

Minerals Safeguarding Development Plan Document

December 2018



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Note: This document should be read in conjunction with the Cornwall Local Plan: Strategic Policies, Site Allocations DPD and any relevant Neighbourhood Development Plans

Images courtesy of Imerys Minerals Limited and Cornwall Council

Foreword

Mining and quarrying have played a key role in Cornwall since prehistoric times, contributing to its heritage, geodiversity and communities.

Despite the decline in mining and the reduction in china clay operations over the recent decades, mineral extraction and processing continue to play an important role in Cornwall supplying materials for local buildings, roads and infrastructure as well as minerals for sale outside of Cornwall such as china clay. With a renewed interest in mining for specialist minerals, Cornwall is once again becoming a hub for mineral exploration and processing. The Minerals Safeguarding DPD emphasises the need to conserve mineral resources and reminds us that we are the guardians of the future of mining and quarrying in Cornwall, what we do now in terms of development and safeguarding our mineral resources will influence what is possible in the future.



Raglavar

Balweyth ha mengleudhyans re's teva rann bosek yn Kernow a-dhia'n osow

kynsistorek, ow kevri dh'y ertach, dordhiverseth ha kemenethow. Yn despit dhe'n difyk a valweyth ha'n leheans a oberyans pri gwynn nans yw nebes degvledhynnyow, estennans hag argerdhans moon a's teves rann bosek hwath yn Kernow ow provia devnydhyow rag dreheviansow, fordhow hag isframweyth leel, keffrys ha'n moon dhe wertha yn-mes a Gernow kepar ha pri gwynn. Gans nowydhheans a les dhe balas monyow arbeniger, yma Kernow unnweyth arta ow tos ha bos both rag hwithrans hag argerdhans moon. An Skriften Dowl Displegyans Difres Monyow a boslever bos edhomm a witha asnodhow moon hag y'gan kovha agan bos ni gwithoryon valweyth ha mengleudhyans yn Kernow rag an termyn a dheu, hag oll a wren lemmyn rag displegya ha gwitha agan asnodhow moon a dhelenow oll a yllir y wul y'n termyn a dheu.

Councillor Egerton - Portfolio holder for Planning and Economy

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Introduction

1. Minerals are essential for economic development, our quality of life and the development of sustainable communities. Cornwall has a wealth of mineral resources which have been exploited throughout the centuries. Mining and quarrying have shaped Cornwall's landscape, natural environment, economy, settlement pattern and transport routes. Minerals remain an important natural resource for the Cornish economy and need to be managed carefully and used efficiently.
2. Minerals can only be worked where they occur, so if development such as housing takes place above or close to a mineral resource it is likely to sterilise that mineral resource. Safeguarding of mineral resources and infrastructure is important to ensure that minerals are available for future generations.
3. The purpose of the Minerals Safeguarding Development Plan Document (DPD) is to set out those areas of mineral resources and infrastructure that are to be safeguarded. Safeguarding does not attempt to predict how much mineral resources will be needed over the plan period; instead it focuses on the viable mineral resources, taking into account evidence of them being a proven resource. It is important to note that there is no presumption in favour of minerals development within a Mineral Safeguarding Area, equally there is no presumption that non-mineral development within a Mineral Safeguarding Area is automatically precluded. Cornwall Council does not rule out the possibility of safeguarding further sites in the future if clear evidence of substantial resources capable of being worked are identified.
4. The Minerals Safeguarding DPD supports the delivery of policies in the Cornwall Local Plan. It is essential that the Local Plan and accompanying development plan documents are read as a whole, all policies will be considered together in decision making. Further information on the role of the Minerals Safeguarding DPD is set out in the section "Policy Context".

Sustainability Appraisal

5. The DPD is accompanied by a Sustainability Appraisal (SA) Report, available at www.cornwall.gov.uk/mineralsdpd and sets out the conclusions from the assessment of the policy within this document.
6. The SA concluded that there was unlikely to be any negative effects on the sustainability appraisal objectives. Positive effects could potentially impact upon minerals and geodiversity objectives, historic environment and design objectives as well as transport objectives.

Habitats Regulations Assessment

7. A Habitats Regulations Assessment (HRA) Screening Report accompanies the DPD; it is available at www.cornwall.gov.uk/mineralsdpd and sets out the results of the HRA screening process for the Minerals Safeguarding DPD.
8. The HRA concludes that the policy within this DPD could be screened out, as it is unlikely to have any effect on Natura 2000 sites.

