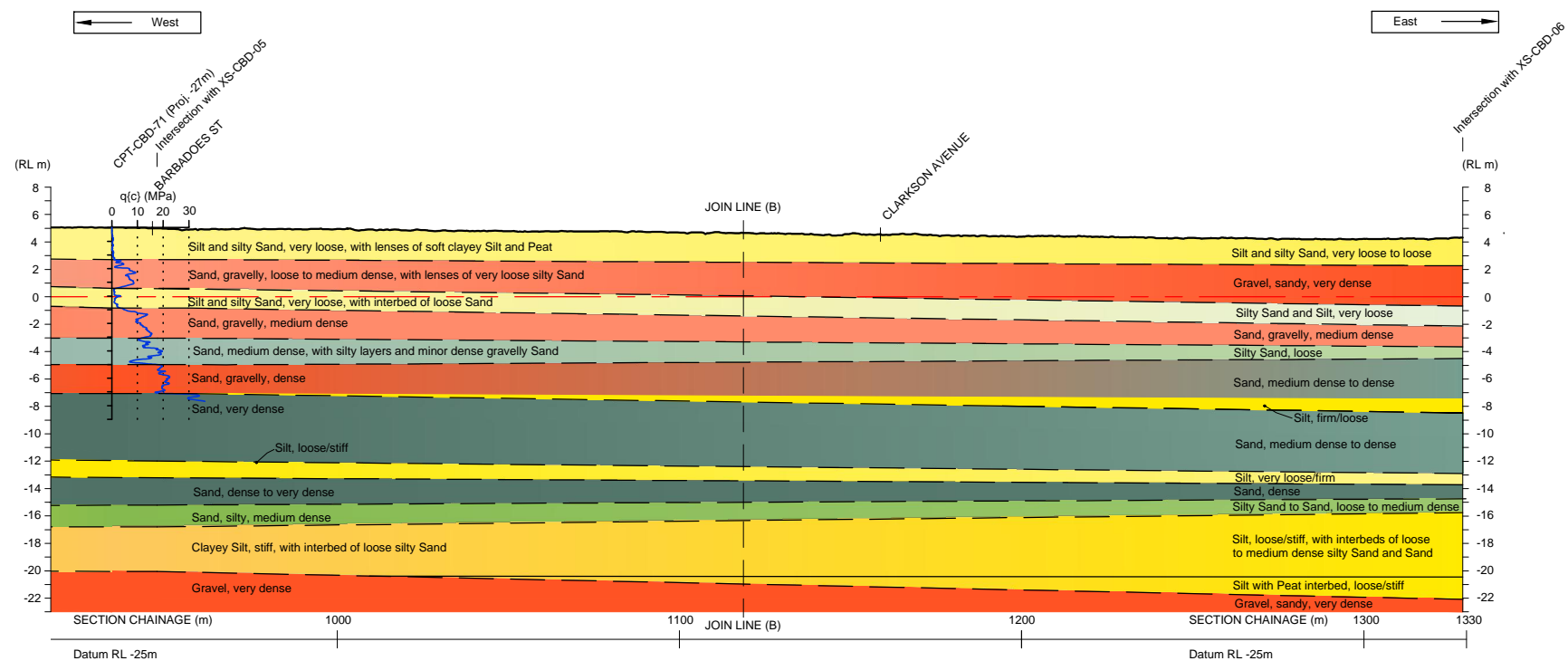
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CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-13 (Lichfield Street)

FIG. No. **C 17**

REV. **1**

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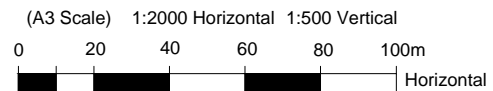
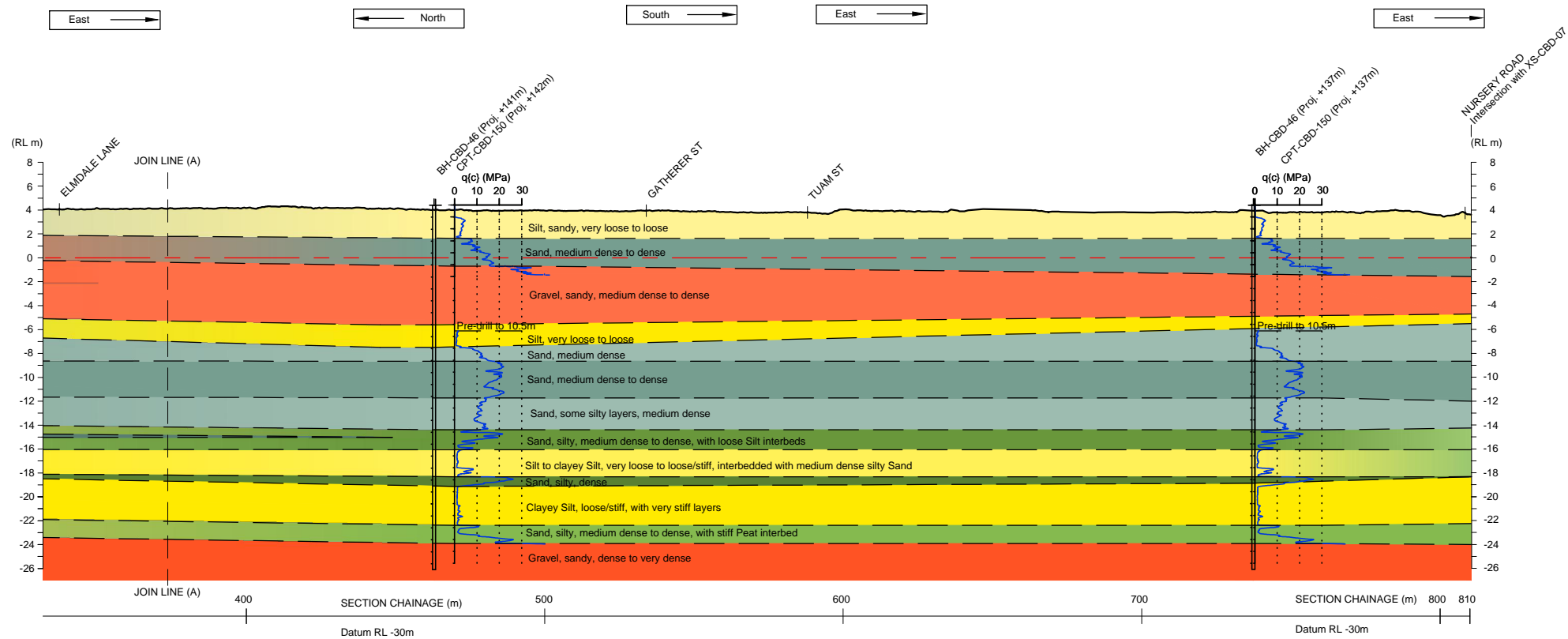
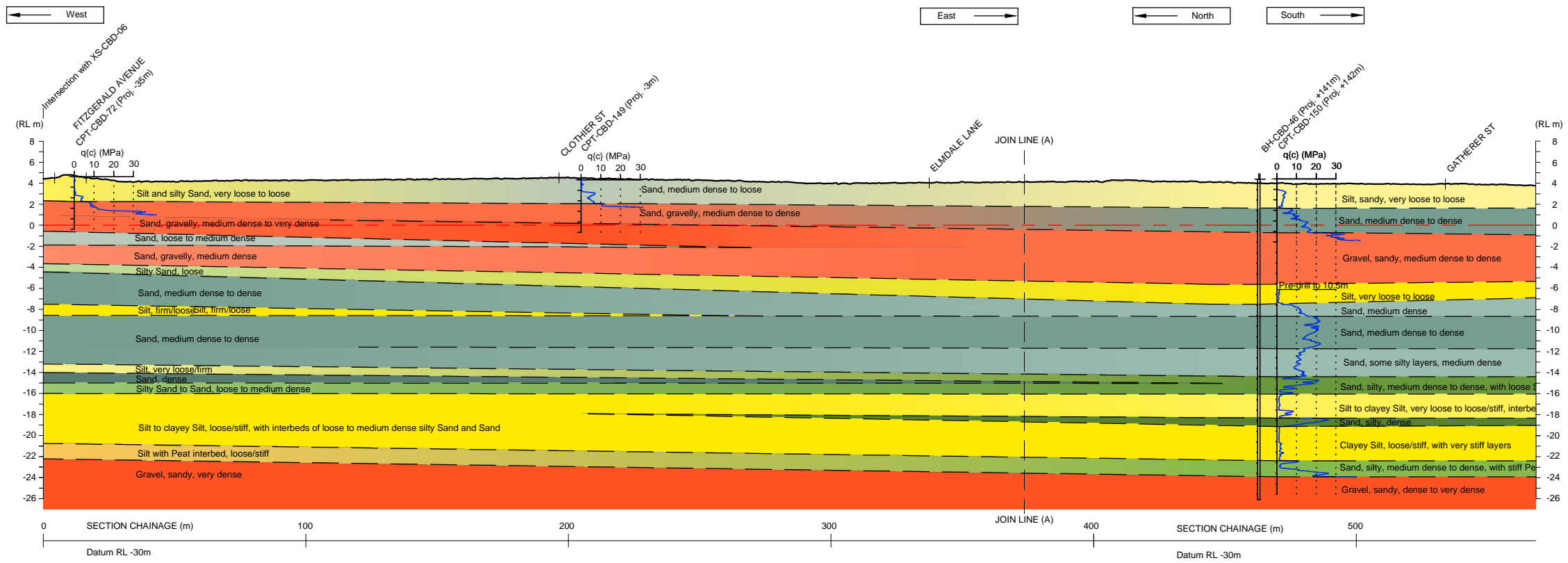


