

- Legend**
- |     |      |      |                      |
|-----|------|------|----------------------|
| N1  | SY4  | SW17 | Strike and Dip       |
| N2  | DA7  | SW16 | Faults               |
| N3  | DA6  | SW14 | 100m zone from Route |
| N4  | DA5  | PG3  |                      |
| S1  | DA4  | PG2  |                      |
| S2  | DA3  | PG1  |                      |
| S3  | DA2  | GE3  |                      |
| S4  | DA1  | GE2  |                      |
| F1  | DA0  | GE1  |                      |
| SY2 | SW21 |      |                      |
| SY1 | SW20 |      |                      |

<div><div>1</div><div>2</div><div>3</div></div>				
P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd

ARUP

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

Metres

02505001,000

Bedrock Geology

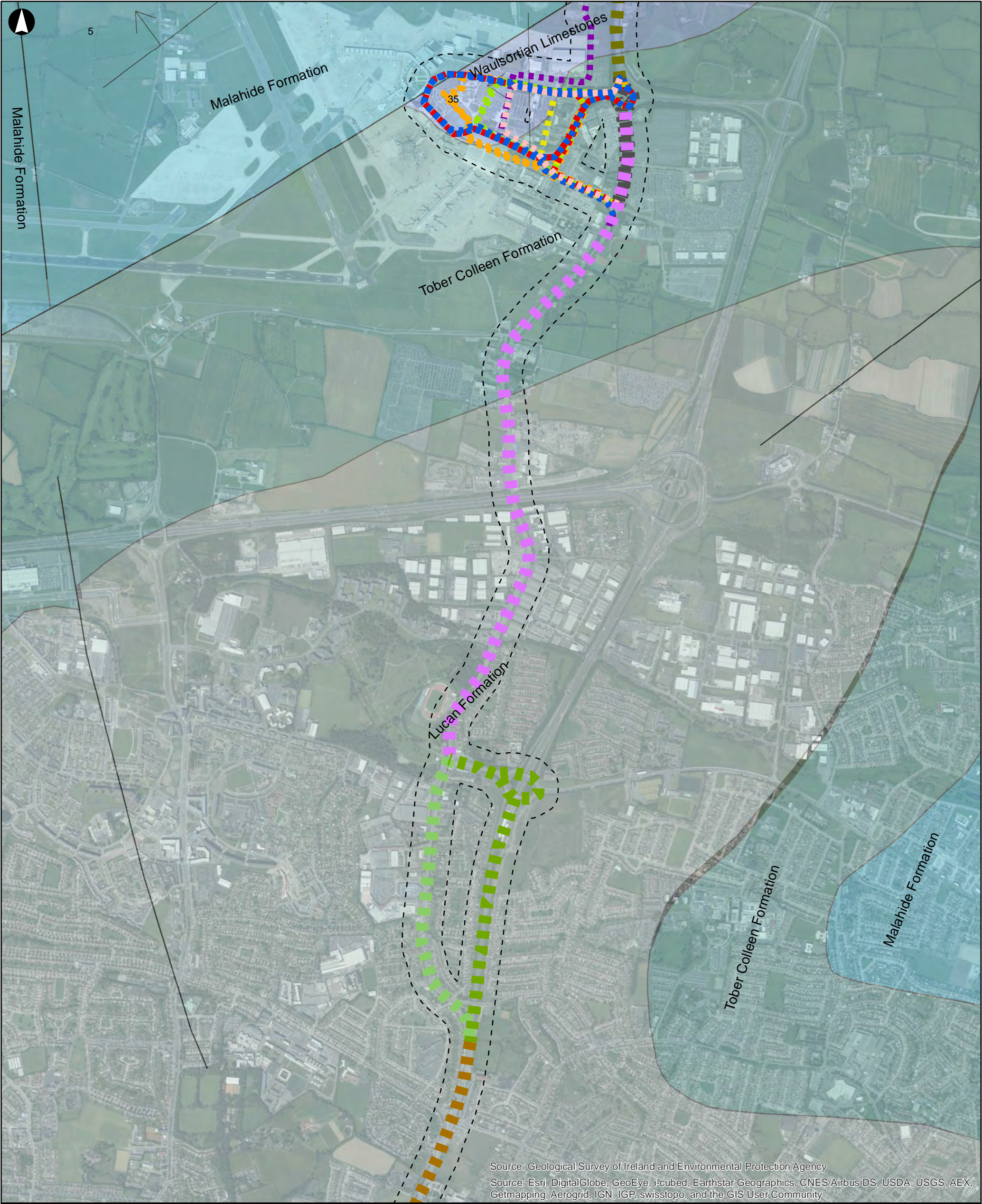
(Sheet 1)

Scale at A3

Not to scale

Job No	Drawing Status
225244-10	Preliminary
Drawing No	Issue
Figure 5.3.1	P3





Source: Geological Survey of Ireland and Environmental Protection Agency  
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

N1

N2

N3

N4

S1

S2

S3

S4

F1

SY2

SY1

SY4

DA7

DA6

DA5

DA4

DA3

DA2

DA1

DA0

SW21

SW20

SW17

SW16

SW14

PG3

PG2

PG1

DA2

DA1

DA0

SW21

SW20

Strike and Dip

Faults

100m zone from Route

GE3

GE2

1

2

3

P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd

ARUP

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

02505001000

Metres

Bedrock Geology

(Sheet 2)

