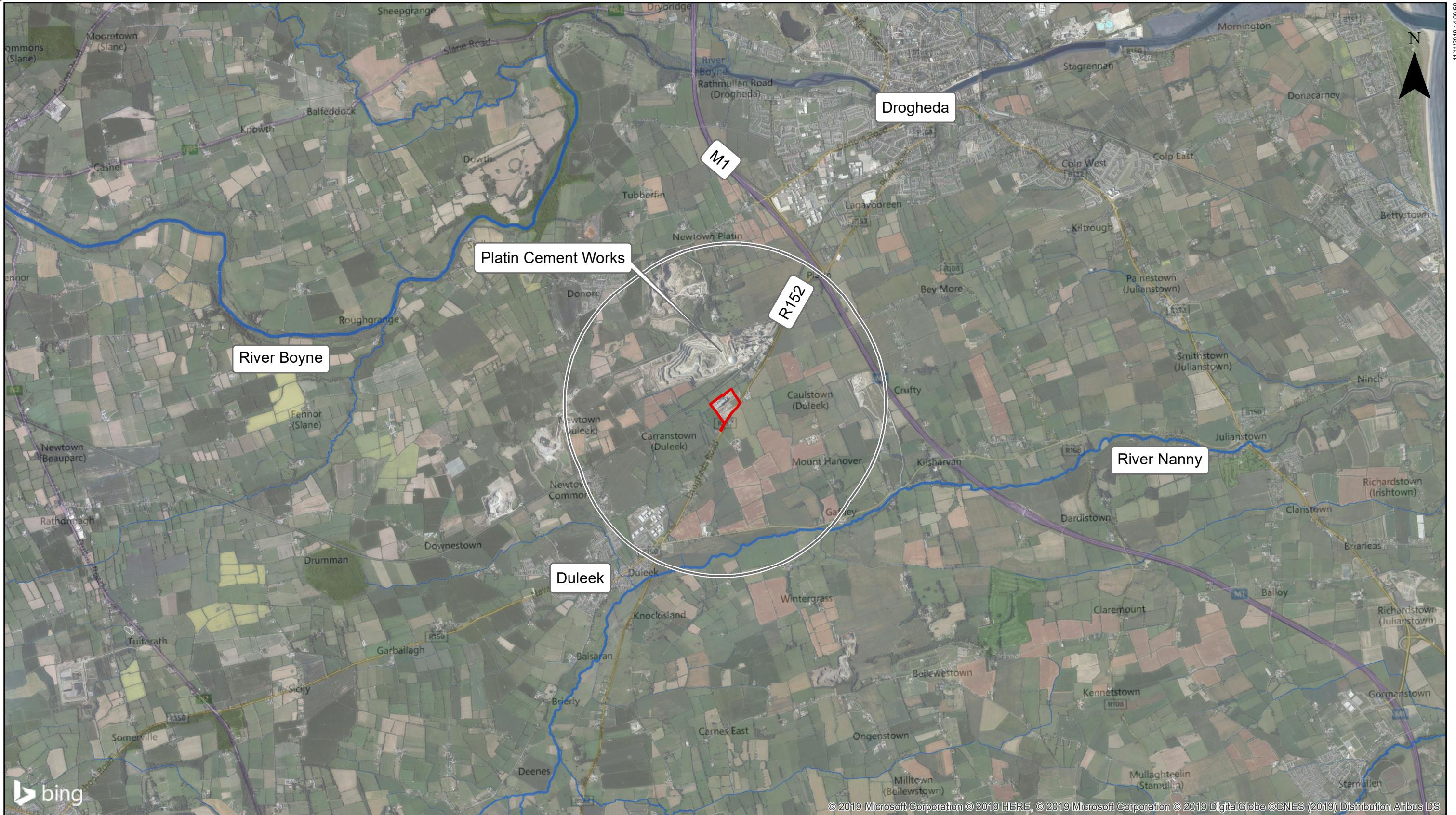


Appendix 14.1

Figures 14.1-14.9



- Legend**
- Site boundary
 - Site Boundary 2km Buffer
 - Rivers

Client				
Indaver				
P1	2019-10-25	LM	MK	GB
Issue	Date	By	Chkd	Appd

Job Title
Site Sustainability Project

Scale at A3
1:50,000

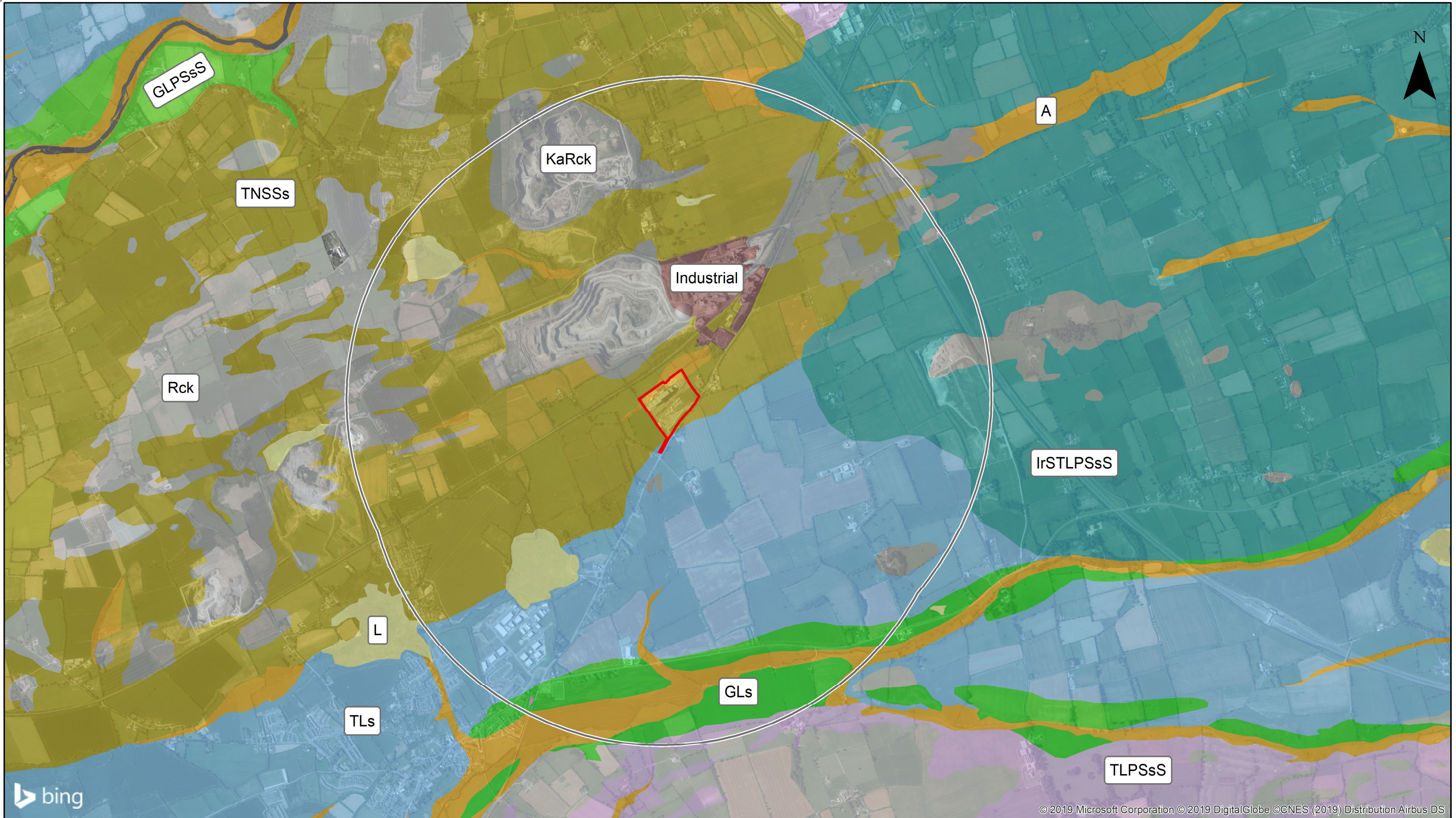
Discipline
Environmental

ARUP

50 Ringsend Road
Dublin 4, D04 T6X0
Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169
www.arup.com

Kilometers

Drawing Title		
Study Area		
Drawing Status		
PLANNING		
Job No	Drawing No	Issue
271242-00	Figure 14.1	P1



Legend

- Site boundary
- Site Boundary 2km Buffer
- Quaternary Sediments**
 - A, Alluvium
 - GLPSSs, Gravels derived from Lower Palaeozoic sandstones and shales
 - GLs, Gravels derived from Limestones
 - Industrial
 - IrSTLPSSs, Irish Sea Till derived from Lower Palaeozoic sandstones and shales
 - KaRck, Kartsified bedrock outcrop or subcrop
 - L, Lacustrine sediments
 - Rck, Bedrock outcrop or subcrop
 - TLPSSs, Till derived from Lower Palaeozoic sandstones and shales
 - TLs, Till derived from limestones
 - TNSSs, Till derived from Namurian sandstones and shales
 - Water

Client
Indaver

© Geological Survey of Ireland 2019. Geological map is copyright of the Geological Survey of Ireland.