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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GX-S-CBD-13 (Lichfield Street)		FIG. No. C 17	REV. 1
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- Notes:**
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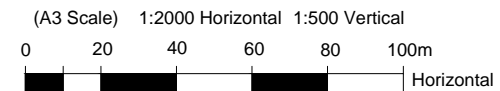
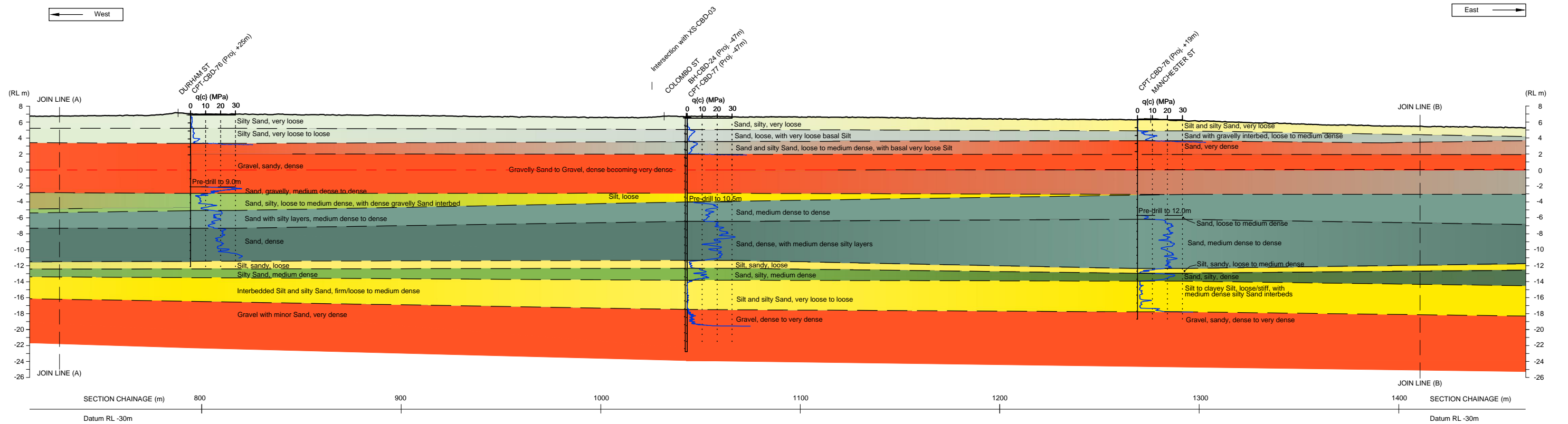
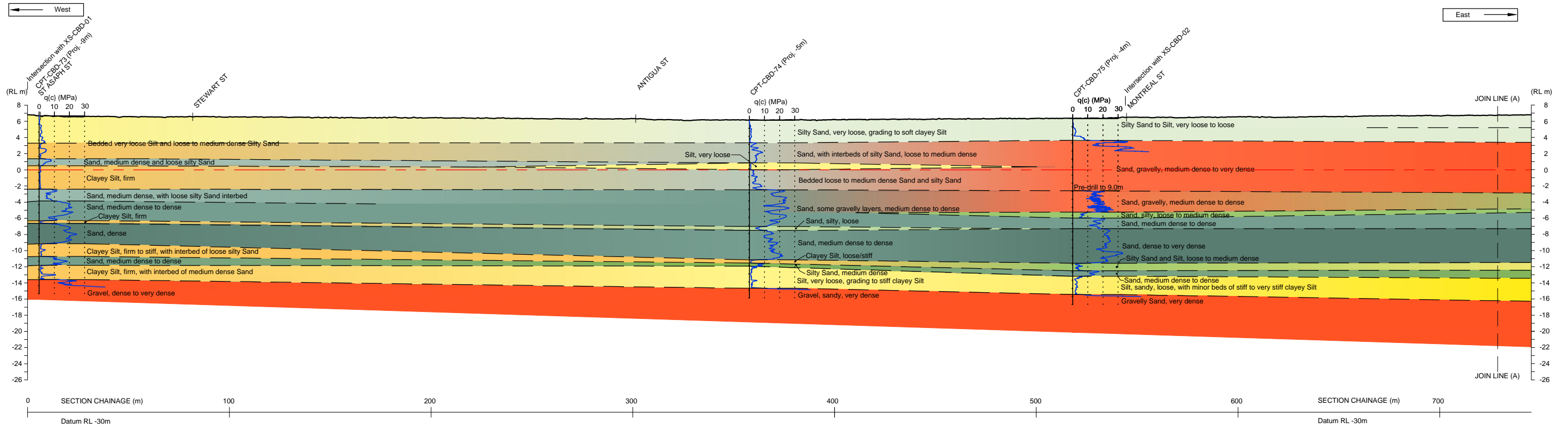
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CHRISTCHURCH CITY COUNCIL
 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GX-CBD-13A (Essex Street)

FIG. No. C 18

REV. 1

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Notes:

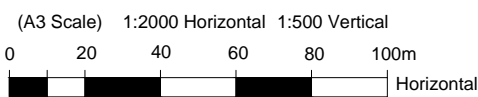
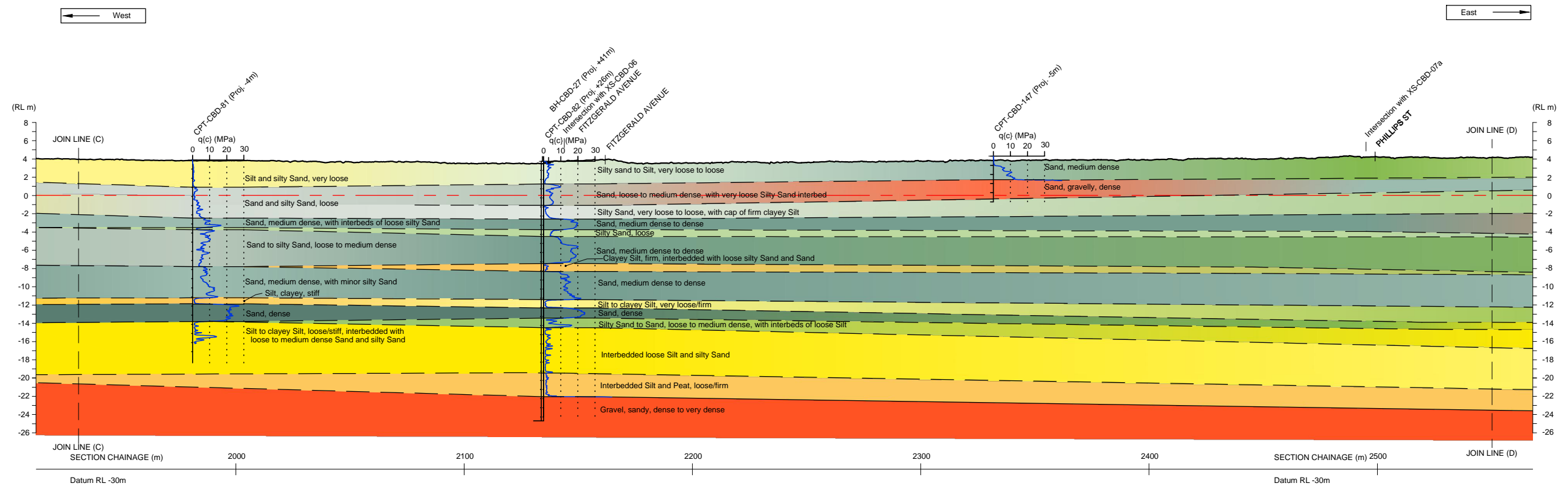
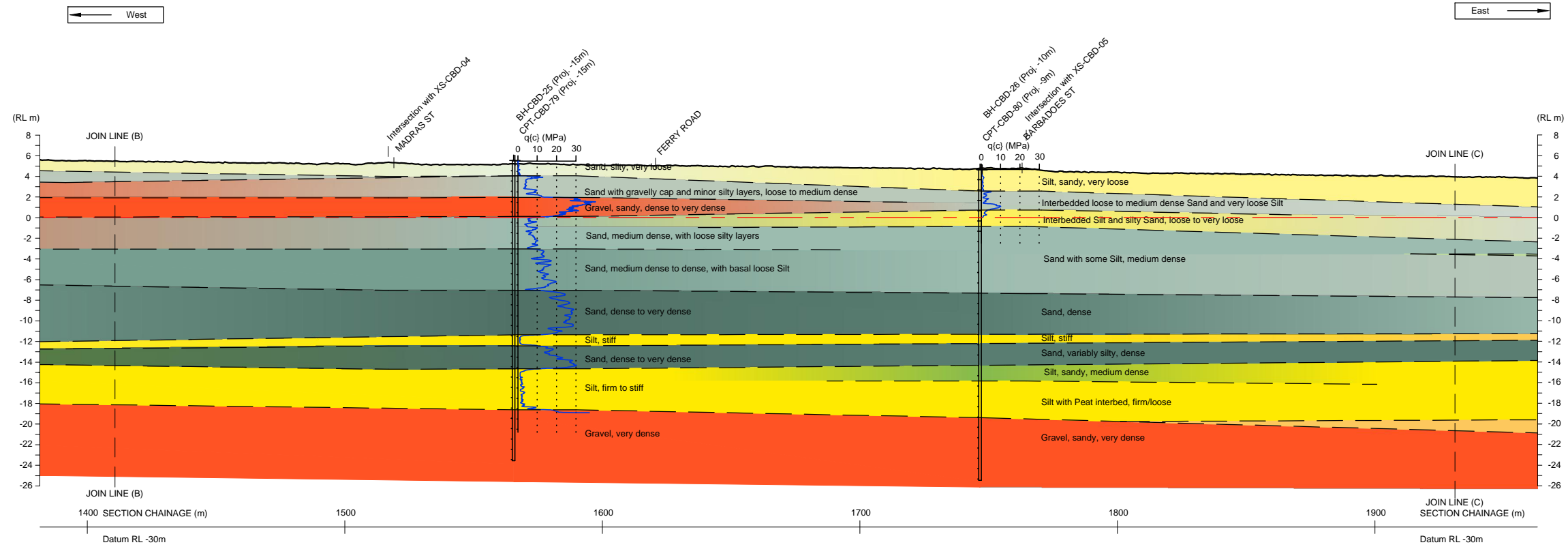
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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-14 (St Asaph Street)		FIG. No. C 19	REV. 1
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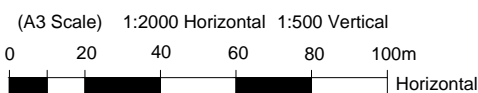
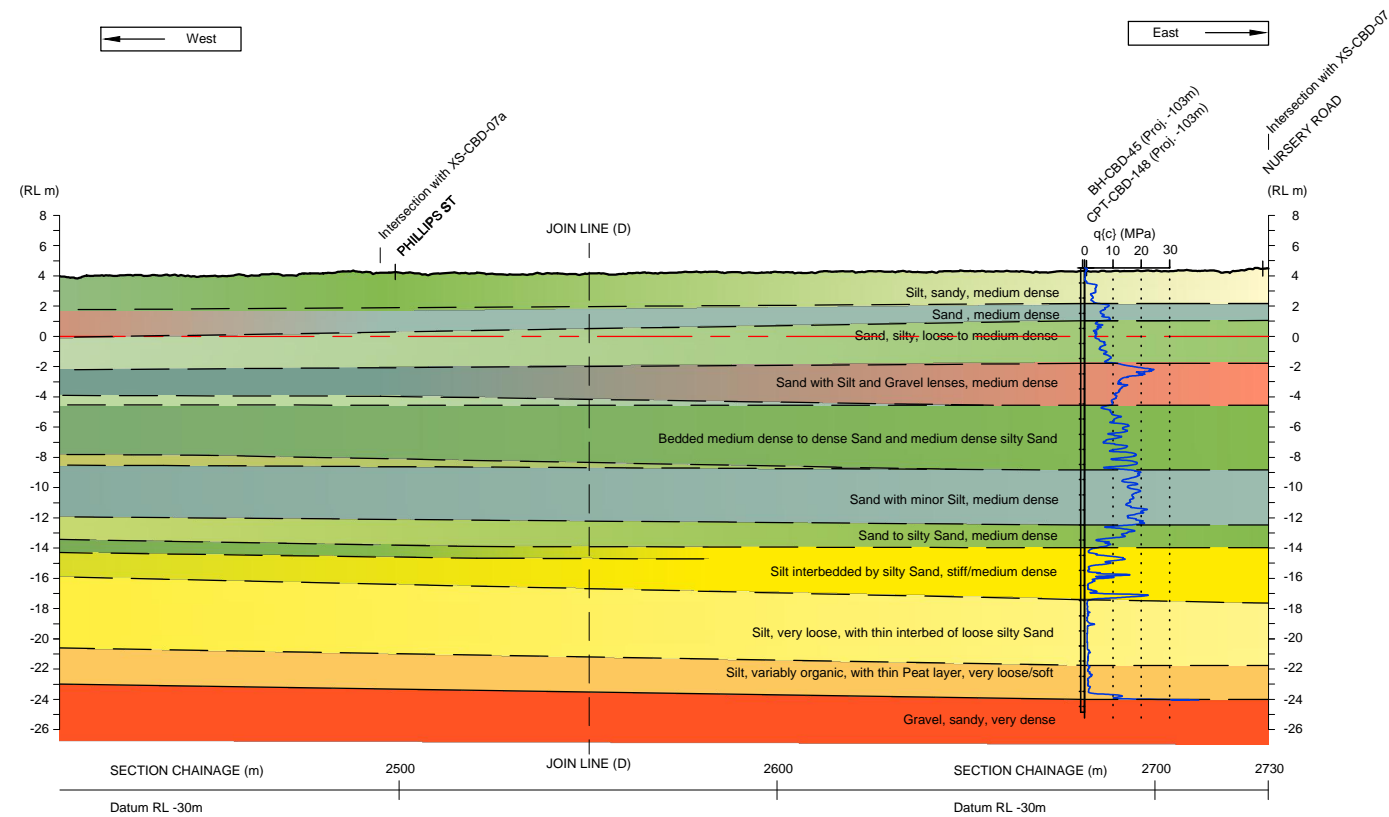
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CHRISTCHURCH CITY COUNCIL GEOLOGICAL INTERPRETATIVE REPORT CHRISTCHURCH CENTRAL CITY GXS-CBD-14 (St Asaph Street)		FIG. No. C 19
		REV. 1