Scale at A3

Not to scale

Job No

225244-10

Drawing Status

Preliminary

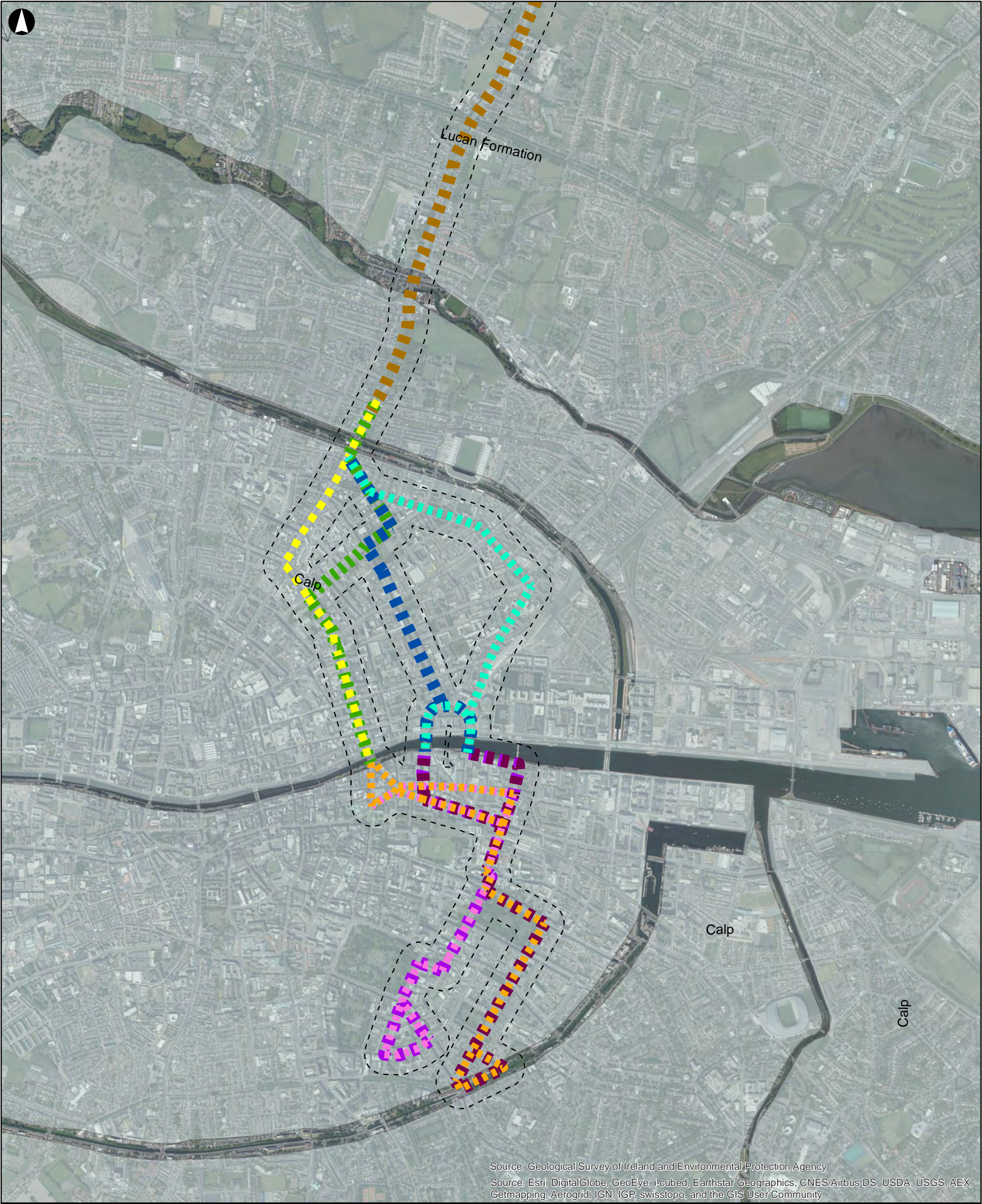
Drawing No

Figure 5.3.2

Issue

P3





Source: Geological Survey of Ireland and Environmental Protection Agency  
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

N1	SY4	SW17	Strike and Dip
N2	DA7	SW16	Faults
N3	DA6	SW14	100m zone from Route
N4	DA5	PG3	
S1	DA4	PG2	
S2	DA3	PG1	
S3	DA2	GE3	
S4	DA1	GE2	
F1	DA0	GE1	
SY2	SW21		
SY1	SW20		