Supporting Evidence

9. The Minerals Safeguarding DPD is also accompanied by a range of technical evidence reports including:
 - Mineral resource and infrastructure assessment
 - Mineral safeguarding site profiles
 - Aggregates
 - Building stone
 - The Building Stones of Cornwall – the identification of heritage quarries
 - China clay
 - Metals
 - Infrastructure
 - Minerals Cross-Boundary Report
 - Strategic Flood Risk Assessment

Policy Context

National Planning Policy Framework

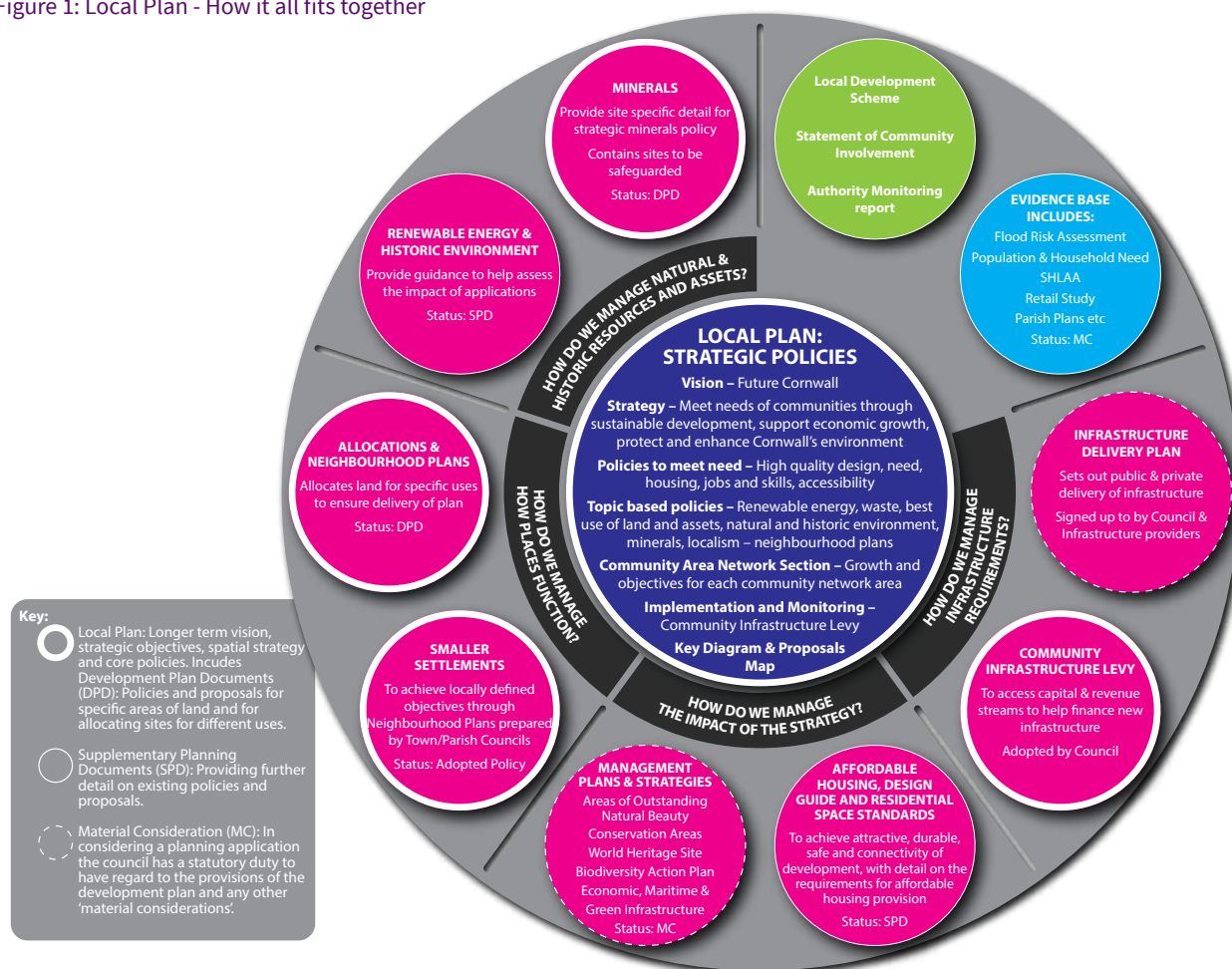
10. The National Planning Policy Framework (NPPF) states that local planning authorities should adopt appropriate policies in order that known locations of specific mineral resources of local and national importance are not needlessly sterilised by non-mineral development.
11. The Framework also goes on to say that existing, planned and potential rail heads, rail links, wharfage and associated storage, handling and processing facilities for the transport of minerals should be safeguarded. As well as existing, planned and potential sites for concrete batching and other materials and the handling, processing and distribution of recycled and secondary aggregates.
12. The Planning Practice Guide emphasises the need for mineral safeguarding areas to use the best available information on the location of all mineral resources in the area. It also states that clear development management policies should be adopted to set out how proposals for non-minerals development in the mineral safeguarding areas will be handled. Policies should also be included which indicate what action applicants should take to address the risk of losing the ability to extract the resource, this could include prior extraction.