P1	2019-10-25	LM	MK	GB
Issue	Date	By	Chkd	Appd

Job Title
Site Sustainability Project

Scale at A3
1:25,000

Discipline
Environmental

ARUP

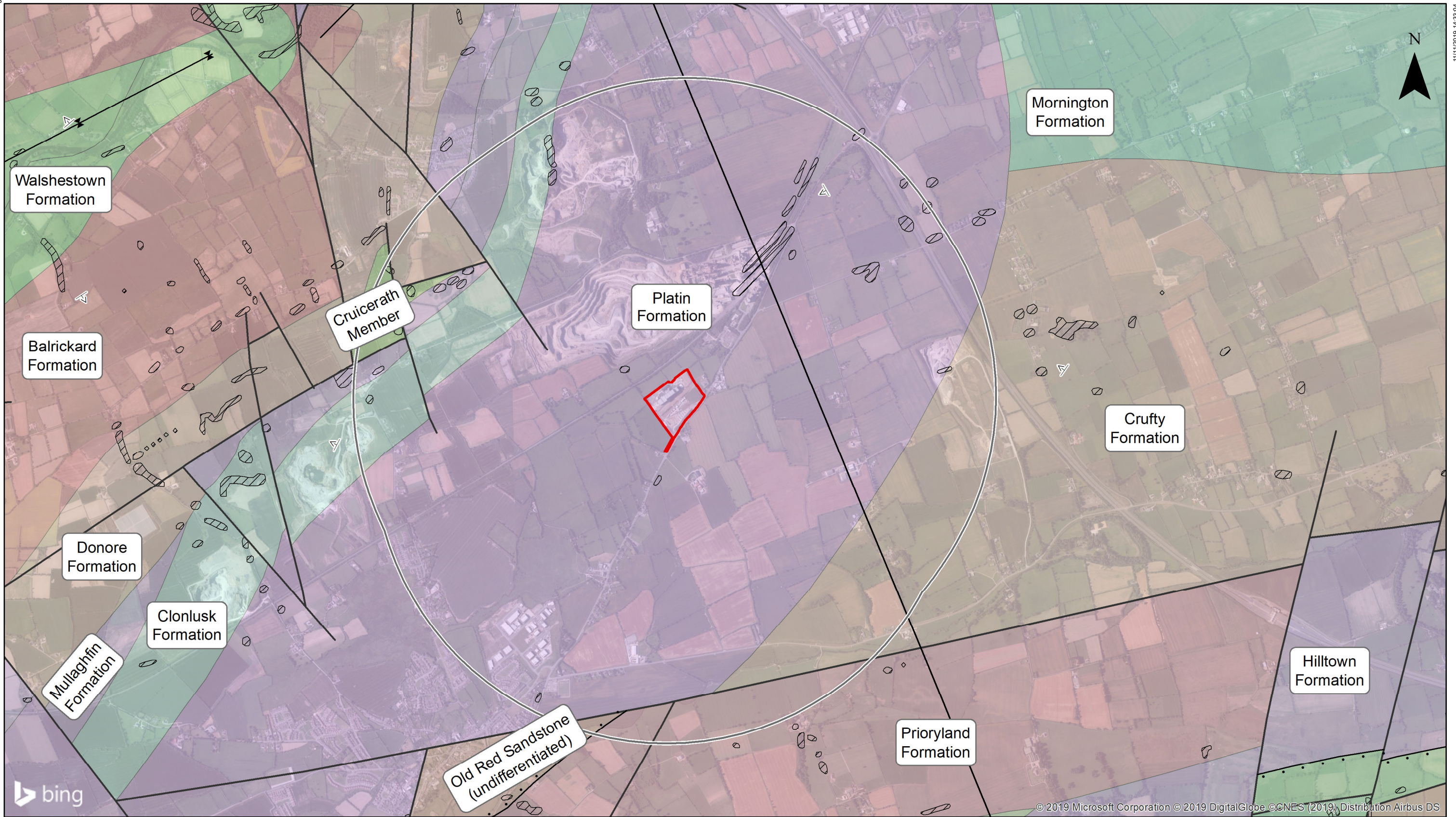
50 Ringsend Road
Dublin 4, D04 T6X0
Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169
www.arup.com