**ARUP**

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

Scale at A3

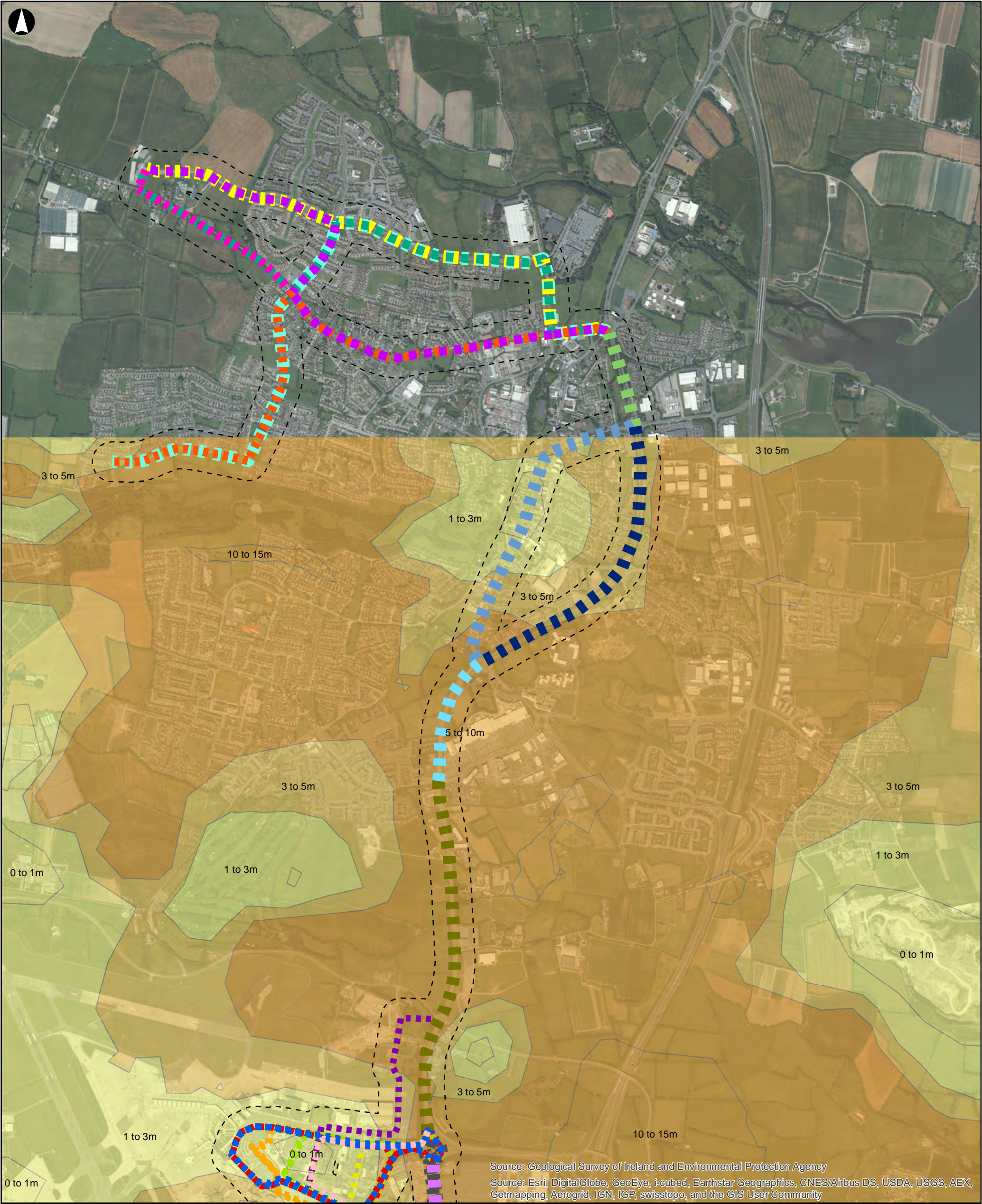
**Bedrock Geology (Sheet 3)**

**Not to scale**

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.3</b>	Issue <b>P3</b>

P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd





**Legend**

N1	SY4	SW17
N2	DA7	SW16
N3	DA6	SW14
N4	DA5	PG3
S1	DA4	PG2
S2	DA3	PG1
S3	DA2	GE3
S4	DA1	GE2
F1	DA0	GE1
SY2	SW21	
SY1	SW20	

**Depth to Bedrock**

0 - 3 m
3 - 5 m
5 - 15 m
15 - 30 m
30 - 45 m

100m zone from Route

**ARUP**

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

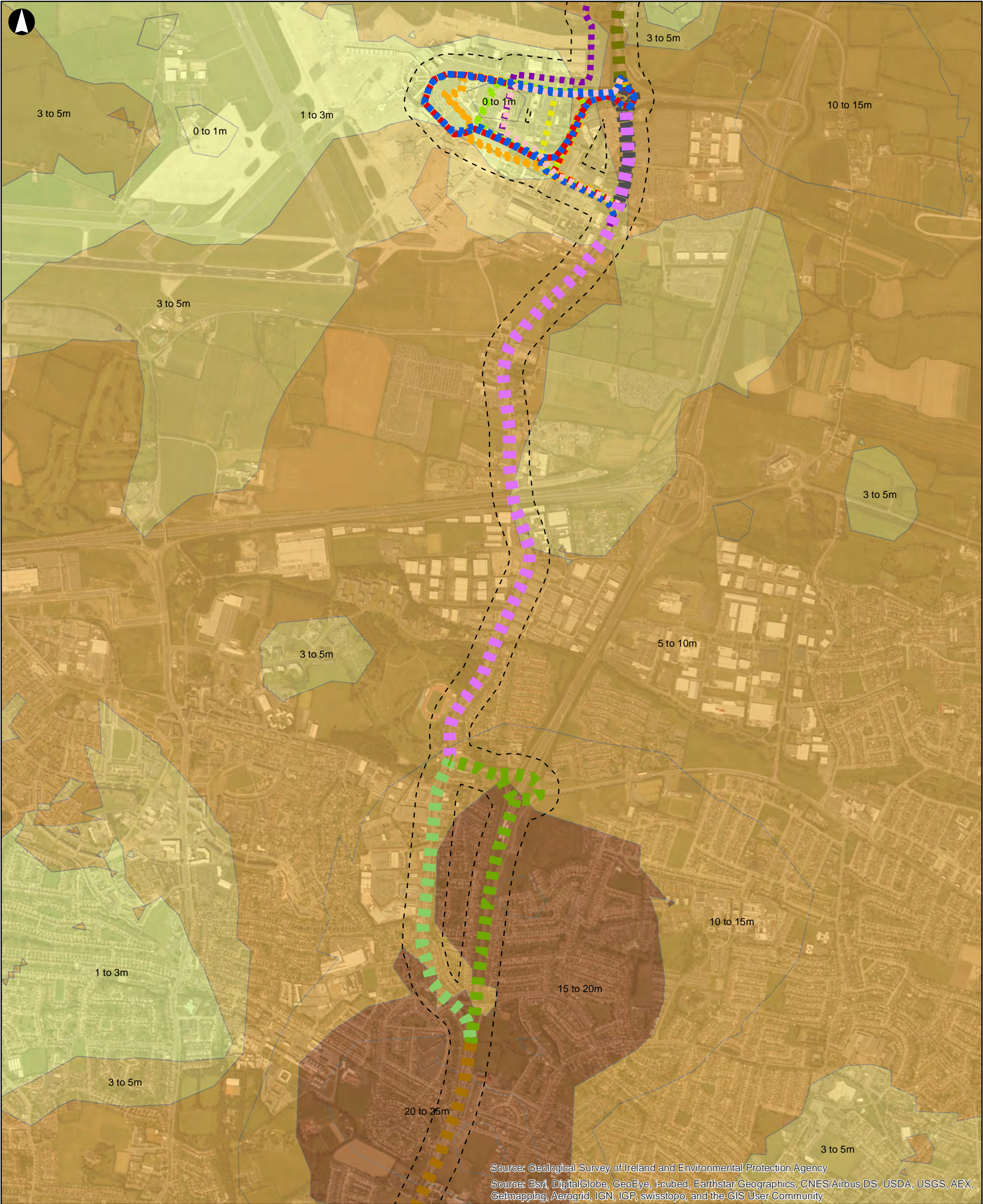
Scale at A3

**Depth to Bedrock (Sheet 1)**

**Not to scale**

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.4</b>	Issue <b>P3</b>





Source: Geological Survey of Ireland and Environmental Protection Agency  
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**Legend**

N1

N2

N3

N4

S1

S2

S3

S4

F1

SY2

SY1

SY4

DA7

DA6

DA5

DA4

DA3

DA2

DA1

DA0

SW21

SW20

SW17

SW16

SW14

PG3

PG2

PG1

GE3

GE2

GE1

**Depth to Bedrock**

0 - 3 m

3 - 5 m

5 - 15 m

15 - 30 m

30 - 45 m

**100m zone from Route**

1

2

3

P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd

ARUP

Client  
National Transport Authority

Job Title  
Swords / Airport to City Centre Swiftway

0 250 500 1,000

Metres

Depth to Bedrock  
(Sheet 2)

Scale at A3

Not to scale

Job No  
225244-10

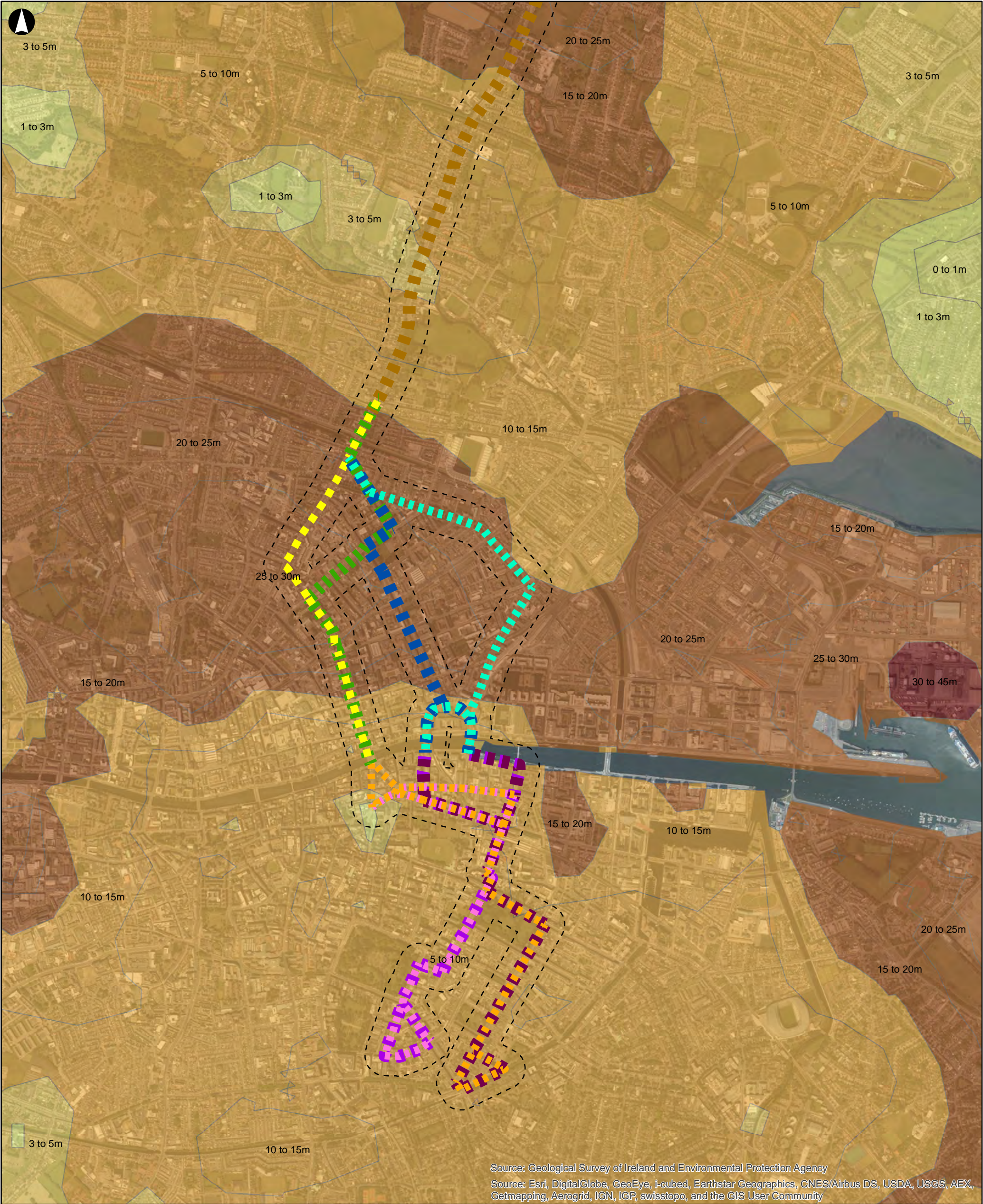
Drawing Status  
Preliminary

Drawing No  
Figure 5.3.5

Issue  
P3

MXD Location: \\dubnits03\Dublin\_Jobs\225000\225244-10\4. Internal Project Data\4-03 Design\4-03-02 Consulting\GIS\Geotechnical\SCBRT\_Template\10.mxd 08/10/2014 15:20:39 © Arup