Cornwall Local Plan

13. The Minerals Safeguarding DPD supports the delivery of policies in the adopted Cornwall Local Plan. Figure 1 Cornwall Local Plan - How it All Fits Together sets out the role of the DPD within the Local Plan for Cornwall. The Local Plan contains policies on many different issues such as housing, transport, environment, historic environment and flooding. It is essential that the Local Plan and accompanying development plan documents are read as a whole, all policies will be considered together in decision making.

14. The Local Plan is available at <https://www.cornwall.gov.uk/localplancornwall>

Figure 1: Local Plan - How it all fits together



15. The Cornwall Local Plan Strategic Policies contains two specific minerals policies; policy 17 sets out the general principles of minerals development to enable a sustainable minerals industry. Policy 18 sets out the strategic principles for safeguarding mineral resources and infrastructure, and is reproduced below for information.

Policy 18: Minerals safeguarding

1. Important mineral resources and reserves and existing, planned and potential bulk transport, storage, handling and processing facilities and sites shall be safeguarded from sterilisation by other forms of incompatible development.
2. Mineral Safeguarding Areas will be identified for the following minerals resources and reserves;
 - aggregates (both primary and secondary),
 - china clay,
 - building and ornamental stone (including roofing and heritage materials) and
 - metals (including relevant shafts and adits),

Policy 18: Minerals safeguarding (*continued*)

3. Mineral Safeguarding Areas will be identified for the following existing, planned and potential mineral infrastructure;

- key concrete batching and other products and roadstone coating,
- storage, handling, processing and distribution of minerals,
- the bulk transport of minerals by rail, sea (ports) or haul roads.

The Cornwall Minerals Safeguarding Development Plan will develop detailed policy and identify sites for safeguarding minerals, mineral resources and associated facilities for transport, storage, handling and processing for onward transport by rail or sea. Key sites used for the batching / manufacture of concrete products and coated materials will also be identified for safeguarding as well as sites for processing and the distribution of substitute recycled and secondary aggregate materials. Policy will also be developed to encourage prior extraction where appropriate.

Spatial Context

Minerals in Cornwall

16. The geology of Cornwall is very varied, with both igneous (e.g. granite, elvan, dolerite) and altered sedimentary rocks (shale/slate and sandstone-locally known as killas) combined with extrusive volcanic rocks (basalt). All apart from the granite have been metamorphosed (changed by heat and pressure) to a greater or lesser extent. At the Lizard there are a collection of rocks unusual to the British Isles caused by an ancient ocean floor having been obducted (thrust up) to the surface.

17. Cornwall has a wealth of mineral resources which have been exploited throughout the centuries. Some of these minerals are of local importance for construction purposes and others, such as china clay, are of international significance.



Seed sculpture, DeLank Quarry

18. Figure 2. Geology and Mineral Resources on page 6 shows the geology of Cornwall along with the proposed Mineral Safeguarding Areas.

19. The following mineral sectors are or have been exploited in Cornwall.

Aggregates

20. Igneous rock and sandstone are worked for primary aggregate in Cornwall. China clay by-products and other mineral by-products are used as secondary aggregates.

21. The types of granite worked for aggregate vary considerably in their texture and appearance,

but most are coarse-grained biotite/muscovite granites, with some prominent large potassium feldspar crystals. Fine-grained granites are less common. There is considerable variation in the strength of rocks from one site to another. The technical properties of basic igneous rocks also vary and therefore so do their suitability for use as an aggregate.