Kilometers
0 0.25 0.5 1

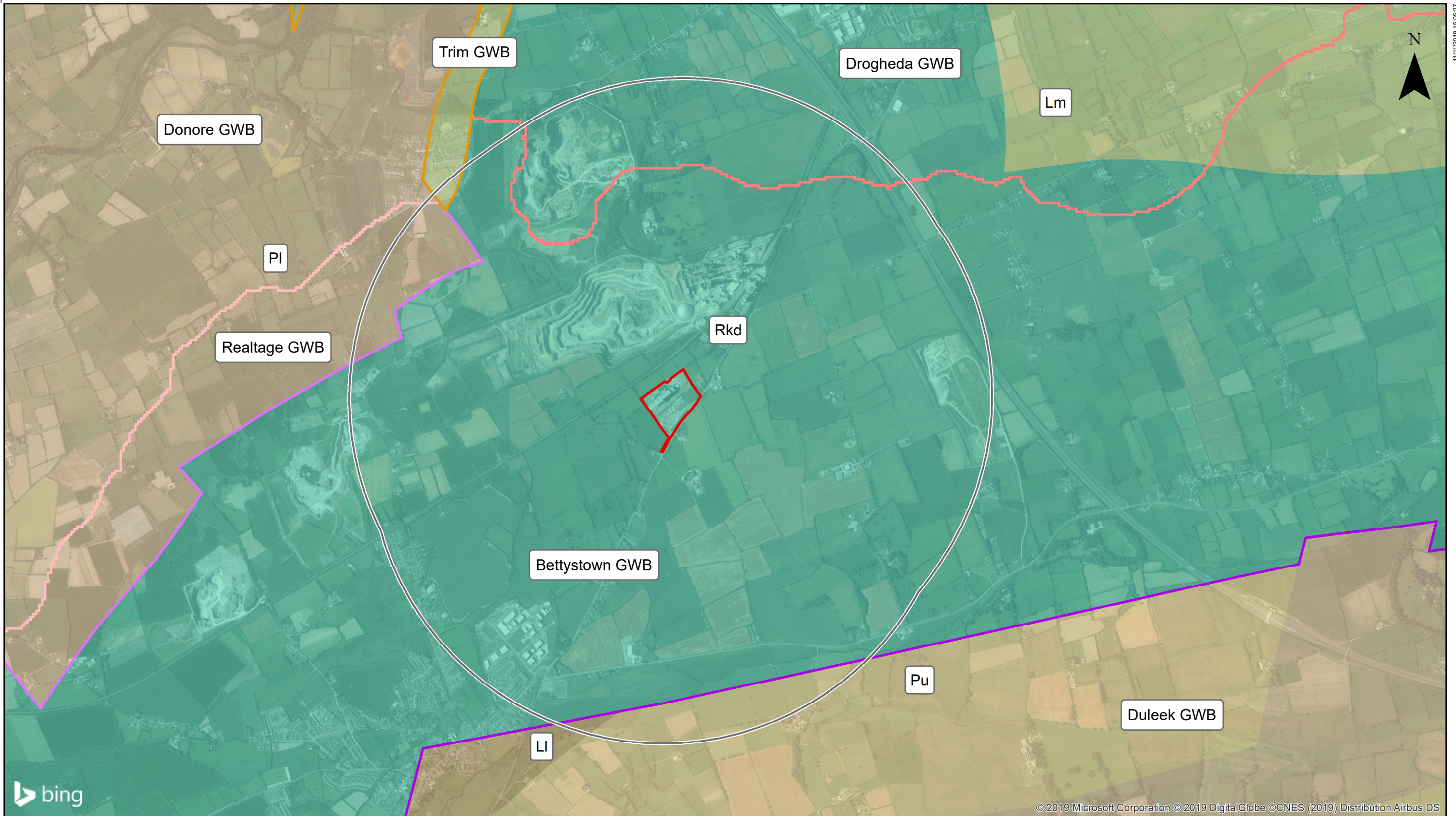
Drawing Title
Quaternary Map

Drawing Status
PLANNING

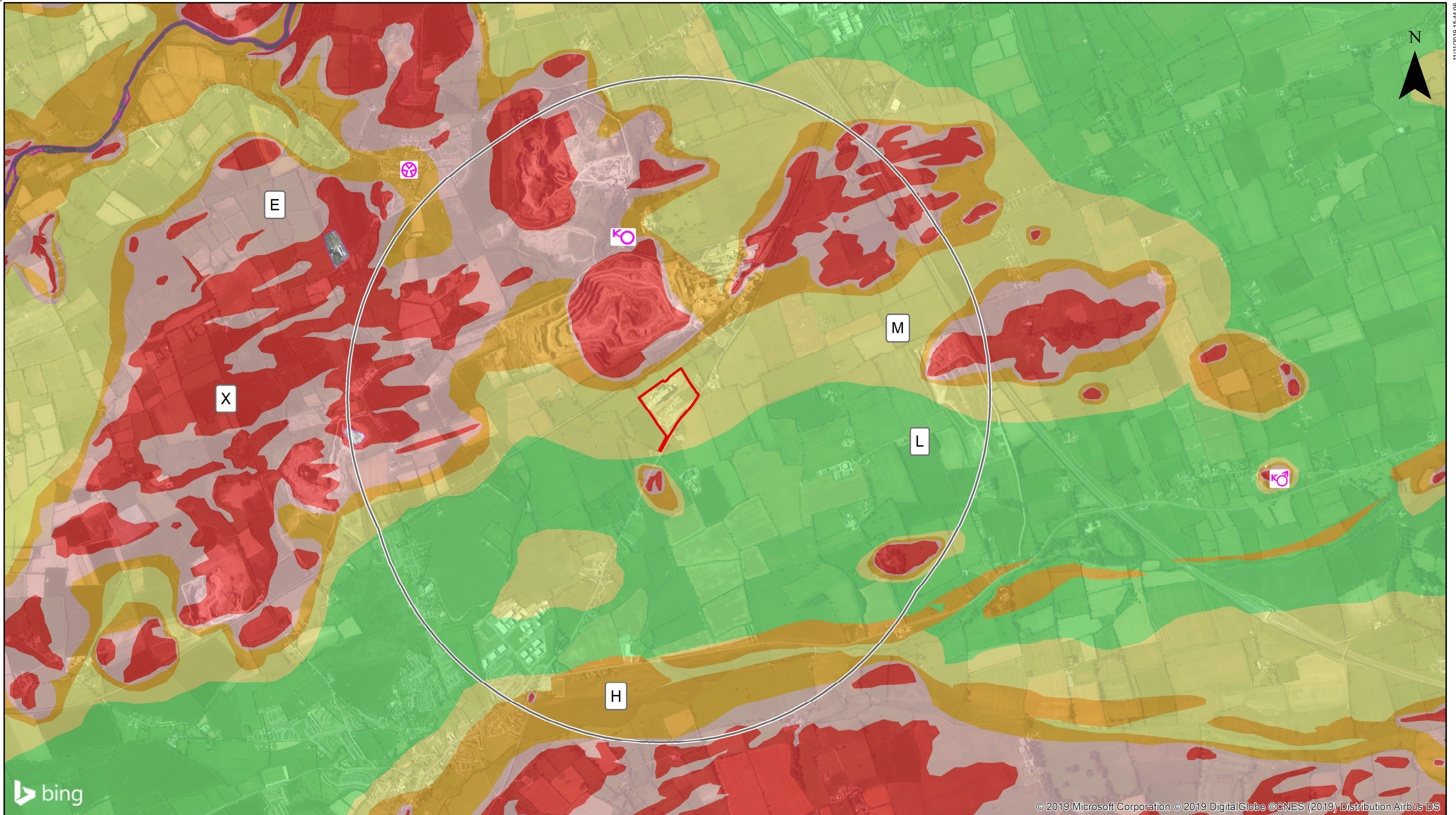
Job No 271242-00	Drawing No Figure 14.2	Issue P1
----------------------------	----------------------------------	--------------------