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**Legend**

N1

N2

N3

N4

S1

S2

S3

S4

F1

SY2

SY1

SY4

DA7

DA6

DA5

DA4

DA3

DA2

DA1

DA0

SW21

SW20

SW17

SW16

SW14

PG3

PG2

PG1

GE3

GE2

GE1

**Depth to Bedrock**

0 - 3 m

3 - 5 m

5 - 15 m

15 - 30 m

30 - 45 m

100m zone from Route

1

2

3

P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd

ARUP

Client

National Transport Authority

Job Title

Swords / Airport to City Centre Swiftway

Metres

02505001,000

Depth to Bedrock

(Sheet 3)

Scale at A3

Not to scale

Job No	225244-10	Drawing Status	Preliminary
Drawing No	Figure 5.3.6	Issue	P3





Source: Geological Survey of Ireland and Environmental Protection Agency  
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**Legend**

N1	SY4	SW17	<b>Drift Geology</b> <b>Marine Deposits</b> Mbs - beach sand Mesc - estuarine silt/ clay <b>Alluvium</b> Undifferentiated alluvium <b>Glaciofluvial sands &amp; gravels</b> GLs <b>Tills</b> TDSs TLs <b>Others</b> Made ground Bedrock at surface 100m zone from Route
N2	DA7	SW16	
N3	DA6	SW14	
N4	DA5	PG3	
S1	DA4	PG2	
S2	DA3	PG1	
S3	DA2	GE3	
S4	DA1	GE2	
F1	DA0	GE1	
SY2	SW21		
SY1	SW20		

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd

Metres

0 250 500 1,000

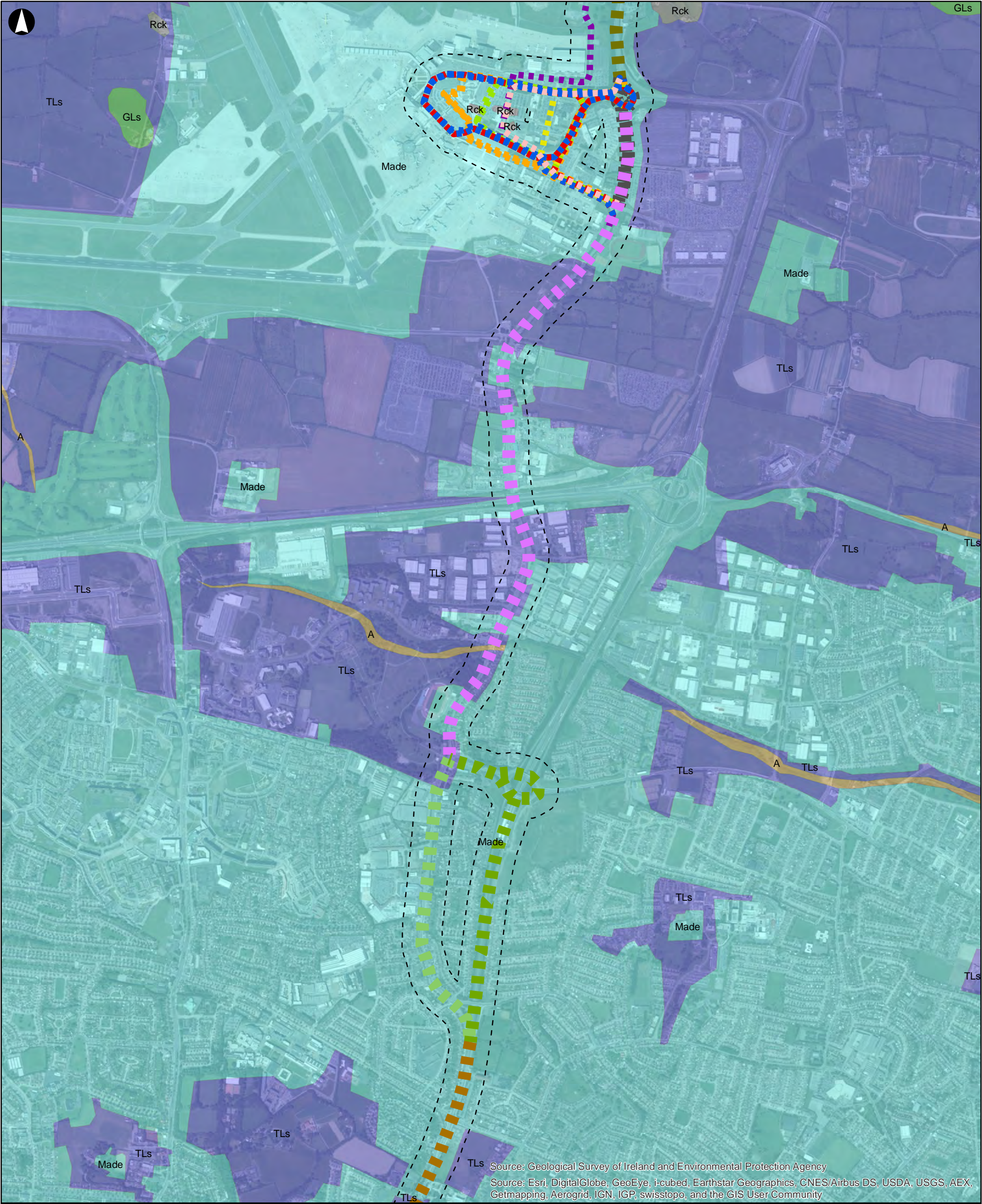
**Drift Geology (Sheet 1)**

Scale at A3

**Not to scale**

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.7</b>	Issue <b>P3</b>





Source: Geological Survey of Ireland and Environmental Protection Agency  
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**Legend**