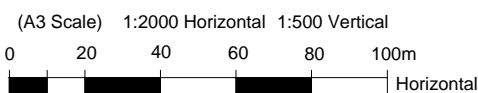
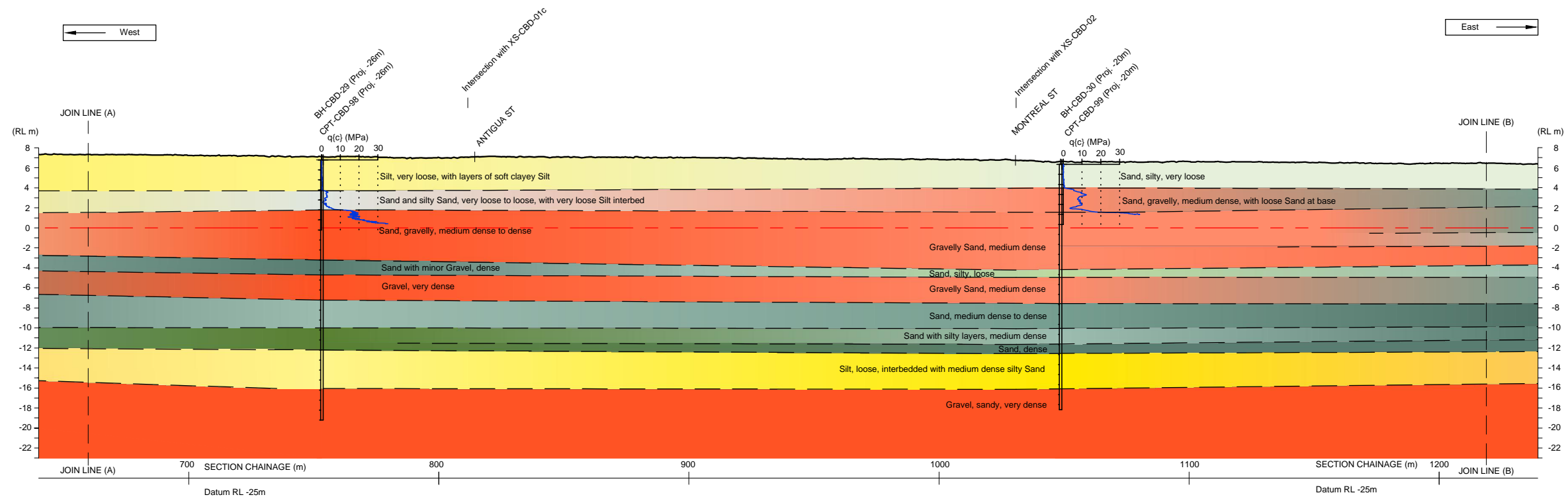
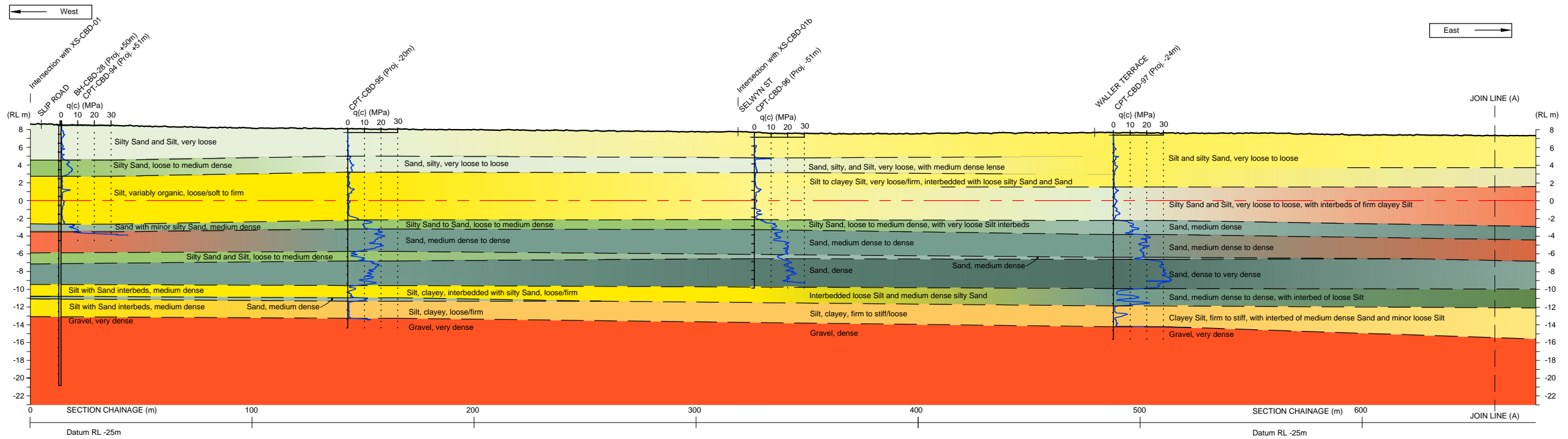


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 5. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
 6. Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



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Sheet 3 of 3		

CHRISTCHURCH CITY COUNCIL	
GEOLOGICAL INTERPRETATIVE REPORT	
CHRISTCHURCH CENTRAL CITY	
GXS-CBD-14 (St Asaph Street)	
FIG. No.	C 19
REV.	1



Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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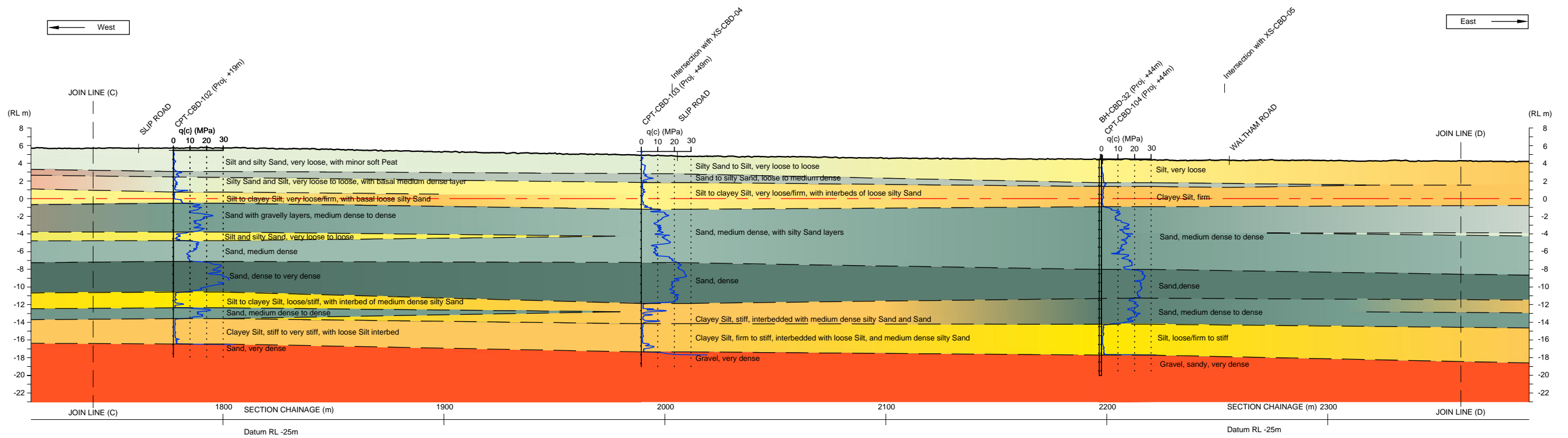
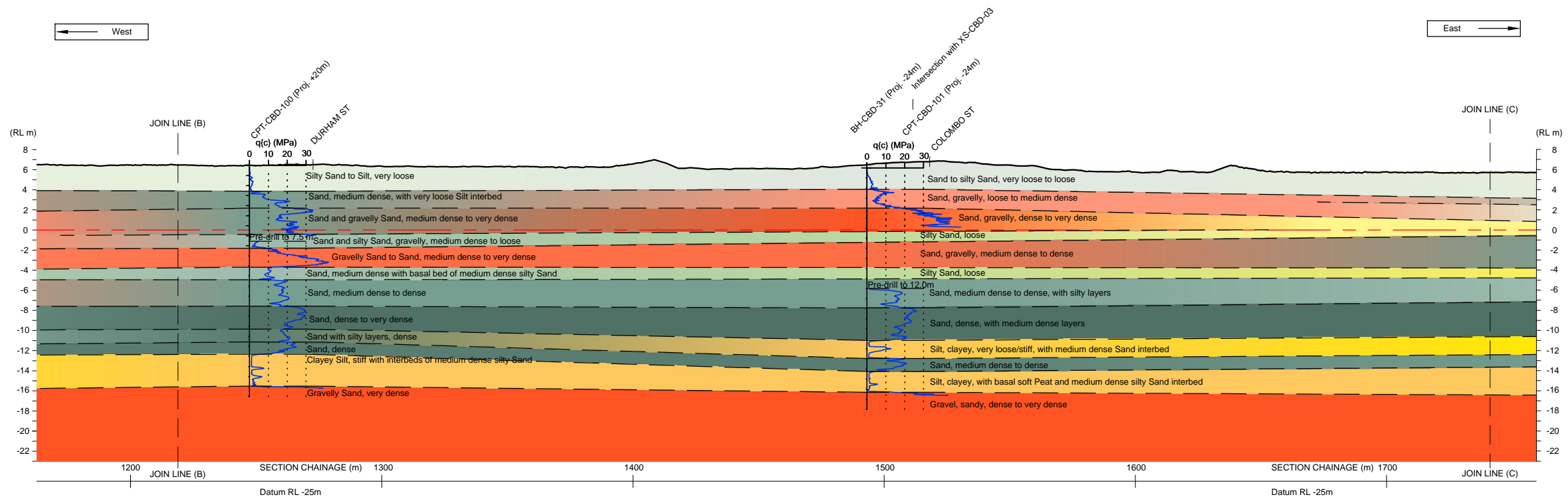
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Sheet 1 of 3		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-15 (Moorhouse Avenue)

FIG. No. C 20

REV. 1

XS-CBD-15 Final.dwg XS-CBD-15 9/12/2011 1:50:59 p.m.



(A3 Scale) 1:2000 Horizontal 1:500 Vertical



Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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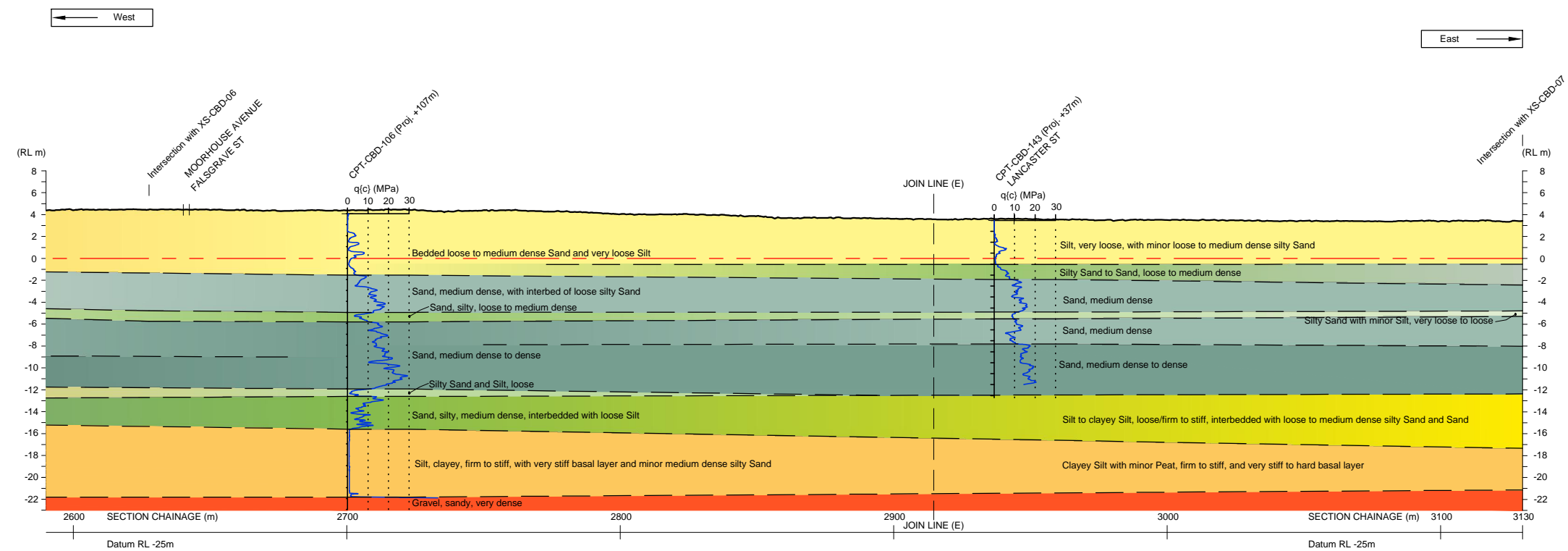
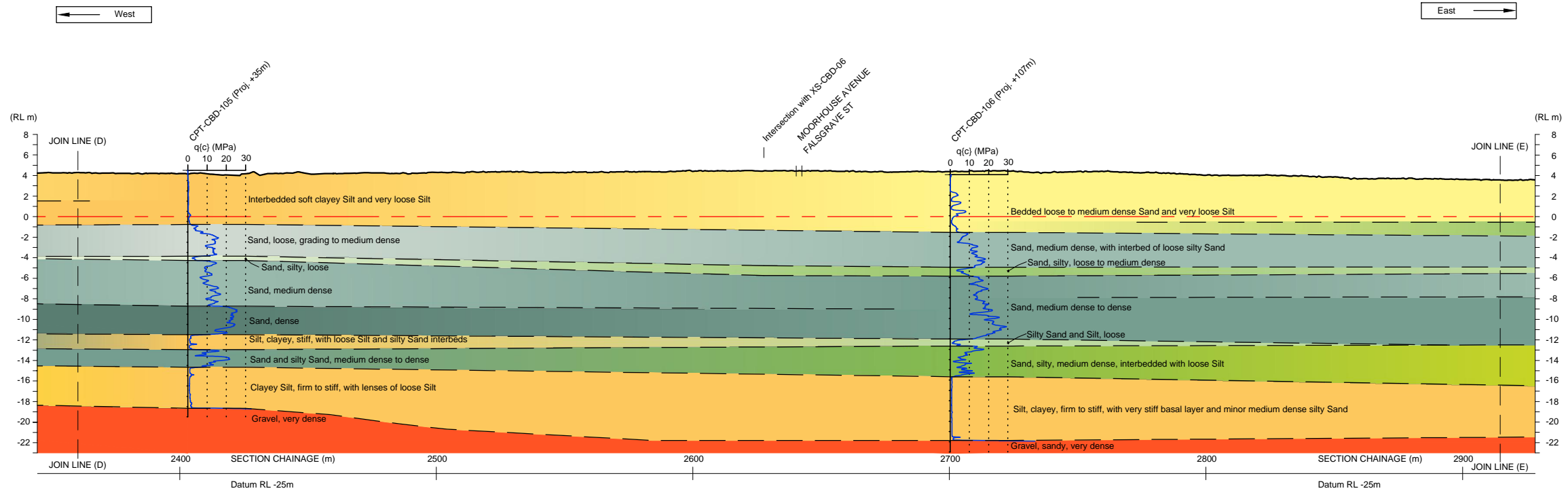
Sheet 2 of 3

CHRISTCHURCH CITY COUNCIL
 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GXS-CBD-15 (Moorhouse Avenue)

FIG. No.