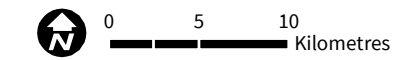


Greystone Quarry

22. Variations in the sandstones have a bearing on the physical properties and therefore their aggregate potential. Despite apparently an extensive resource, relatively little sandstone is produced in Cornwall, perhaps reflecting the high cost of working the resource. Some high specification sandstones occur in the late Carboniferous Culm Measures of north Cornwall, which have shown considerable resistance to polishing and wear.
23. There are very limited resources of sand and gravel from natural primary deposits. Production ceased in 2009 when the only permitted primary sand and gravel site closed; the site has subsequently been restored. Small outcrops of Tertiary and Quaternary sediments (on the Lizard and around St Agnes Head) have been worked in the past. Beach and dune sands have also been worked in the past, mainly as an alkaline soil conditioner. This material is not suitable for use as building sand.
24. An important secondary source of sand and gravel is from the production of china clay, which includes rock waste, sand, overburden and micaceous residues. The material produced can be used for a range of purposes including block making, concreting sand or bulk fill and is frequently regarded as an equivalent material to quarried primary aggregate. There is potential for greater exploitation of the estimated 230 million tonnes of useable secondary aggregate resource in the St Austell China Clay area (embedded in china clay waste tips). Other mineral extraction also produces by-products which can be used as secondary aggregate; in particular slate is sold for use as construction fill and sub-base material.
25. In Cornwall, the primary crushed rock aggregates landbank is between 133 and 140 years depending upon the average annual production used to calculate the landbank. This greatly exceeds the national policy requirement for a crushed rock landbank of at least 10 years to be maintained. National policy requires a landbank of at least seven years to be maintained for sand and gravel, however, it is acknowledged that Cornwall does not have any primary sand and gravel resources. Devon and Somerset County Councils work closely with Cornwall to jointly monitor sand and gravel resources across the three counties. A co-operative approach between these counties is underpinned by the 2014 Memorandum of Understanding on “Steady and Adequate Supply of Sand and Gravel” (initiated by Somerset County Council and signed by Cornwall Council, Devon County Council, Dorset County Council, Exmoor National Park Authority, Gloucestershire County Council and Wiltshire County Council) and the 2015 “Sand and Gravel in Cornwall, Devon and Somerset” Memorandum of Understanding (initiated

Figure 2. Geology and Mineral Resources

British Geological Survey



Geological faults

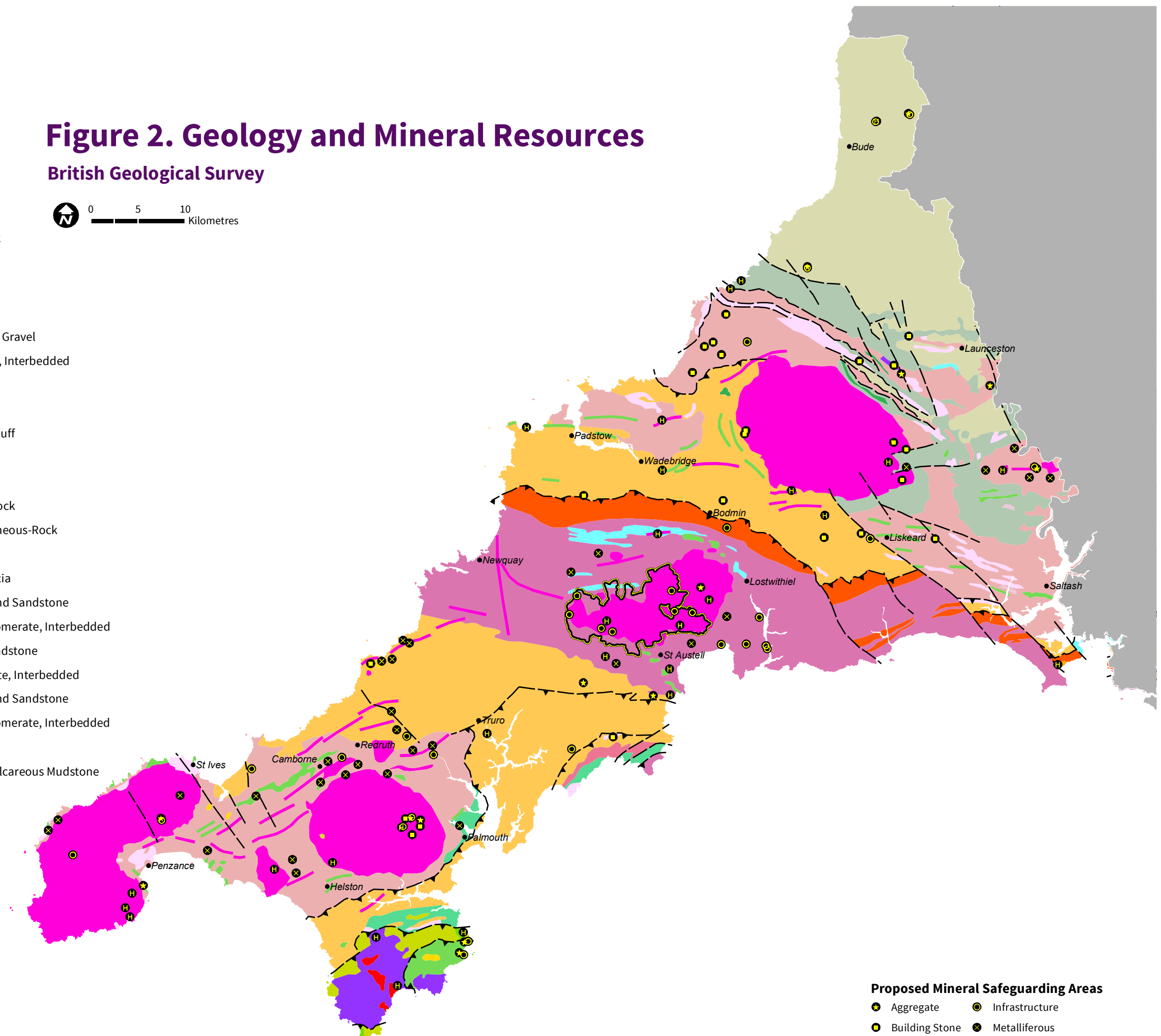
- — — Fault At Rockhead
- ▲ — Thrust Fault; Barbs On Hanging Wall Side