N1	SY4	SW17
N2	DA7	SW16
N3	DA6	SW14
N4	DA5	PG3
S1	DA4	PG2
S2	DA3	PG1
S3	DA2	GE3
S4	DA1	GE2
F1	DA0	GE1
SY2	SW21	
SY1	SW20	

**Drift Geology**

**Marine Deposits**

- Mbs - beach sand
- Mesc - estuarine silt/ clay

**Alluvium**

- Undifferentiated alluvium

**Glaciofluvial sands & gravels**

- GLs

**Tills**

- TDSs
- TLs

**Others**

- Made ground
- Bedrock at surface

100m zone from Route

Client  
**National Transport Authority**

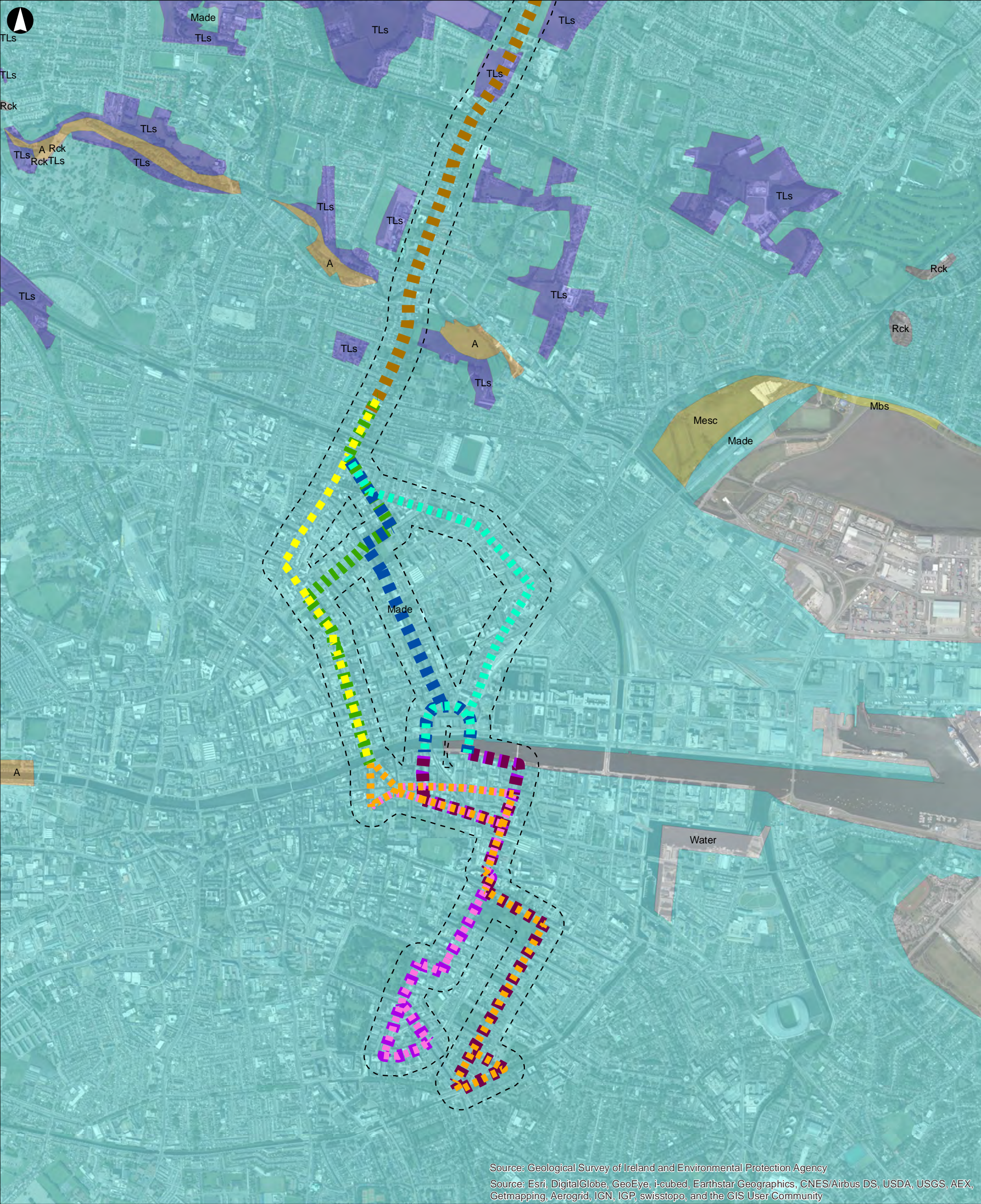
Job Title  
**Swords / Airport to City Centre Swiftway**

Scale at A3

**Not to scale**

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.8</b>	Issue <b>P3</b>





Source: Geological Survey of Ireland and Environmental Protection Agency  
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

N1	SY4	SW17	<b>Drift Geology</b> <b>Marine Deposits</b> Mbs - beach sand Mesc - estuarine silt/ clay <b>Alluvium</b> Undifferentiated alluvium <b>Glaciofluvial sands &amp; gravels</b> GLs <b>Tills</b> TDSs TLs <b>Others</b> Made ground Bedrock at surface 100m zone from Route
N2	DA7	SW16	
N3	DA6	SW14	
N4	DA5	PG3	
S1	DA4	PG2	
S2	DA3	PG1	
S3	DA2	GE3	
S4	DA1	GE2	
F1	DA0	GE1	
SY2	SW21		
SY1	SW20		

**ARUP**

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

Scale at A3

**Drift Geology (Sheet 3)**

**Not to scale**

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.9</b>	Issue <b>P3</b>





Source: Geological Survey of Ireland and Environmental Protection Agency  
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**Legend**

N1	SY4	SW17	* Active Quarries (GSI)
N2	DA7	SW16	
N3	DA6	SW14	Historical Pits and Quarries OSI/GSI Six-inch mapping (1833-1946)
N4	DA5	PG3	
S1	DA4	PG2	Pit
S2	DA3	PG1	Quarry
S3	DA2	GE3	100m zone from Route
S4	DA1	GE2	
F1	DA0	GE1	
SY2	SW21		
SY1	SW20		

**ARUP**

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

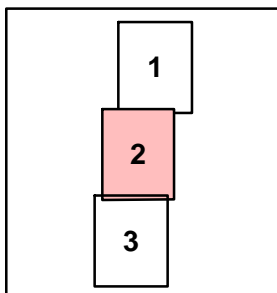
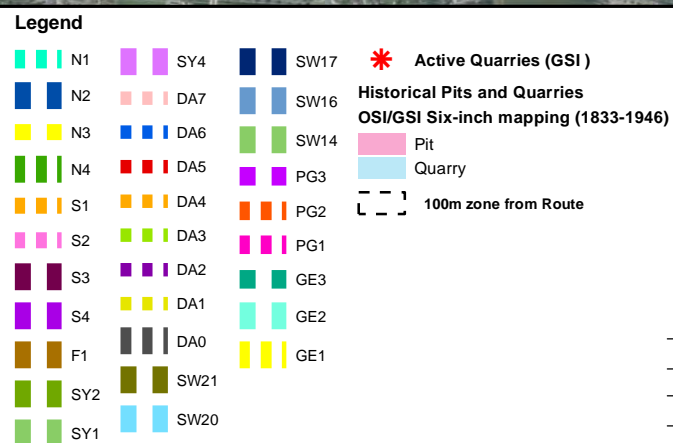
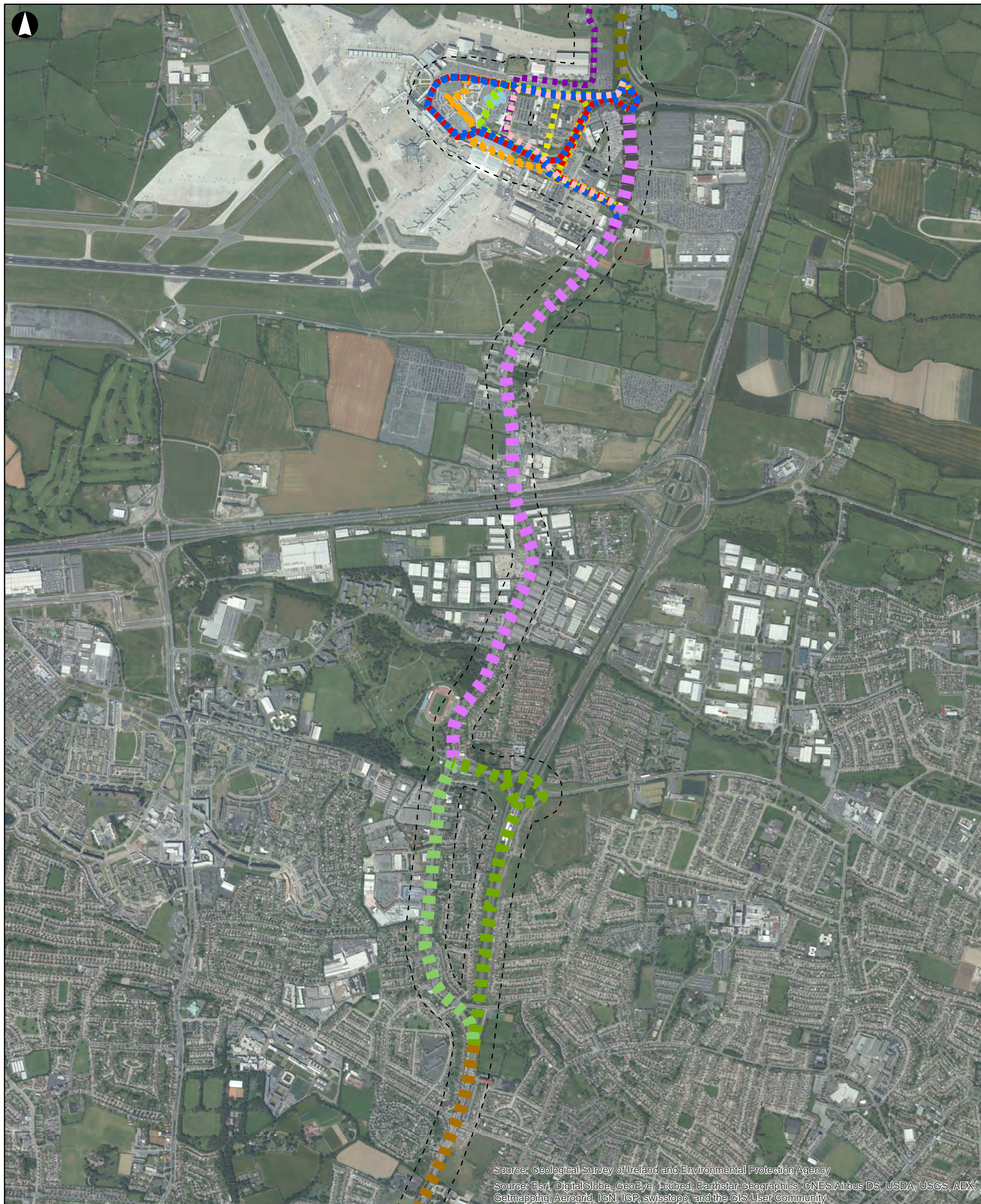
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**Active and Historic Pits and Quarries (Sheet 1)**