C 20

REV. 1



(A3 Scale) 1:2000 Horizontal 1:500 Vertical
 0 20 40 60 80 100m
 Horizontal

Notes:

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 1:2000 Horizontal
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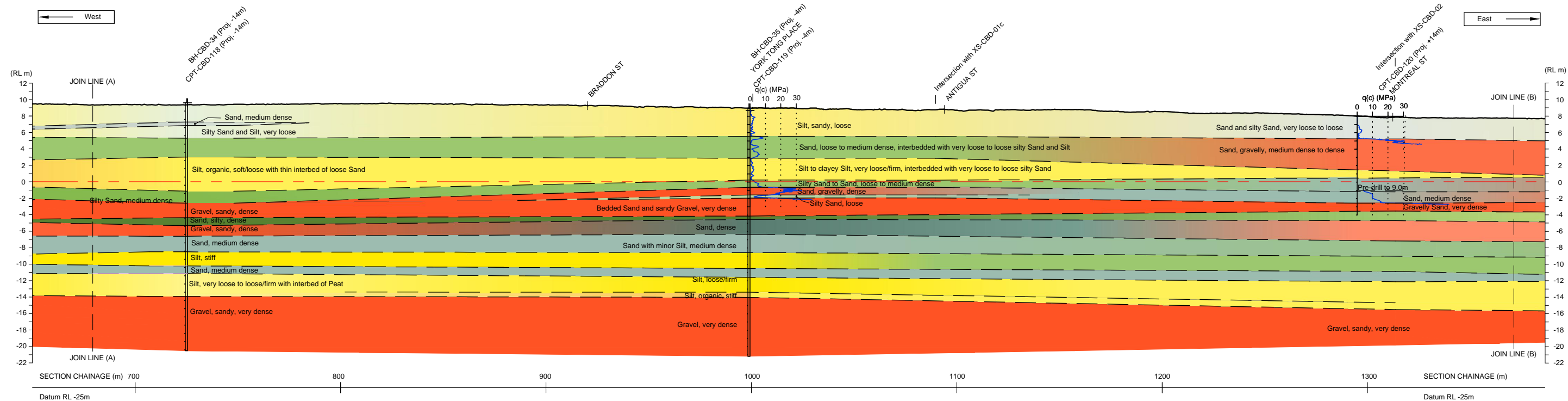
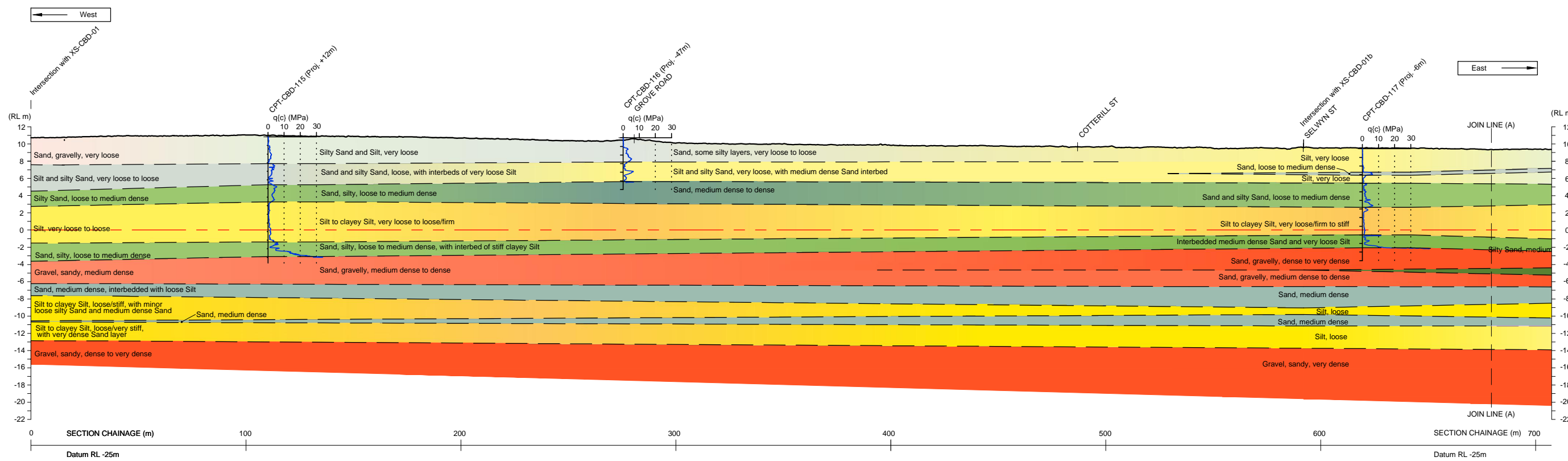
Sheet 3 of 3

FIG. No.

CHRISTCHURCH CITY COUNCIL
 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GXS-CBD-15 (Moorhouse Avenue)

C 20

REV. 1



(A3 Scale) 1:2000 Horizontal 1:500 Vertical
 0 20 40 60 80 100m
 Horizontal

Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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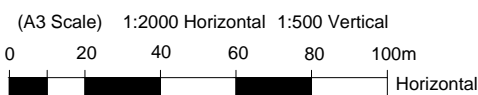
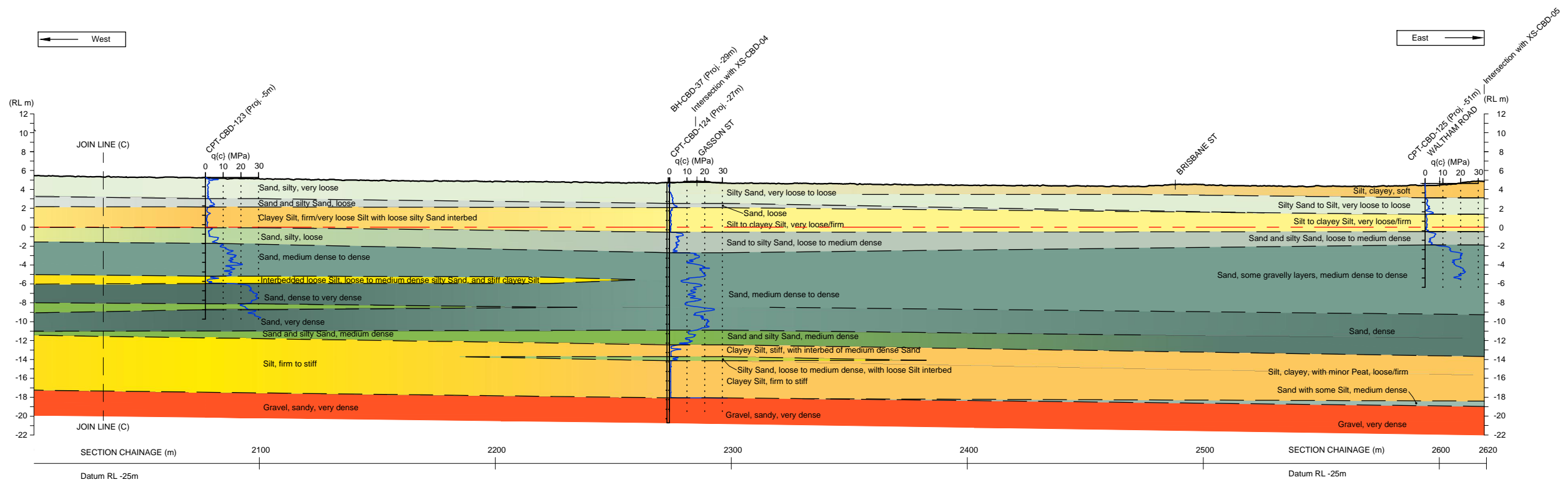
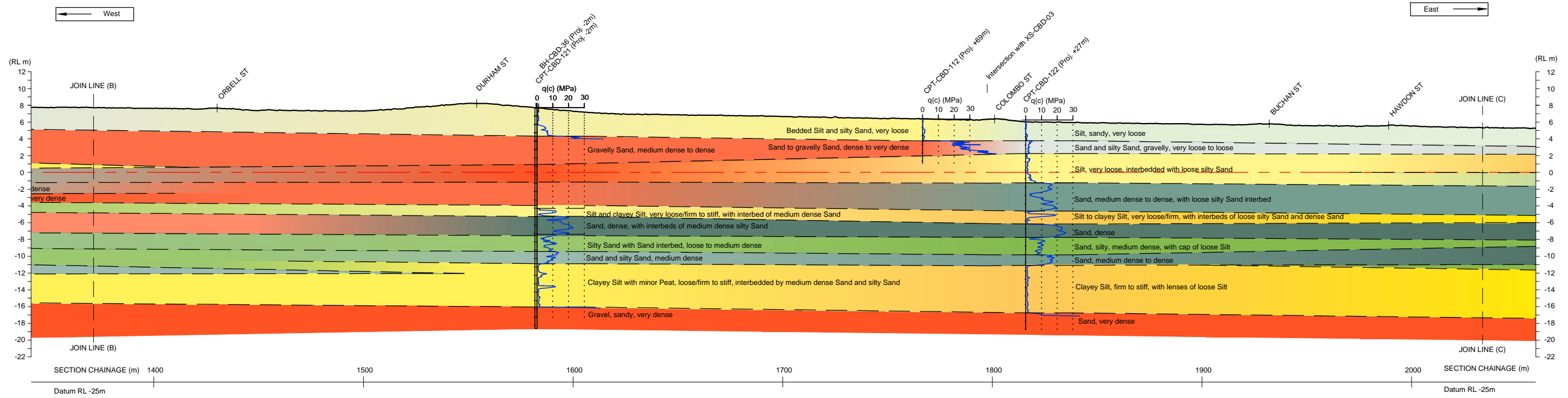
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1:2000 Horizontal		
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Sheet 1 of 2		

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 GEOLOGICAL INTERPRETATIVE REPORT
 CHRISTCHURCH CENTRAL CITY
 GXS-CBD-16 (Harman Street - Sandyford Street - Disraeli Street)

FIG. No. C 21
 REV. 1

Xs-CBD-16 Final.dwg Xs-CBD-16 9/12/2011 1:46:34 p.m.



- Notes:**
- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
 - Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
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 - CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
 - Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).