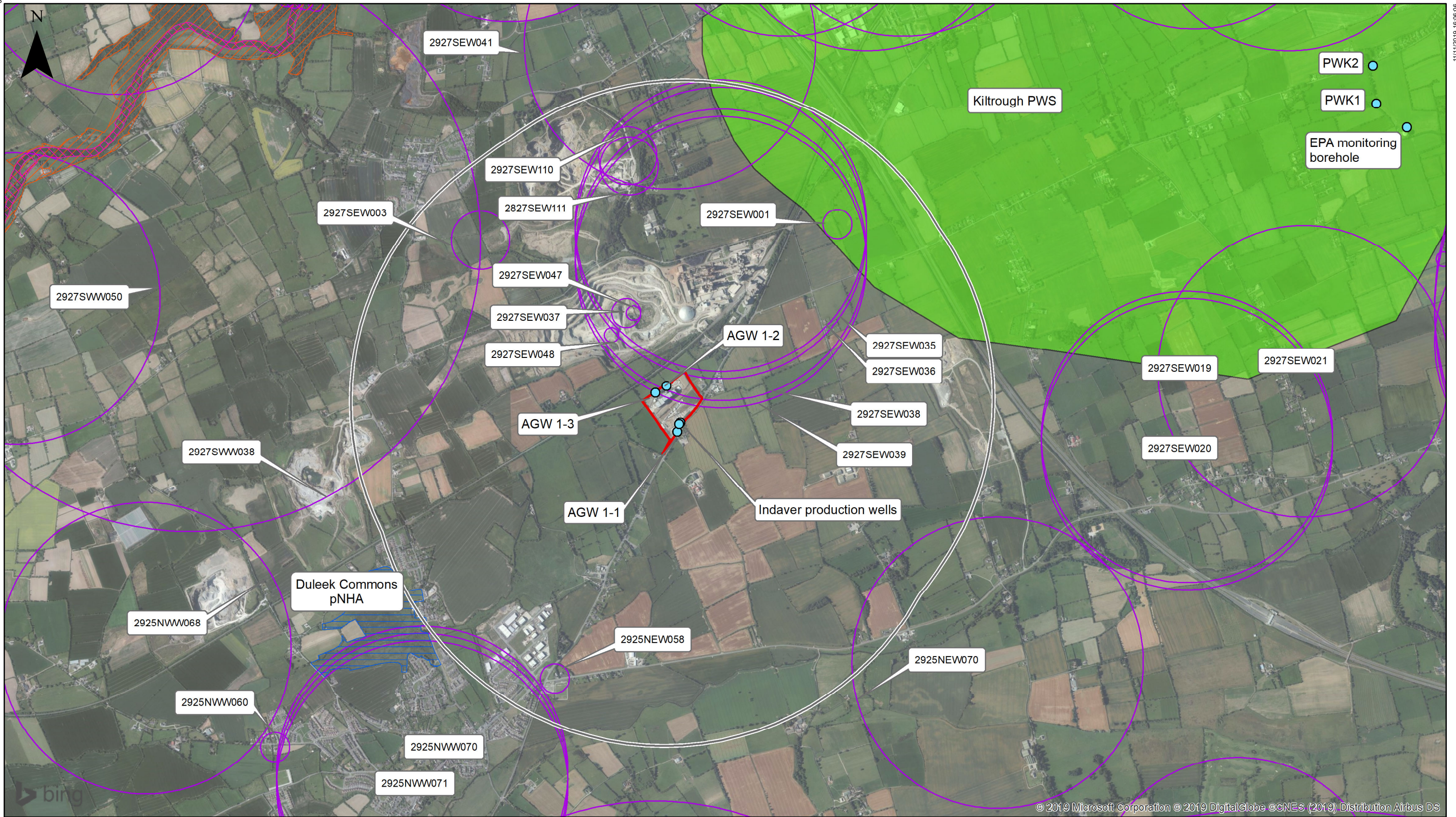
Legend <ul style="list-style-type: none"> Site boundary Site Boundary 2km Buffer Bedrock 100k Balrickard Formation Carnes Formation Clatterstown Formation Clonlusk Formation Crufty Formation Cruicerath Member Diorite Donore Formation Hilltown Formation Kennetstown Formation Loughshinny Formation Mornington Formation Mullaghfin Formation Old Red Sandstone (undifferentiated) Platin Formation PRIORITYLAND Formation Walshestown Formation Fault Ghost Line Synclinal Axis Unconformity, dots on younger side X-Section Strike and dip of bedding, right way up Bedrock Outcrop 		Client Indaver © Geological Survey of Ireland 2019. Geological map is copyright of the Geological Survey of Ireland.	Job Title Site Sustainability Project Scale at A3 1:25,000 Discipline Environmental	<p>50 Ringsend Road Dublin 4, D04 T6X0 Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169 www.arup.com</p> <p>Kilometers 0 0.25 0.5 1</p>	Drawing Title Bedrock Geology Map Drawing Status PLANNING Job No 271242-00									
		<table border="1"> <tr> <td>P1</td> <td>2019-10-25</td> <td>LM</td> <td>MK</td> <td>GB</td> </tr> <tr> <td>Issue</td> <td>Date</td> <td>By</td> <td>Chkd</td> <td>Appd</td> </tr> </table>	P1	2019-10-25	LM	MK	GB	Issue	Date	By	Chkd	Appd	Drawing No Figure 14.3	Issue P1
P1	2019-10-25	LM	MK	GB										
Issue	Date	By	Chkd	Appd										