Geological dykes

- Unnamed Igneous Intrusion, Carboniferous To Permian - Felsic-Rock
- Unnamed Igneous Intrusion, Devonian - Mafic Igneous-Rock

Geological bedrock

- Neogene Rocks (Undifferentiated) - Gravel, Sand, Silt And Clay
- Eocene To Miocene Rocks (Undifferentiated) - Clay, Silt, Sand And Gravel
- Permian Rocks (Undifferentiated) - Sandstone And Conglomerate, Interbedded
- Unnamed Extrusive Rocks, Permian - Felsic Lava
- Holsworthy Group - Mudstone, Siltstone And Sandstone
- Unnamed Extrusive Rocks, Carboniferous - Mafic Lava And Mafic Tuff
- Unnamed Extrusive Rocks, Carboniferous - Mafic Lava
- Unnamed Extrusive Rocks, Carboniferous - Mafic Tuff
- Unnamed Igneous Intrusion, Carboniferous To Permian - Felsic-Rock
- Unnamed Igneous Intrusion, Carboniferous To Permian - Mafic Igneous-Rock
- Teign Valley Group - Mudstone, Siltstone And Sandstone
- Upper Devonian Rocks (Undifferentiated) - Breccia And Metabreccia
- Upper Devonian Rocks (Undifferentiated) - Mudstone, Siltstone And Sandstone
- Upper Devonian Rocks (Undifferentiated) - Sandstone And Conglomerate, Interbedded
- Middle Devonian (Undifferentiated) - Mudstone, Siltstone And Sandstone
- Middle Devonian (Undifferentiated) - Sandstone And Conglomerate, Interbedded
- Lower Devonian Rocks (Undifferentiated) - Mudstone, Siltstone And Sandstone
- Lower Devonian Rocks (Undifferentiated) - Sandstone And Conglomerate, Interbedded
- Devonian Rocks (Undifferentiated) - Hornblende Schist
- Devonian Rocks (Undifferentiated) - Limestone, Mudstone And Calcareous Mudstone
- Devonian Rocks (Undifferentiated) - Mica Schist
- Unnamed Extrusive Rocks, Devonian - Mafic Lava And Mafic Tuff
- Unnamed Extrusive Rocks, Devonian - Mafic Lava
- Unnamed Igneous Intrusion, Devonian - Felsic-Rock
- Unnamed Igneous Intrusion, Devonian - Mafic Igneous-Rock
- Unnamed Igneous Intrusion, Devonian - Ultramafite
- Unnamed Extrusive Rocks, Neoproterozoic - Felsic Tuff



Proposed Mineral Safeguarding Areas

- ★ Aggregate
- Infrastructure
- Building Stone
- ✕ Metalliferous
- Heritage
- 🏠 China Clay

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by Devon County Council and signed by Cornwall Council and Somerset County Council).

26. Further information on aggregates in Cornwall is contained in the Local Aggregate Assessment that Cornwall Council produces on an annual basis www.cornwall.gov.uk/mineralsdspd.

Building Stone

27. Cornwall is underlain by a variety of rocks including slate and granite, which contribute to the special character of the county's landscape and coastal scenery. The geological diversity of Cornwall has meant that the variety of the rock types used is probably unmatched anywhere else in the world. The production and usage of stone peaked in the late 19th Century and finally fell into serious decline in the 1960s. This decline could be attributed to changes in construction methods and imports.