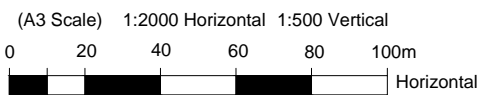
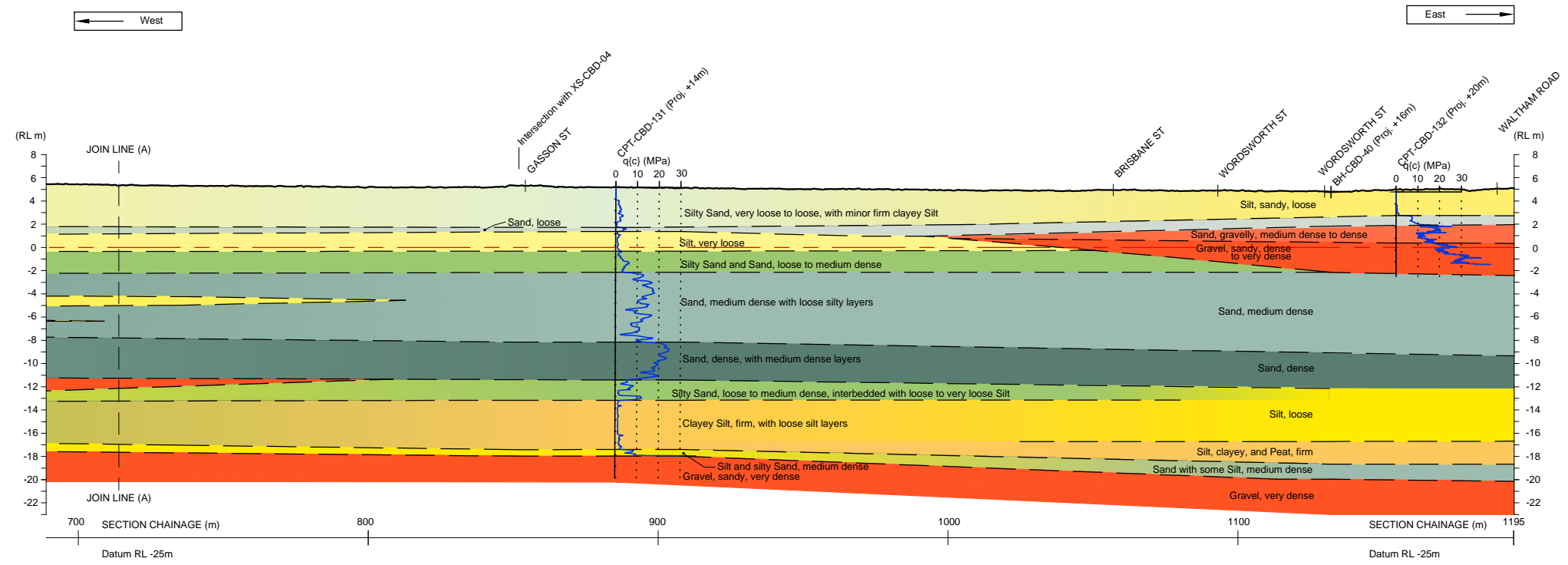
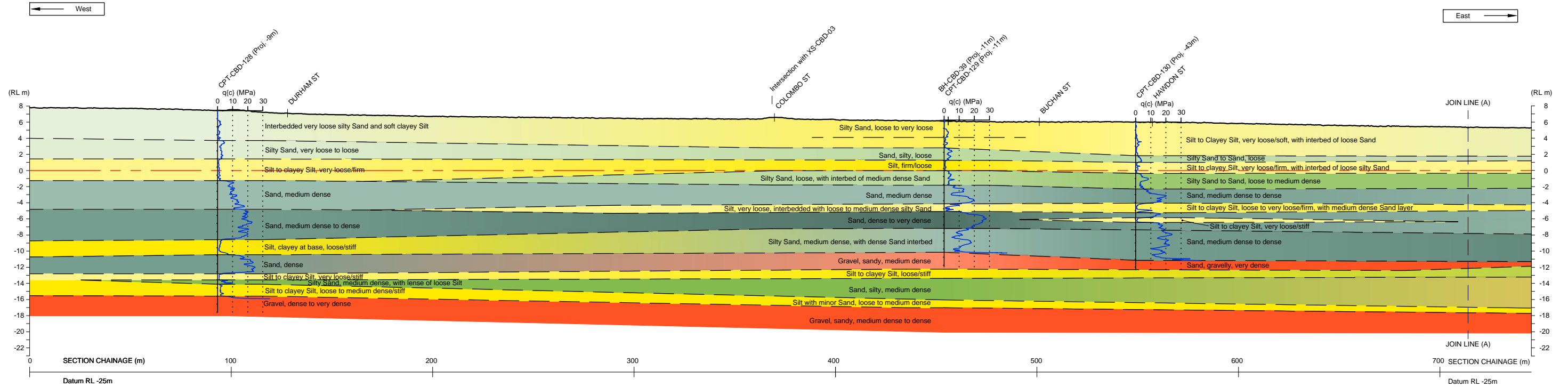


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		1:2000 Horizontal
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Sheet 2 of 2		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GX-S-CBD-16 (Harman Street - Sandyford Street - Disraeli Street)

FIG. No.	C 21	REV.	1
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- Notes:**
- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
 - Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
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 - Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
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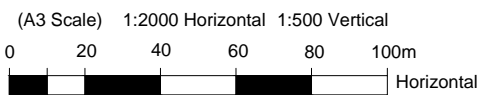
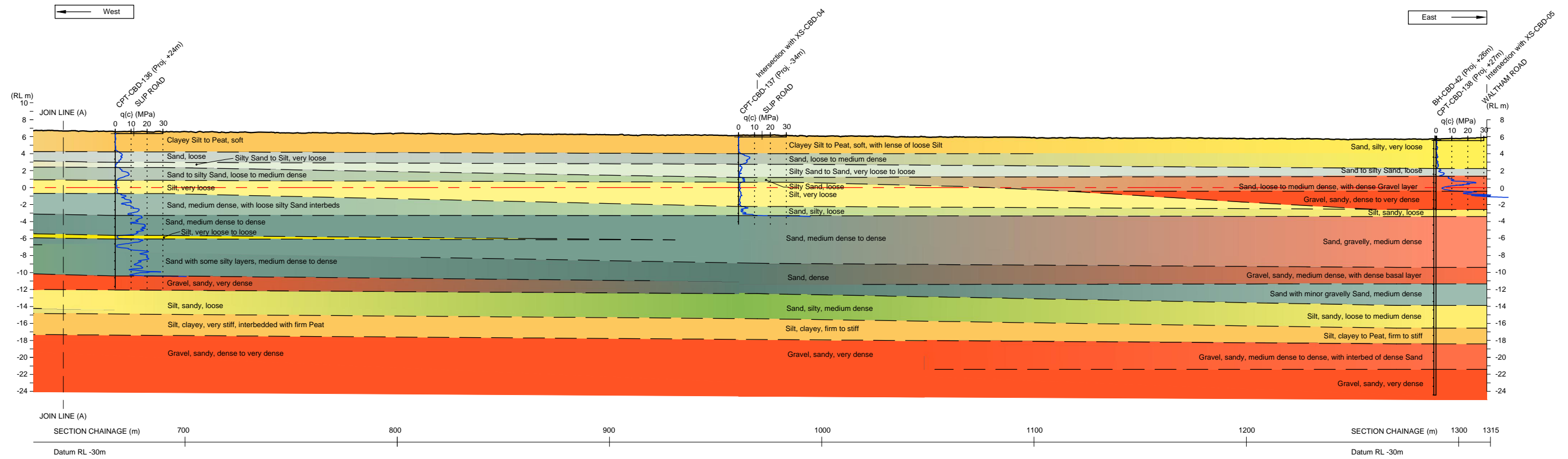
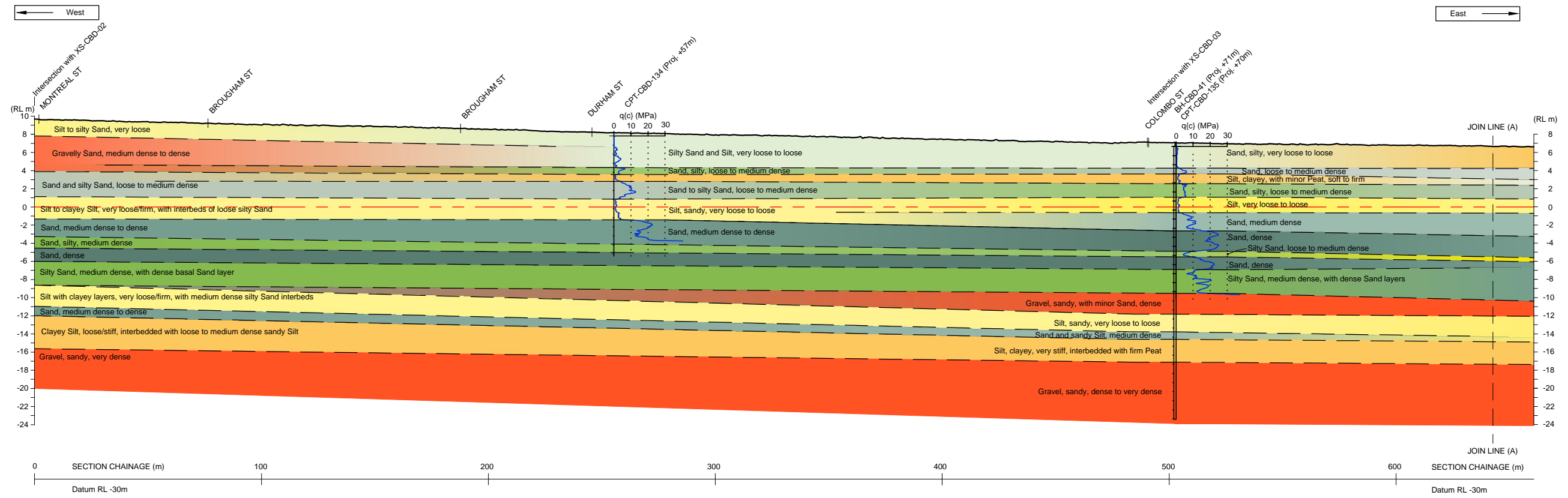
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Sheet 1 of 1		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-17 (Wordsworth Street)

FIG. No. C 22

REV. 1

XCS-CBD-17 Final.dwg XCS-CBD-17 9/12/2011 1:36:24 p.m.



Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
- Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Field Classification and Description of Soil & Rock for Engineering Purposes" (December, 2005).
- No data available in top 1.2m due to services pre-drill.
- Ground surface profile inferred from LIDAR data (flown by NZ Aerial Mapping 8-10 March 2011) where available.
- CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
- Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



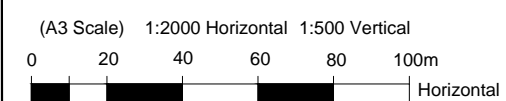
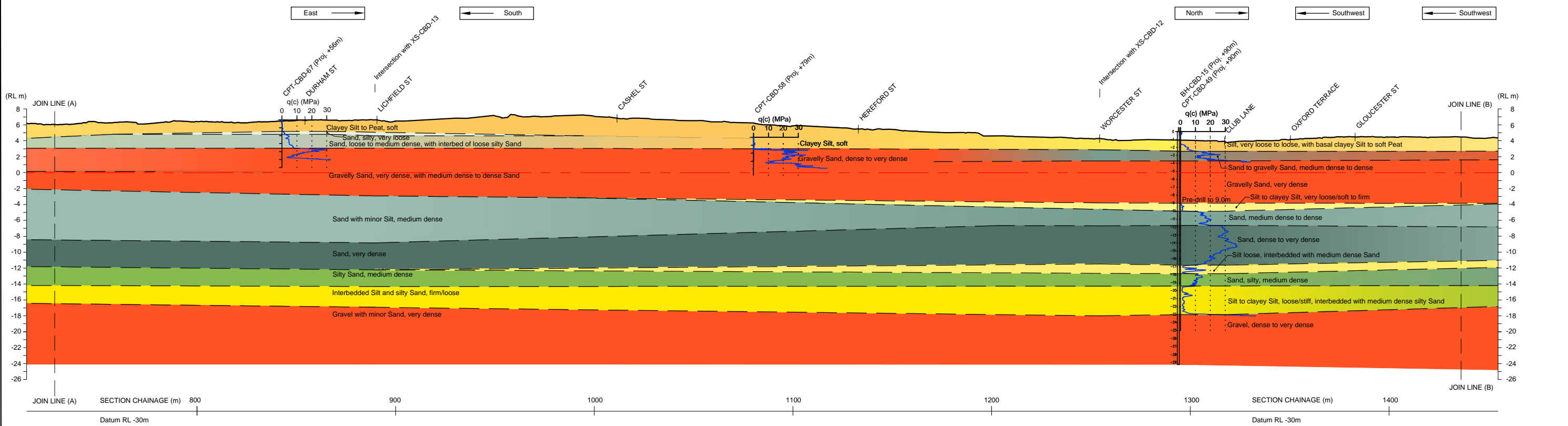
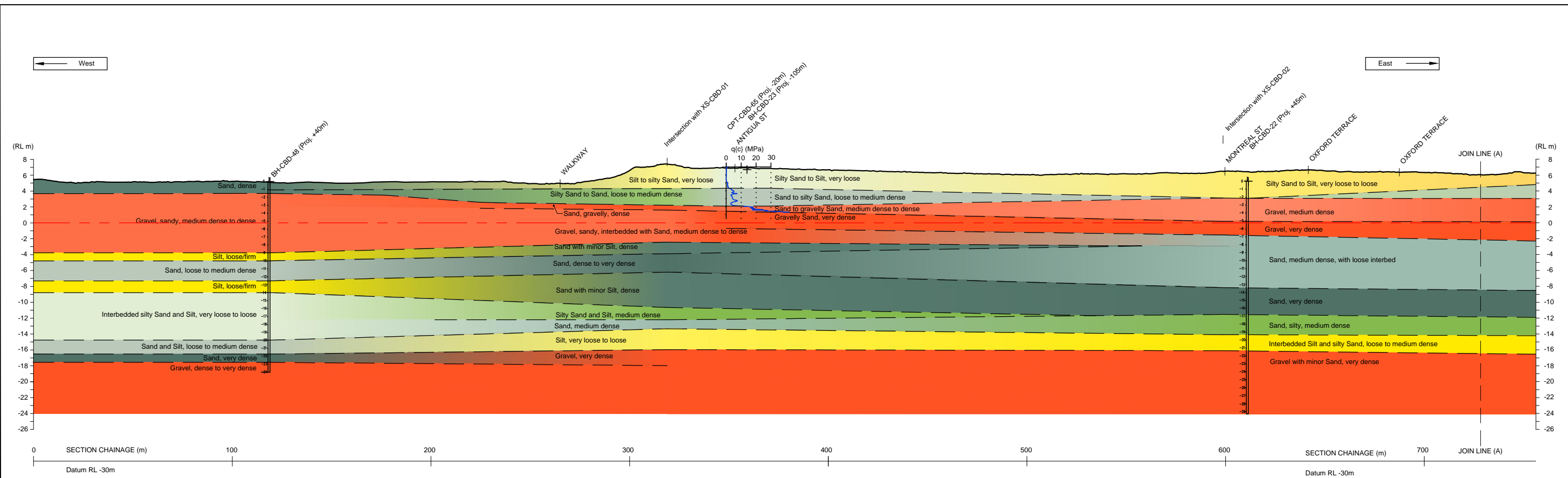
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Sheet 1 of 1		

CHRISTCHURCH CITY COUNCIL
GEOLOGICAL INTERPRETATIVE REPORT
CHRISTCHURCH CENTRAL CITY
GXS-CBD-18 (Brougham Street)

FIG. No.	C 23	REV. 1
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XS-CBD-18 Final.dwg XS-CBD-18 9/12/2011 1:33:43 p.m.



Notes:

- Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsoils away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
- Strength and density descriptions follow NZ Geotechnical Society "Guidelines for the Description of Soil & Rock" (2005).
- No data available in top 1.5m due to services pre-drill.
- Ground surface profile inferred from LiDAR data (Environment Canterbury, flown by NZ Aerial Mapping 8-10 March 2011) where available. CPT and borehole elevations are relative to Lyttelton Datum (mean sea level).
- Soil material type, density and strength have been inferred from CPT data using methodologies published in Lunne, Robertson & Powell (1997).



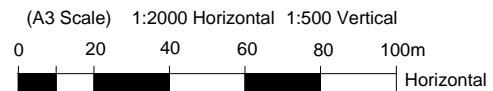
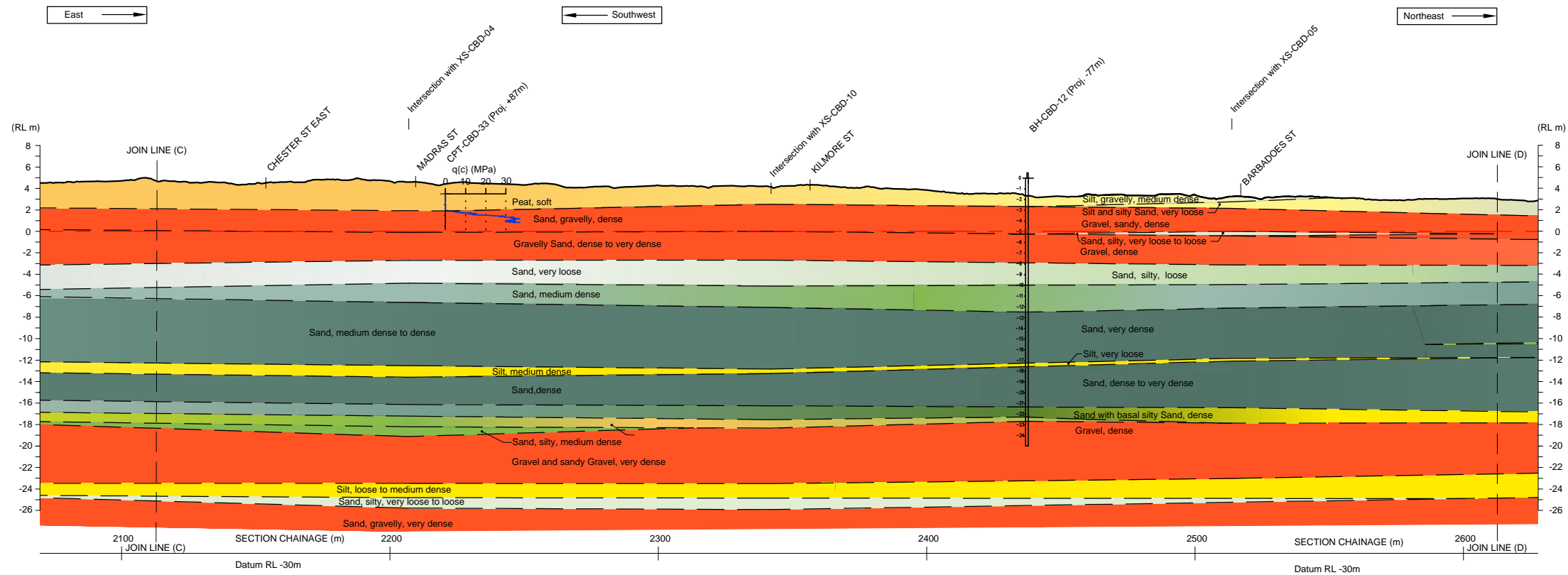
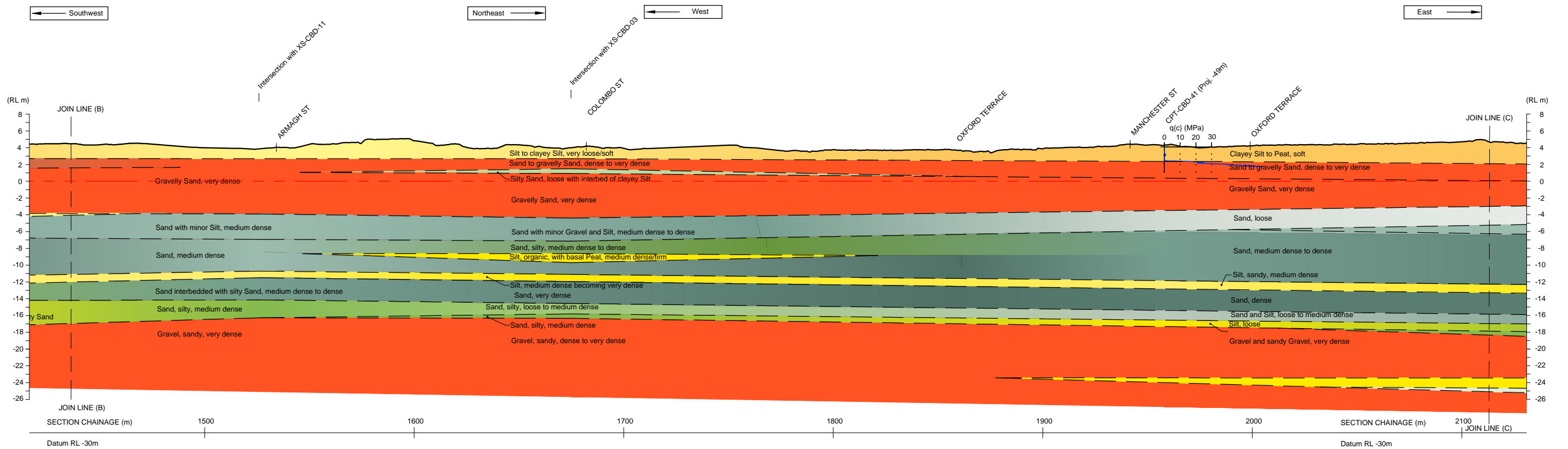
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Sheet 1 of 3		