Legend Site boundary Site Boundary 2km Buffer Groundwater Bodies Bettystown Donore Drogheda Duleek Realtage Trim		Bedrock Aquifer LI - Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones Lm - Locally Important Aquifer - Bedrock which is Generally Moderately Productive PI - Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones Pu - Poor Aquifer - Bedrock which is Generally Unproductive Rkd - Regionally Important Aquifer - Karstified (diffuse)		Client Indaver © Geological Survey of Ireland 2019. Geological map is copyright of the Geological Survey of Ireland.	Job Title Site Sustainability Project Scale at A3 1:25,000 Discipline Environmental	 50 Ringsend Road Dublin 4, D04 T6X0 Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169 www.arup.com	Drawing Title Bedrock Aquifer Map Drawing Status PLANNING Job No 271242-00	Drawing No Figure 14.4 Issue P1
---	--	--	--	--	---	---	--	--



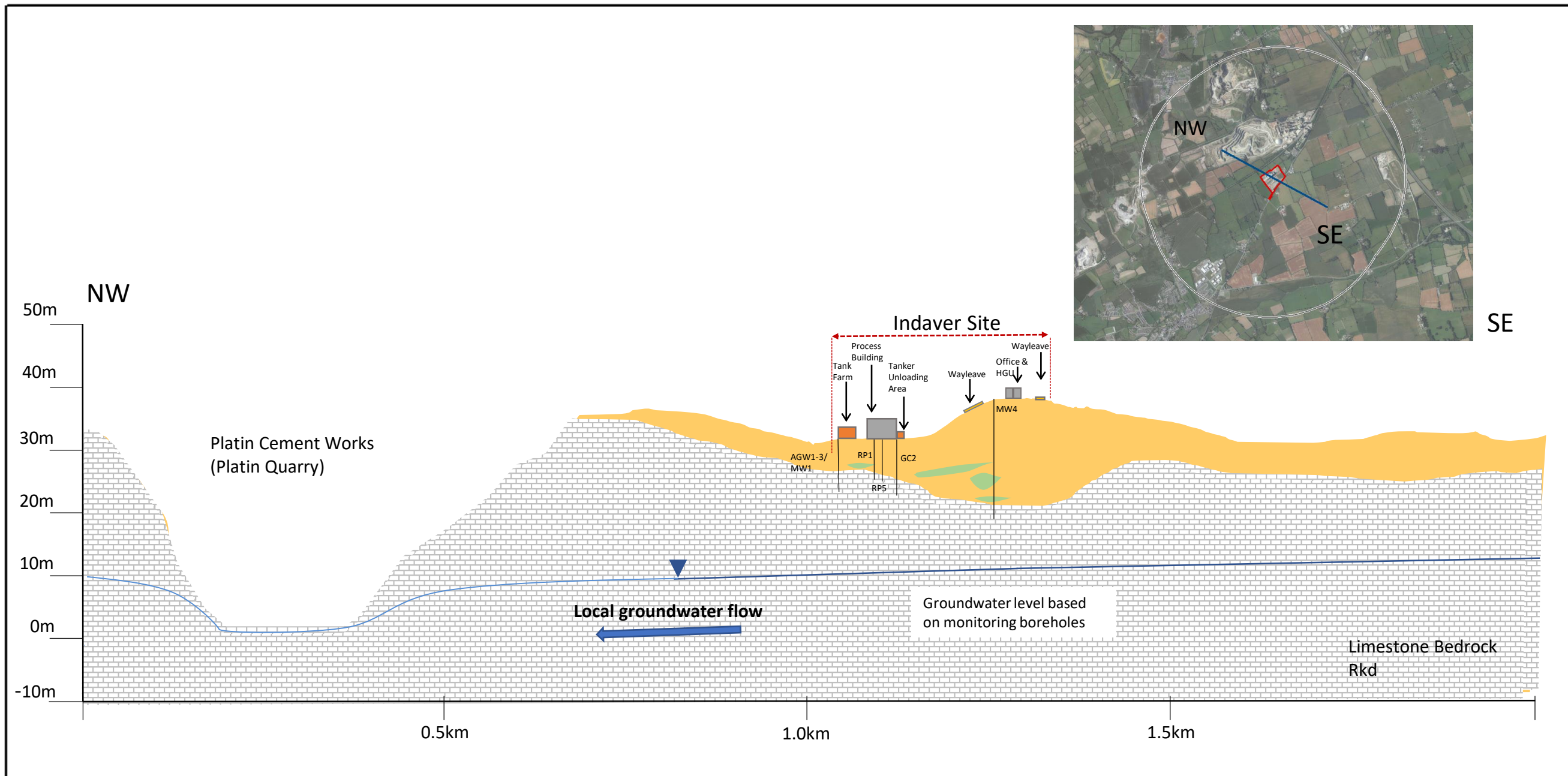
Legend Site boundary Site Boundary 2km Buffer		Karst Borehole Enclosed Depression Spring		Aquifer Vulnerability X - Bedrock at or near surface or karst E - Extreme H - High M - Moderate L - Low Water		Client Indaver © Geological Survey of Ireland 2019. Geological map is copyright of the Geological Survey of Ireland.		Job Title Site Sustainability Project Scale at A3 1:25,000 Discipline Environmental		 50 Ringsend Road Dublin 4, D04 T6X0 Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169 www.arup.com		Drawing Title Aquifer Vulnerability Map Drawing Status PLANNING Job No 271242-00		Drawing No Figure 14.5		Issue P1	
--	--	---	--	--	--	--	--	---	--	---	--	--	--	----------------------------------	--	--------------------	--



Legend <ul style="list-style-type: none"> Site boundary Site Boundary 2km Buffer NPWS Protected Areas <ul style="list-style-type: none"> Special Protection Areas Special Area of Conservation Proposed Natural Heritage Areas 		Groundwater Wells and Springs (GSI Database) <ul style="list-style-type: none"> GSI Groundwater Wells and Springs. Circle diameter indicates accuracy of well location. 		