Not to scale

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.10</b>	Issue <b>P3</b>





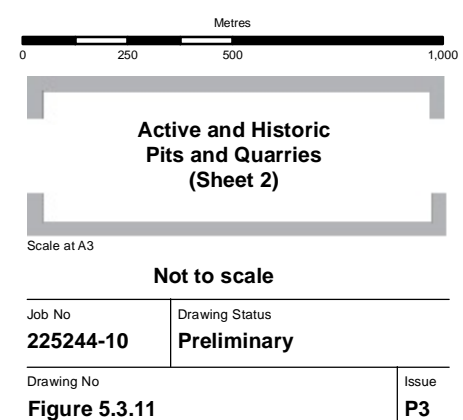
P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd

ARUP

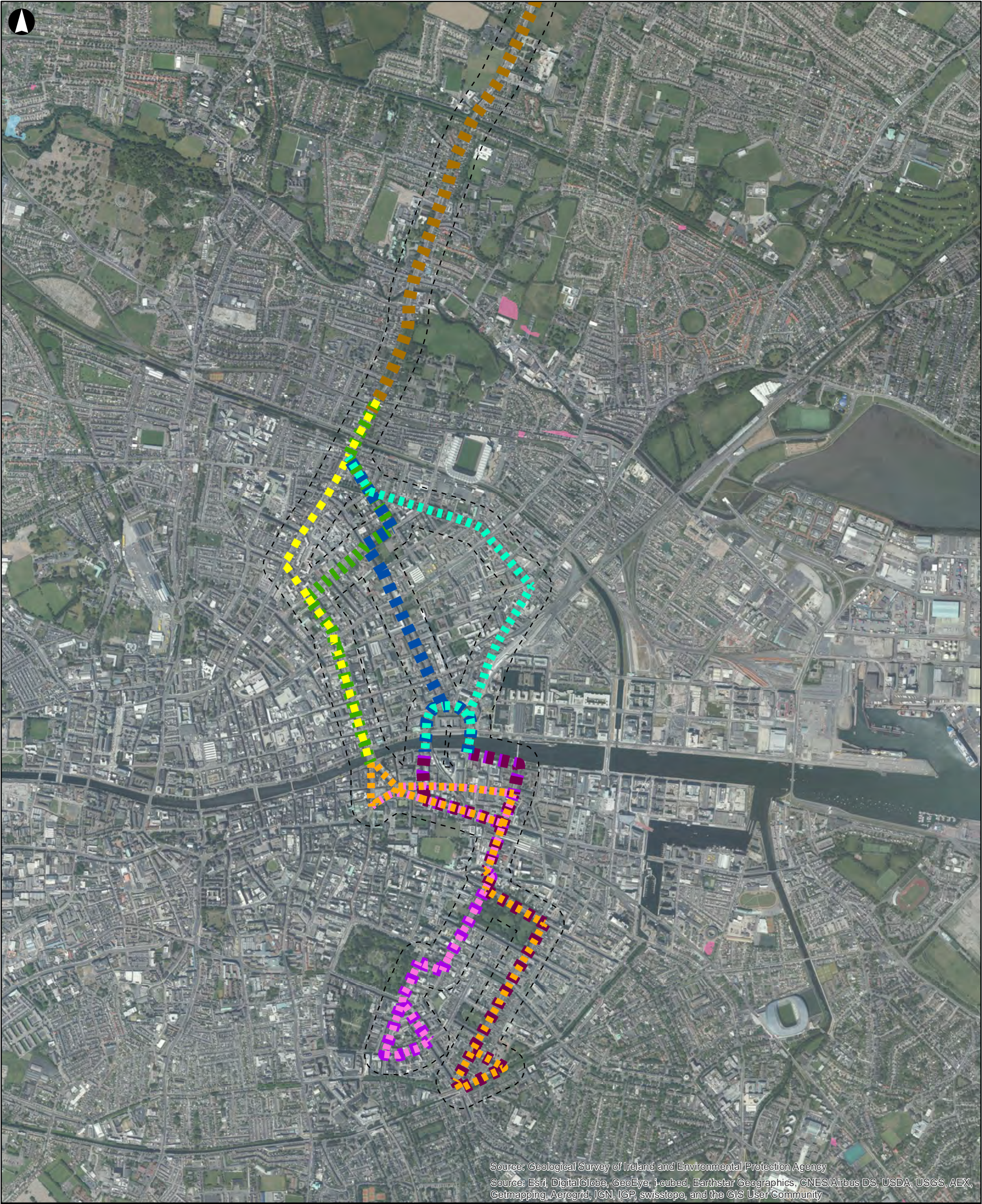
Client  
**National Transport Authority**

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Job Title  
**Swords / Airport to City Centre Swiftway**







Source: Geological Survey of Ireland and Environmental Protection Agency  
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

N1	SY4	SW17	* Active Quarries (GSI)
N2	DA7	SW16	
N3	DA6	SW14	<b>Historical Pits and Quarries</b>
N4	DA5	PG3	OSI/GSI Six-inch mapping (1833-1946)
S1	DA4	PG2	Pit
S2	DA3	PG1	Quarry
S3	DA2	GE3	100m zone from Route
S4	DA1	GE2	
F1	DA0	GE1	
SY2	SW21		
SY1	SW20		