CANTERBURY EARTHQUAKES 2010-2011
REGIONAL GEOTECHNICAL INVESTIGATIONS
CENTRAL CITY
GSX-CBD-19 (Avon River)

FIG. No. **C 24**

REV. **1**

XS-CBD-19 Final.dwg XS-CBD-19 9/12/2011 2:44:45 p.m.



Notes:

1. Subsurface conditions are inferred from borehole logs and correlations from CPT data. The nature and continuity of the subsols away from the the investigation locations are inferred and it must be appreciated that actual ground conditions could vary from the assumed model.
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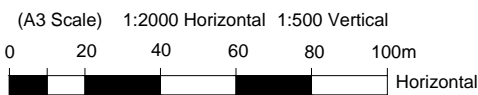
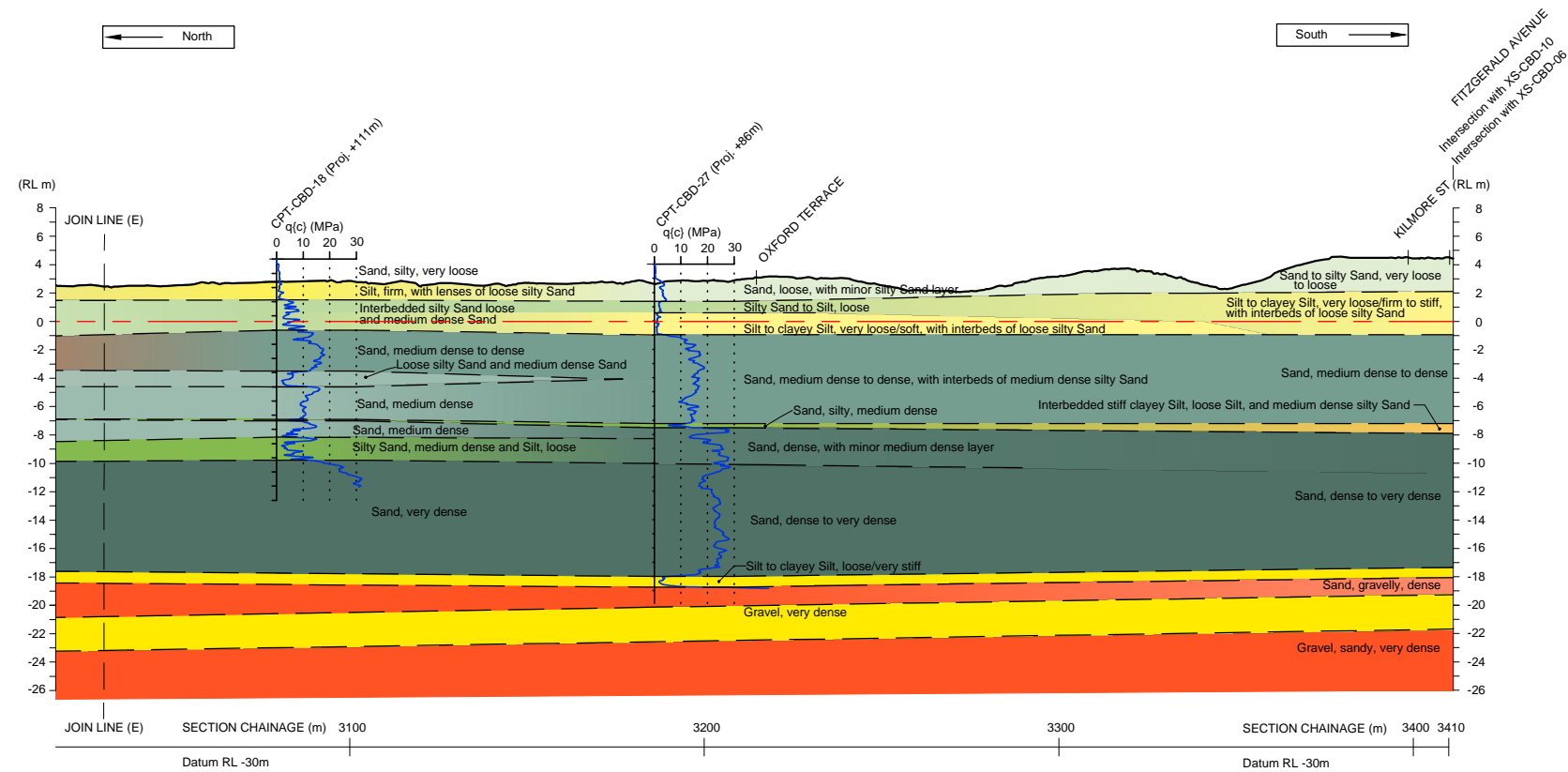
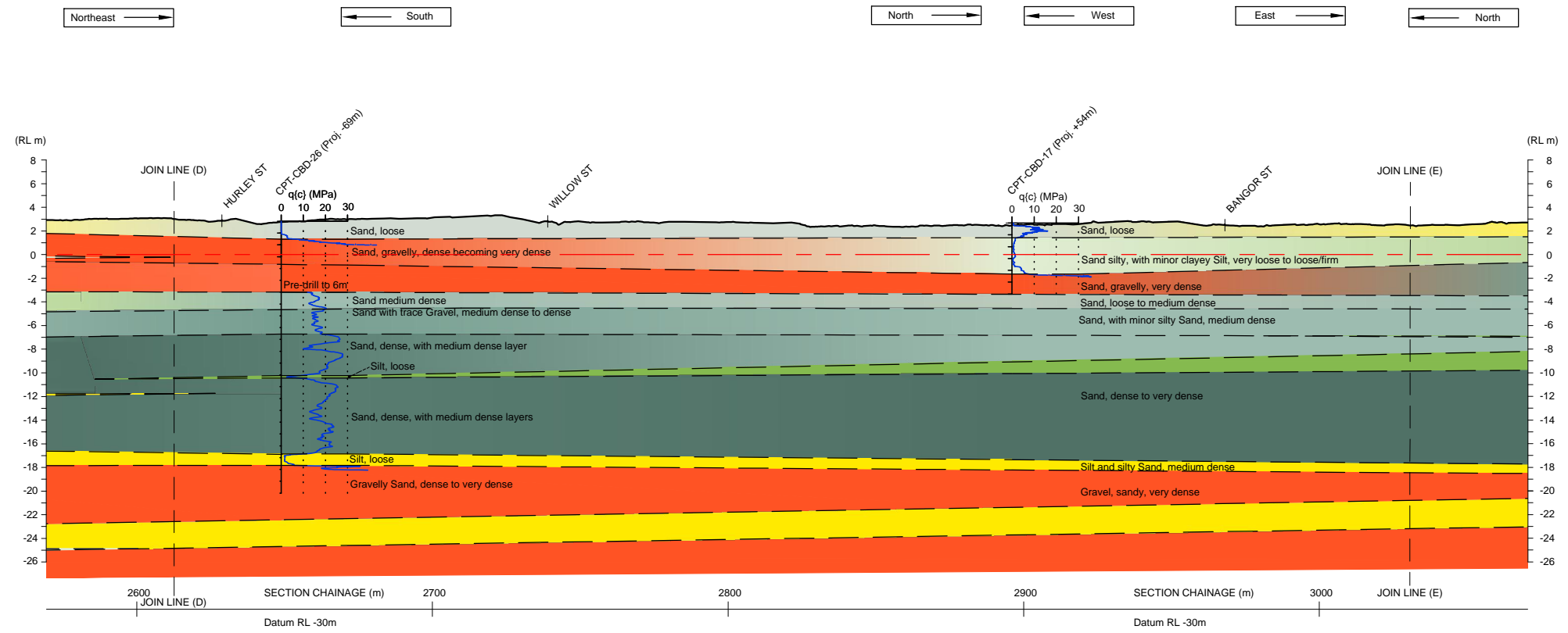


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1:2000 Horizontal		
1:500 Vertical		
Sheet 2 of 3		

CANTERBURY EARTHQUAKES 2010-2011
REGIONAL GEOTECHNICAL INVESTIGATIONS
CENTRAL CITY
GSX-CBD-19 (Avon River)

FIG. No. **C 24**

REV. **1**



Notes:

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 SCALES (AT A3 SIZE)
 1:2000 Horizontal
 1:500 Vertical

Sheet 3 of 3

CANTERBURY EARTHQUAKES 2010-2011
 REGIONAL GEOTECHNICAL INVESTIGATIONS
 CENTRAL CITY
 GSX-CBD-19 (Avon River)

FIG. No.

C 24

REV. 1