De Lank Quarry

28. However, greater emphasis is now being placed on the restoration and conservation of older buildings using sympathetic materials such as locally sourced stone. Recognising this situation, Cornwall Council commissioned a study on the building stones of Cornwall and potential sources of such stones. The study concluded that there are a number of quarries throughout Cornwall that have been used in the past and should be safeguarded for future heritage use. These sites have been called 'Heritage Quarries' and are defined as quarries which have previously supplied building stone and slate for important buildings and structures and which are protected as major long term assets to buildings conservation. Designated 'Heritage Quarries' contain rock of unique petrology, appearance and/or physical properties. Those sites considered suitable for heritage stone either do not have planning permission or are classed as 'Dormant' under the Environment Act 1995; therefore they cannot re-open without approval from the local planning authority. The study also identified a number of quarries that currently have extant planning permission and it is the intention to safeguard these quarries as 'Heritage Quarries' once planning permission expires. These sites are identified with an 'H'. The study is available as evidence to support this Mineral Safeguarding DPD, available online at www.cornwall.gov.uk/mineralsdspd.
29. **Granite** is the most extensive igneous rock in Cornwall and occurs in four large intrusions or 'plutons' at Land's End, Carnmenellis, St Austell and Bodmin Moor. Typically the granite areas form the higher ground of Cornwall. The granites also give rise to the dramatic coastal cliffs, notably Land's End.
30. There is considerable variation in the appearance of granite from one location to another, from fine-grained types to coarse-grained granites with individual large feldspar crystals.
31. Other types of granite occur in dykes or veins of fine-grained rock which are mainly pale grey or cream colour. These are known as 'elvans' and have been used in the past as building material.

32. Granites have provided an attractive source of dimension stone and their historical importance as a building material is reflected by the large numbers of disused quarries. In the 19th and 20th Centuries granite was in demand for construction and export. Cornish building stone has been used for prestigious projects such as Tower Bridge in London.
33. **Basic igneous rocks** such as basalt, dolerite, gabbro and picrite occur within the Devonian and Lower Carboniferous slate and sandstone. These are known collectively as greenstones and they tend to be harder than their slate hosts so they form landscape features such as Nare Head and Clicker Tor (near Menheniot).
34. Many gabbro outcrops occur on the Lizard and there are many disused quarries showing the widespread use of the stone for building materials.
35. Serpentine occurs on the Lizard peninsula and on a very restricted scale in East Cornwall. It is highly coloured and soft and is used for ornamental purposes. However, it has been used in the past as a building material and there are examples of its use across the Lizard. In the east of Cornwall polyphant stone (serpentinised picrite) has been worked as an ornamental stone. Although currently only very small quantities are produced.
36. **Sandstones** comprise alternating folded beds of shale and hard sandstone, as occur in late Carboniferous Crackington Formation and the late Devonian Portscatho Formation. Sandstones vary in thickness, lateral persistence, grain size and strength. Despite extensive resources, limited amounts of sandstone are produced in Cornwall, perhaps reflecting the cost of working the resource. A few small quarries extract sandstone for building materials alongside their main aggregate extraction.
37. **Slates** underlie much of Cornwall and are commonly interbedded with coarser-grained siltstone and sandstone. They are also known by the old miners' term as 'killas' in some areas.
38. The slates in Cornwall are variable in nature and colour ranging from dark to light grey with green and red hues. Brown iron oxide staining is common, these are rustic slates. Slates which can be split are used for roofing but their occurrence is more restricted. Cornwall is an important source of roofing slate, including Delabole slate noted for its distinctive silvery grey colour. Elsewhere operations are small-scale mainly producing rustic slate, commonly used for paving, cladding, walling and fireplaces.
39. In terms of future supply of building stone, encouragement of local distinctiveness is increasing; thus requiring the use of local stone. As well as the conservation and restoration of historic buildings which may use local stone. However, predicting the tonnage of any particular stone needed in the future is very difficult due to variability of the market, existing viable levels of reserve and achievable outputs.
40. Further information on the building stones of Cornwall is available in a technical report which supports the policy in this DPD and the Cornwall Local Plan, available at www.cornwall.gov.uk/mineralsdpd.

China Clay

41. China clay or (kaolin) is a product of altered granite, which has been affected by an interaction of groundwater with the feldspar minerals within the granite to form kaolinite. China clay deposits world-wide are very limited.
42. In the case of Cornwall's granite deposits, the alteration is variable in quality and distribution. The kaolinised zones within the granite tend to be funnel-shaped or trough-like in cross section, several hundreds of metres across at outcrop, and narrowing downwards. Some of the kaolinised bodies are very extensive and deep-seated, with the stems of the funnels more than 300m below the surface. Kaolinised granite is more friable and generally softer than unaltered rock and consists mainly of quartz or mica, unaltered feldspar (potassium feldspar tends to be less readily altered than the plagioclase feldspars) and kaolinite.
43. In Cornwall china clay resources are found within three of the larger granite bodies namely the Land's End peninsula, Hensbarrow (north of St Austell) and Bodmin Moor, along within smaller bodies in Godolphin/Tregonning and Belowda.
44. The primary china clay deposits of south-west England are world class in terms of their size and quality. They have yielded over 165 million tonnes of marketable clay since production began in the middle of the 18th Century.
45. In Cornwall significant quantities were extracted from the Bodmin Moor and Land's End granites in the past, production has ceased in these areas. Commercial exploitation of the china clay in Cornwall is now confined to the western and central parts of the Hensbarrow granite. Britain is one of world's largest producers of china clay, after Brazil, USA and China. In 2014 exports were valued at approximately £116,105,000. Therefore the china clay industry makes a significant contribution to the UK's balance of payments. The china clay industry employs circa 750 people locally. However, production of china clay has declined, since a peak in the 1950s.
46. Planning permission for winning and working of china clay in the St Austell (Hensbarrow) area extend to some 88 square kilometres, although the area of active extraction, tipping, handling and processing sites is much smaller. The mineral planning permission area contains a number of Operational Areas within which extraction and ancillary operations are focused.
47. Traditionally, china clay is extracted from the kaolinised granite by 'wet mining' using high pressure jets of water ('monitors') to erode the working faces and wash out the kaolin. Processing of china clay is essentially based on wet refining and thickening at the refinery. Clays from different areas are blended at the refinery to meet the requirements of specific customers and projects.