Groundwater Supply Source Protection Zone <ul style="list-style-type: none"> SO-Outer Protection Area Indaver Groundwater Boreholes 		Client Indaver © Geological Survey of Ireland 2019. Geological map is copyright of the Geological Survey of Ireland.	Job Title Site Sustainability Project Scale at A3 1:25,000 Discipline Environmental	 50 Ringsend Road Dublin 4, D04 T6X0 Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169 www.arup.com	Drawing Title Hydrogeological Constraints Map Drawing Status PLANNING Job No 271242-00	Drawing No Figure 14.6 Issue P1
--	--	--	--	---	--	---	--	---	--	--



<p>Legend</p> <ul style="list-style-type: none"> Site boundary Site_Boundary_2km_Buffer Geological Heritage (Audited Sites) <p>Mineral Location</p> <ul style="list-style-type: none"> Non-metallic Crushed Rock <p>Active Quarries</p>	<p>Client</p> <p>Indaver</p> <p>© Geological Survey of Ireland 2019. Geological map is copyright of the Geological Survey of Ireland.</p> <table border="1"> <tr> <td>P1</td> <td>2019-10-29</td> <td>LM</td> <td>MK</td> <td>GB</td> </tr> <tr> <td>Issue</td> <td>Date</td> <td>By</td> <td>Chkd</td> <td>Appd</td> </tr> </table>	P1	2019-10-29	LM	MK	GB	Issue	Date	By	Chkd	Appd	<p>Job Title</p> <p>Site Sustainability Project</p> <p>Scale at A3</p> <p>1:25,000</p> <p>Discipline</p> <p>Environmental</p>	<p>ARUP</p> <p>50 Ringsend Road Dublin 4, D04 T6X0 Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169 www.arup.com</p> <p>Kilometers</p> <p>0 0.25 0.5 1</p>	<p>Drawing Title</p> <p>Geological Constraints Map</p> <p>Drawing Status</p> <p>PLANNING</p> <table border="1"> <tr> <td>Job No</td> <td>Drawing No</td> <td>Issue</td> </tr> <tr> <td>271242-00</td> <td>Figure 14.7</td> <td>P1</td> </tr> </table>	Job No	Drawing No	Issue	271242-00	Figure 14.7	P1
P1	2019-10-29	LM	MK	GB																
Issue	Date	By	Chkd	Appd																
Job No	Drawing No	Issue																		
271242-00	Figure 14.7	P1																		