**ARUP**

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

Scale at A3

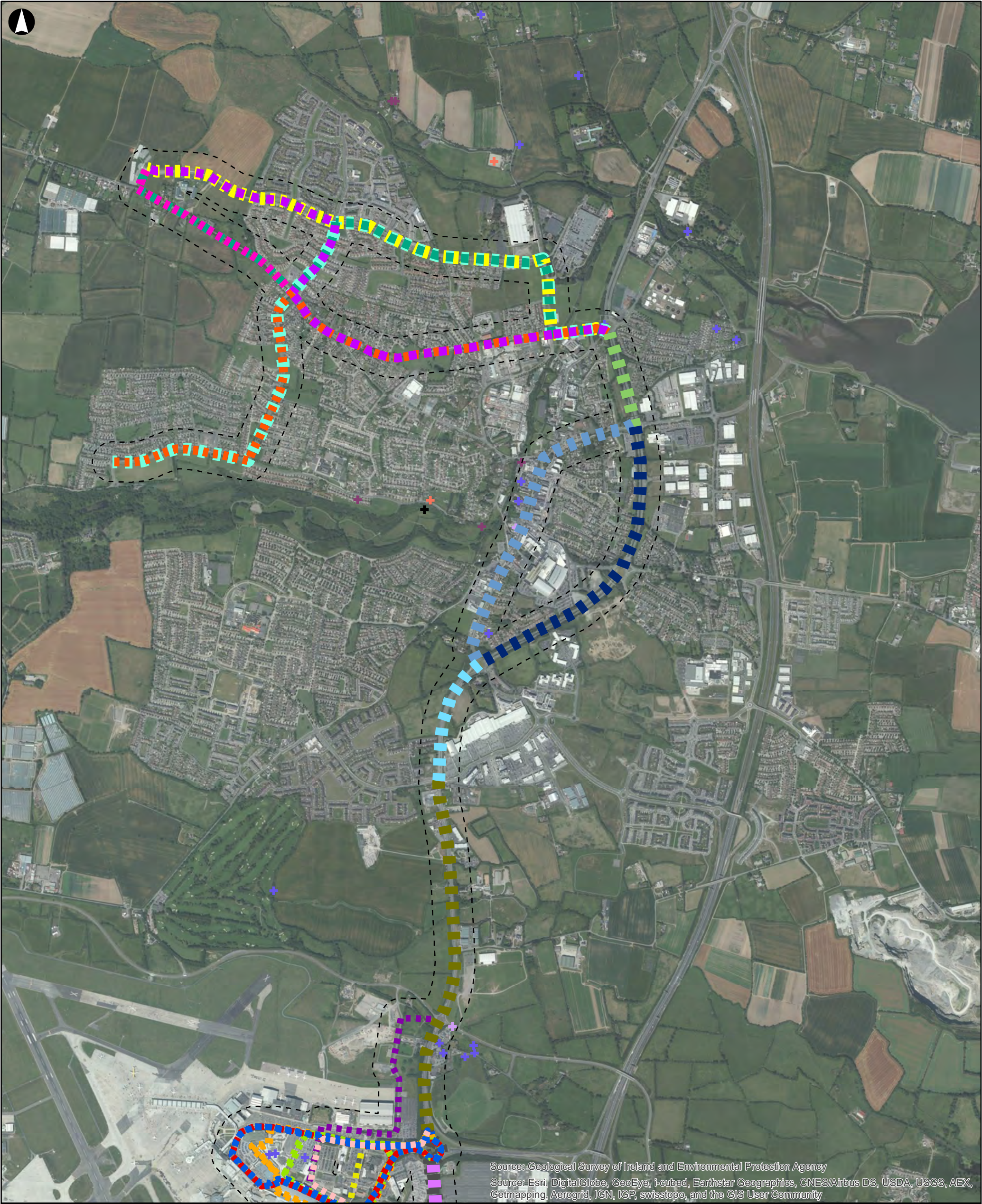
**Active and Historic Pits and Quarries (Sheet 3)**

**Not to scale**

Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.12</b>	Issue <b>P3</b>

P3	2014-10-06	JL	JB	JB
Issue	Date	By	Chkd	Appd





Source: Geological Survey of Ireland and Environmental Protection Agency  
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

N1	SY4	SW17
N2	DA7	SW16
N3	DA6	SW14
N4	DA5	PG3
S1	DA4	PG2
S2	DA3	PG1
S3	DA2	GE3
S4	DA1	GE2
F1	DA0	GE1
SY2	SW21	
SY1	SW20	

**Potential Historic Contamination**

- Others (Dock, goods shed, factory, railway station, stores, etc)
- Animal Products (Hair works)
- Chemical (Dry battery manufactory, printing works, etc)
- Drinks Industry (Breweries, distilleries, malt house, etc)
- Food (Bakery, tobacco factory, corn mill, etc)
- Metal Industry (Smithy, foundry, brasswork, etc)
- Minerals & Aggregate (Quarries, lead mines, lime kilns, etc)
- Municipal Facilities (Cleaning depot/yard, etc)
- Pulp-Paper Industry (Cooperage, saw mill, etc)
- Textile (Dye works, polish factory, clothing factory, etc)
- Oil-Gas Industry (Gas works)
- Power Generation (Electricity station)

100m zone from Route

1
2
3

P3	2014-10-08	JL	JB	JB
Issue	Date	By	Chkd	Appd

**ARUP**

Client  
**National Transport Authority**

Job Title  
**Swords / Airport to City Centre Swiftway**

Metres  
0 250 500 1,000

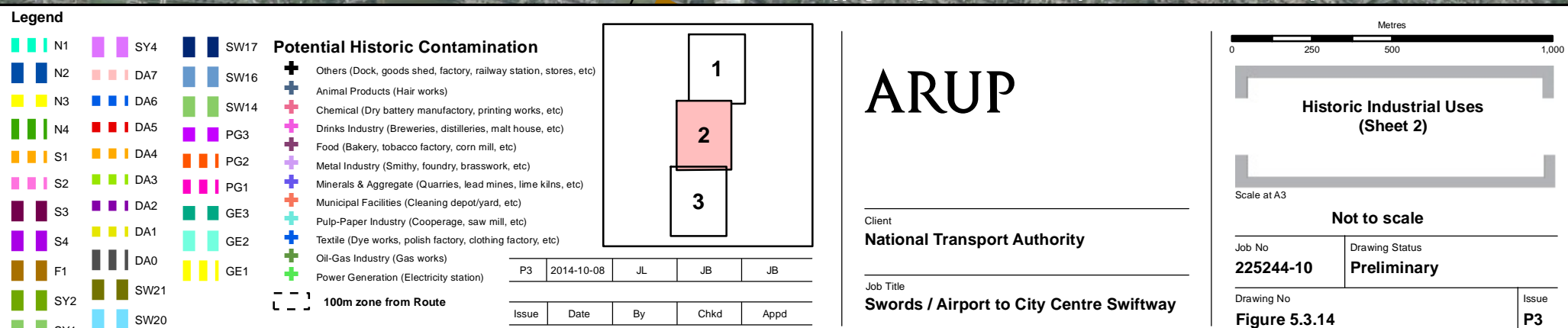
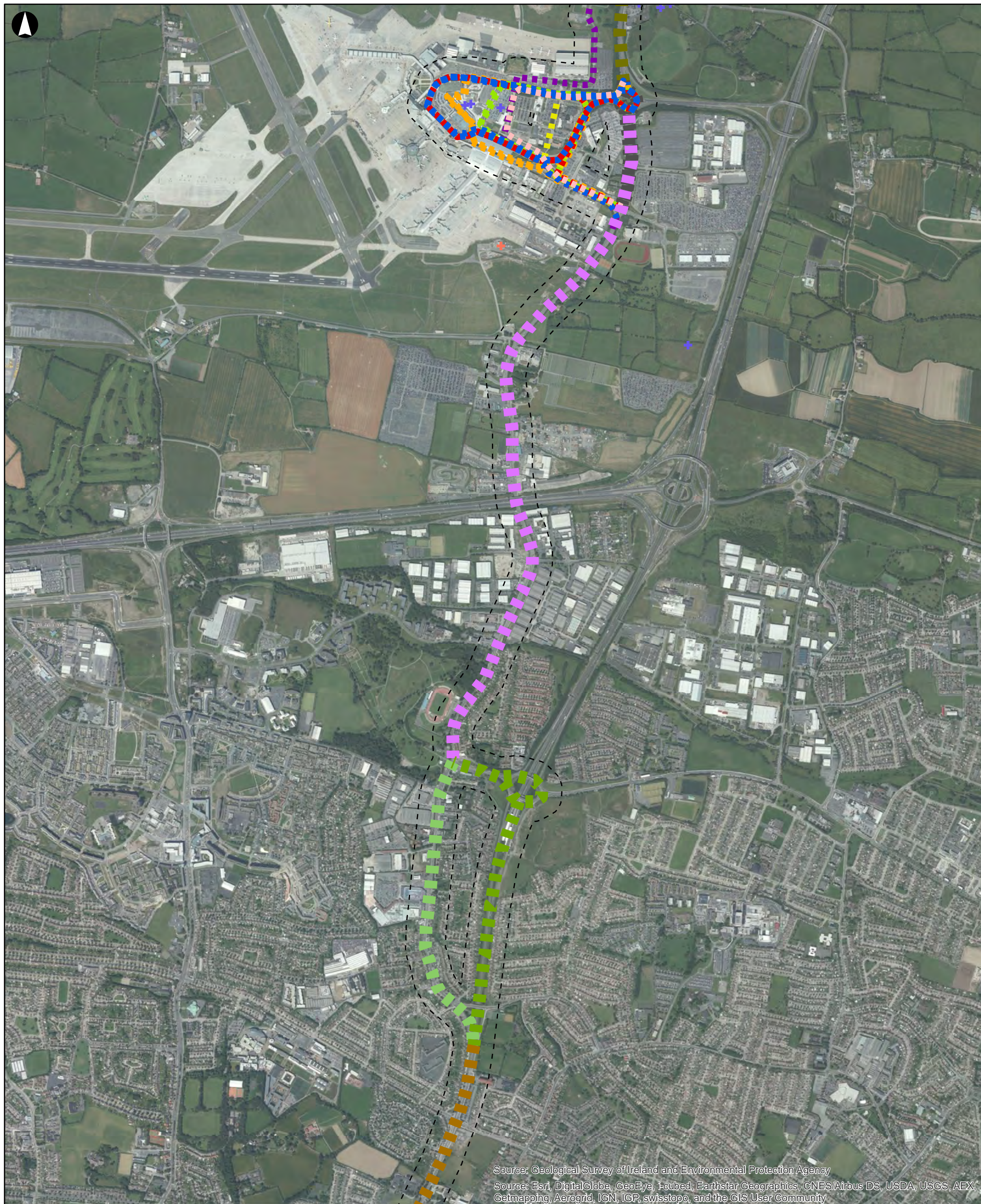
**Historic Industrial Uses (Sheet 1)**