Melbur Pit

48. On average, the material extracted from the pits contains 12-15% of commercially-saleable clay, the remainder being regarded in the past as waste which needed to be tipped on adjacent areas. In the past some waste materials were sold to the construction industry for use as an aggregate. The quantity of this 'secondary' aggregate sold has increased significantly and now often exceeds sales of primary aggregates.
49. Mica is also produced as a by-product of china clay production; it is a fine slurry residue that is deposited in large lagoons. The mica settles and the water is pumped out for re-use. Some older mica dams have been re-worked. Mica dams may contain other minerals, which in the future could become a valuable mineral resource.
50. China stone is a largely unkaolinised granite from the western part of the St Austell granite and are low in iron and high in lithium and fluorine containing minerals, hence they are pale coloured. Because of their fine grain and ability to be worked they have been used as a building stone in the past. The absence of iron-bearing minerals makes china stone suitable for use as a flux in the manufacture of pottery and bone china.
51. Further information on china clay in Cornwall, is available in a technical report which supports the policy in this DPD and the Cornwall Local Plan, available at www.cornwall.gov.uk/mineralsdpd. Information on china stone as a building material is set out in 'The Building Stones of Cornwall: Identification of Heritage Quarries' published as evidence to support the policy in this DPD.

Metals

52. There is a close geographical connection between the granite of Cornwall and the location of the important metalliferous mining districts. The Cornubian granite batholith has a West-East extent of over 250km beginning west of the Isles of Scilly and ending just east of the Dartmoor granite. Much of the batholith is concealed beneath Devonian and Carboniferous strata. The batholith varies in width between 40 and 60km; from west to east the larger granite exposures or plutons are those of the Isles of Scilly, Land's End, Carnmenellis, St Austell and Bodmin Moor. Smaller bodies include Godolphin/Tregonning, St Michael's Mount, Carn Marth, Carn Brea, St Agnes, Castle-an-Dinas, Belowda, Kit Hill, Hingston Down and Gunnislake.



Botallack Mine

53. Fluid escaping along fractures from the cooling granite bodies was responsible for depositing a wide range of minerals including metal ores. This fluid movement led to a complex sequence of mineralising events, with individual veins or 'lodes' carrying particular assemblages of minerals. The BGS Report 'Mineral Resource Information for Development Plans' has identified zones of intense hydrothermal vein mineralisation and zones of scattered stratiform vein and stratiform mineralisation in certain horizons within the slate, sandstone and basic igneous

rocks throughout Cornwall that are enriched in metals. These include veins and stratiform deposits that are unrelated to the granites and their thermal influence, which cover areas across Cornwall and do not appear to give an indication of whether there is a quality resource of such form, quality and quantity that has reasonable prospect for eventual economic extraction. The principal metallic ores extracted in Cornwall have been tin, copper and iron.