Legend

- The Site
- Proposed Building
- Existing Building
- 110kV Exclusive Zone
- Water Table
- Boulder Clay
- Potential Sand/Gravel Lens
- Limestone
- Groundwater flow direction (north-west)

*Drawing is for illustrative purposes only.
Not to scale*

Ordnance Survey Ireland License No. EN 0002812
© Ordnance Survey Ireland/ Government of Ireland

P1	21/11/2019	LMG	MK	GB
----	------------	-----	----	----

Issue	Date	By	Chkd	Appd
-------	------	----	------	------



ARUP

50 Ringsend Road
Dublin 4
Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169
www.arup.com

Client

Indaver

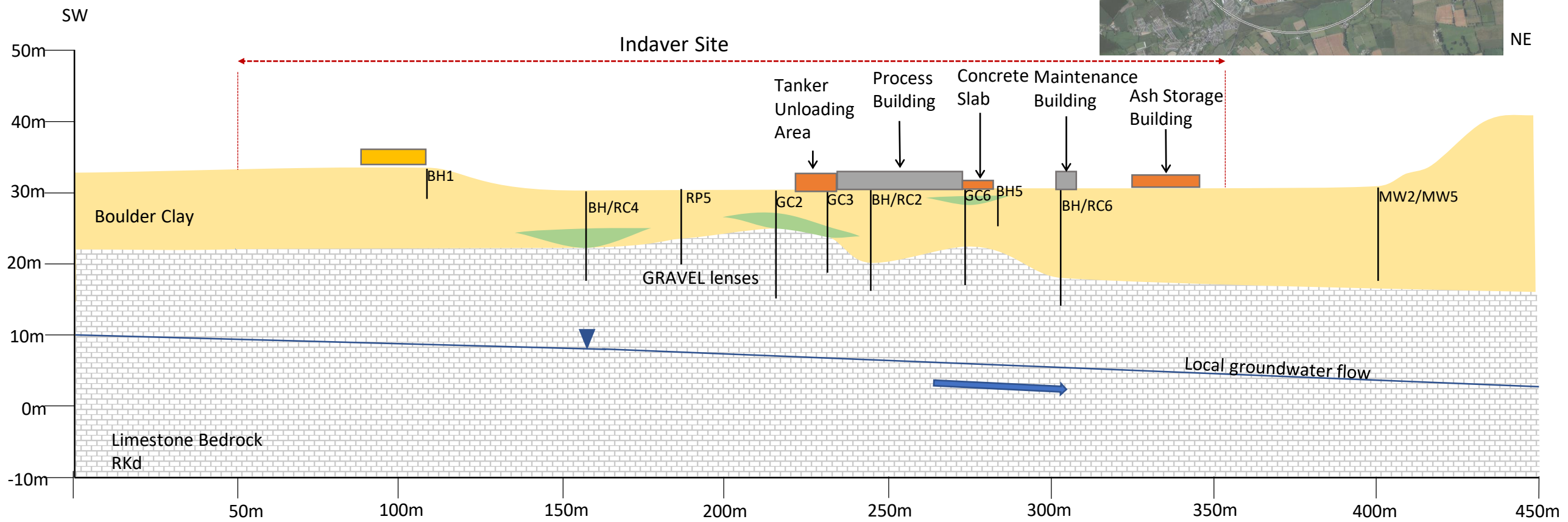
Job Title

**Indaver
Environmental Impact Assessment**

**Regional Conceptual Site Model
of Current Geological and
Hydrogeological Environment**

Job No 271424-00	Drawing Status Issue
----------------------------	--------------------------------

Drawing No Figure 14.8	Sheet No 11
----------------------------------	-----------------------



Legend

- The Site
- Proposed Building
- Existing Building
- 110kV Exclusive Zone
- Water Table
- Boulder Clay
- Potential Sand/Gravel Lens
- Limestone
- Groundwater flow direction (north-west)

*Drawing is for illustrative purposes only.
Not to scale*

Ordnance Survey Ireland License No. EN 0002812
© Ordnance Survey Ireland/ Government of Ireland

I1	21/11/2019	LMG	MK	GB
----	------------	-----	----	----

Issue	Date	By	Chkd	Appd



ARUP

50 Ringsend Road
Dublin 4
Tel +353 (0)1 233 4455 Fax +353 (0)1 668 3169
www.arup.com

Client

Indaver

Job Title

**Indaver
Environmental Impact Assessment**

**Local Conceptual Site Model of
Current Geological and
Hydrogeological Environment**

Job No 271424-00	Drawing Status Issue
----------------------------	--------------------------------

Drawing No Figure 14.9	Issue I1
----------------------------------	--------------------