Scale at A3

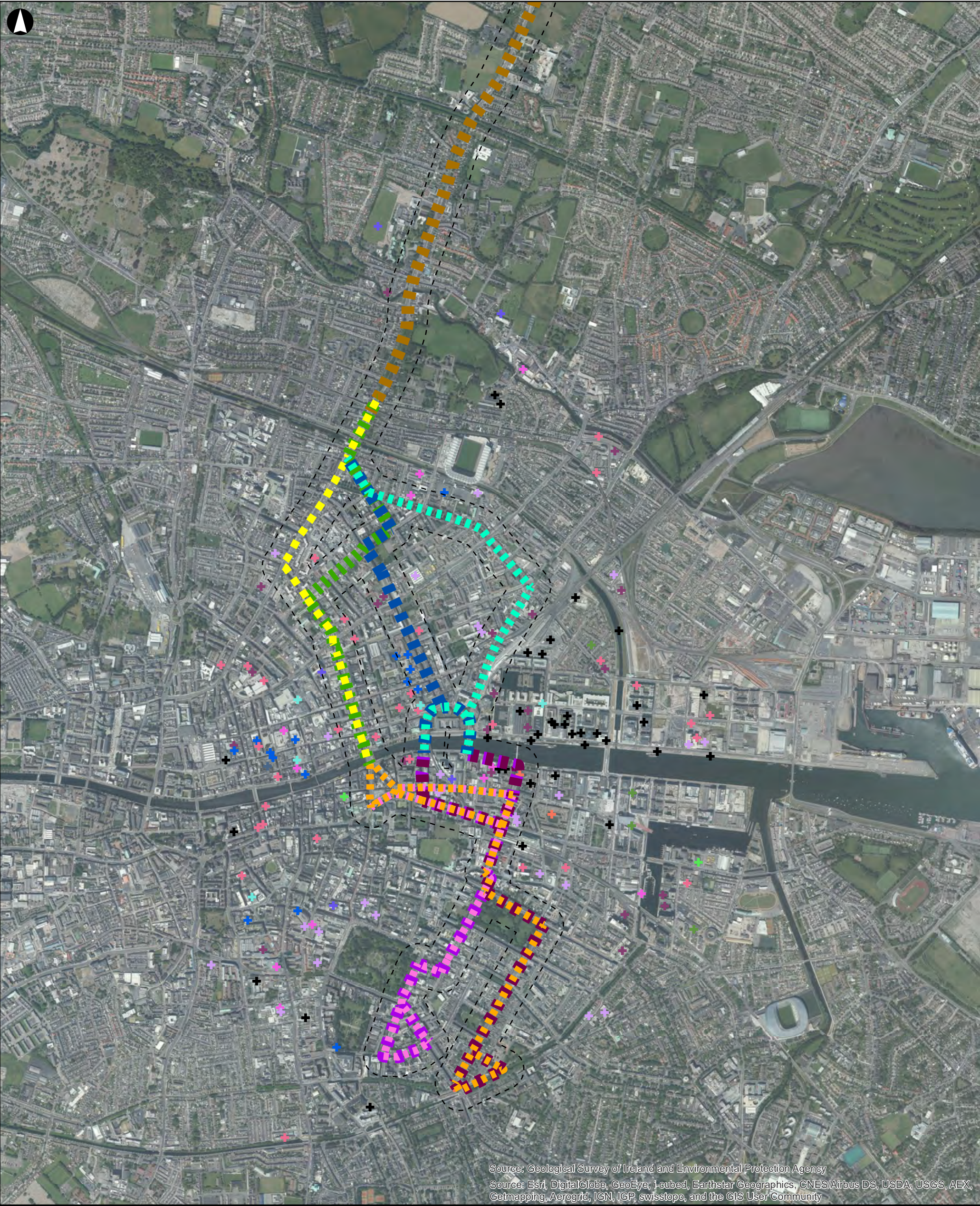
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Job No <b>225244-10</b>	Drawing Status <b>Preliminary</b>
Drawing No <b>Figure 5.3.13</b>	Issue <b>P3</b>









Source: Geological Survey of Ireland and Environmental Protection Agency  
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N1

N2

N3

N4

S1

S2

S3

S4

F1

SY2

SY1

SY4

DA7

DA6

DA5

DA4

DA3

DA2

DA1

DA0

SW21

SW20

SW17

SW16

SW14

PG3

PG2

PG1

GE3

GE2

GE1

100m zone from Route

1

2

3

Others (Dock, goods shed, factory, railway station, stores, etc)

Animal Products (Hair works)

Chemical (Dry battery manufactory, printing works, etc)

Drinks Industry (Breweries, distilleries, malt house, etc)

Food (Bakery, tobacco factory, corn mill, etc)

Metal Industry (Smithy, foundry, brasswork, etc)

Minerals & Aggregate (Quarries, lead mines, lime kilns, etc)

Municipal Facilities (Cleaning depot/yard, etc)

Pulp-Paper Industry (Cooperage, saw mill, etc)

Textile (Dye works, polish factory, clothing factory, etc)

Oil-Gas Industry (Gas works)

Power Generation (Electricity station)

ARUP

Client  
National Transport Authority

Job Title  
Swords / Airport to City Centre Swiftway

0 250 500 1,000

Metres

Historic Industrial Uses  
(Sheet 3)

Scale at A3

Not to scale

Job No  
225244-10

Drawing Status  
Preliminary

Drawing No  
Figure 5.3.15

Issue  
P3

P3	2014-10-08	JL	JB	JB
Issue	Date	By	Chkd	Appd

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