54. The veins within and close to the granites mostly carry tin, in places with tungsten and arsenic. In the rocks immediately around the granites copper and arsenic may be found with tin, while further out tin diminishes and zinc may be present. Veins carrying lead, silver and zinc together with spar minerals such as fluorite and barite, are to be found at some distance from the granite outcrops. In some districts, for example around Gunnislake, the veins are noted for their polymetallic character. This is a result of a number of mineralising events being superimposed in the same structure and can lead for example, to tin, tungsten, arsenic, copper, zinc and fluorite occurring together. In addition to the metals and minerals listed above, Cornwall has yielded manganese and silver as well as small amounts molybdenum, cadmium, fluorspar and gold.
55. Metalliferous minerals have been worked by underground methods and (less significantly) from surface deposits; for example in the case of tin ore this has been extracted by tin streaming in the past. Historically, larger tonnages of both copper and iron have been produced and in total, Cornwall has produced more copper and iron than tin but tin has been the more valuable commodity in terms of price. According to the BGS Resource information for Development Plans the St. Austell Granite hosts a considerable, although low-grade, lithium resource which is present in lithium-bearing micas containing up to 2.5 per cent lithium metal. Present day needs are mostly met from overseas high-grade deposits and is unlikely that this occurrence will be of economic interest in the foreseeable future
56. The only current production of metals in Cornwall is at the micro-scale Blue Hills Tin Streams near St Agnes. Mine development work is underway at South Crofty Mine, Pool. Planning permission was granted in late 2011 to relocate South Crofty's surface operations and create modern ore processing and mine access facilities in the Tuckingmill Decline Area. Within the planning permission a number of shafts have been identified to provide access and ventilation to the mine. New Tolgus Shaft has been identified as part of the planning permission; the shaft is located to the South West of the Cornwall Site Allocations DPD proposed allocation for Tolgus Urban Extension (CPIR-UE1). Any proposal relating to the Tolgus Urban Extension should consider the Mineral Safeguarding Area in relation to New Tolgus Shaft; however this should not preclude delivery of the scheme at Tolgus Urban Extension.
57. Generally, primary refining of metal ores is undertaken at, or close to, the mine thus reducing the weight and volume of the material to be transported to secondary refining facilities and markets (which tend to be global). Large scale smelting facilities for many metals are specialised and consequently there may be a need to export materials to smelters outside the UK or Europe.
58. The main underground metalliferous mining areas of Cornwall have made a contribution to the

landscape, built heritage, culture and society. In 2006 the mining landscape of Cornwall and West Devon was inscribed as a World Heritage Site (WHS). The WHS Management Plan clearly states that there is not a presumption against mining within the World Heritage Site, subject to development respecting the outstanding universal values of the WHS. The WHS Management Plan also acknowledges that the WHS contains many old mineral dumps and recognises their historic value.

59. BGS Metals Factsheet¹ states that “SW England remains prospective for discovery of high grade tin and copper vein deposits. However, extensive and intensive historical workings make exploration for new deposits difficult. It is likely that new discoveries would be at considerable depth which would require a substantial exploration investment. Recent metalliferous extraction operations have been relatively small scale operations, often based on historical mines. Such locations may become of importance in the future”. The price of metals is a major factor controlling the viability of developing new mines as will be illustrated by the monitoring of the viability of South Crofty mine, which aims to develop as a polymetallic mine.
60. It is therefore important to safeguard strategic access points/areas for known metalliferous resources to facilitate the potential for future reactivation of mining and to ensure that underground mine features are not sterilised by surface non-mineral development.
61. Further information on metalliferous resources in Cornwall is available in a technical report which supports the policy in this DPD and the Cornwall Local Plan, available at www.cornwall.gov.uk/mineralsdpd.

Mineral Infrastructure in Cornwall

62. The NPPF requires certain infrastructure sites associated with the transport, processing and distribution of minerals to be safeguarded. In Cornwall, the mineral related infrastructure is mainly wharves, ports, rail and concrete batching plants.

Mineral Wharves and Ports

63. There are two quarries which have dedicated mineral wharves; Dean Quarry and West of England Quarry, both of which are located on the Lizard peninsula.
64. In addition to the two dedicated mineral wharves; the ports of Falmouth and Fowey export aggregates and china clay. Par previously exported minerals, however, due to its tidal nature exports from Par have ceased. Part of Par Docks remains operational for the processing of china clay; this area is referred to as East Par China Clay Processing Infrastructure. The infrastructure Mineral Safeguarding Area at East Par partially includes a proposed allocation in the Cornwall Site Allocations DPD for Par Docks (ECO-M2). The purpose of this is to ensure that any proposal relating to Par Docks (ECO-M2) should consider the Mineral Safeguarding Area



West of England quarry wharf

¹ <http://www.bgs.ac.uk/mineralsuk/planning/mineralPlanningFactsheets.html>

in relation to East Par china clay processing infrastructure and receives specialist advice (such as noise, dust and visual impact mitigation); however, this is not intended to, and should not, preclude the delivery of the scheme at Par Docks (ECO-M2).

Rail

65. It is mainly the St Austell China Clay Area which contains rail links as china clay and its associated products are transported by rail. Indeed the data on china clay indicates that 13% of clays are transported by rail.

Concrete Batching Plants

66. Many of the aggregate quarries within Cornwall also contain on-site concrete processing facilities; however, there are also a number of independent concrete processing plants spread throughout Cornwall which produce concrete products.

Development Plan Document Vision and Objectives

67. Drawing on the vision and objectives set out in the Cornwall Local Plan, the DPD has the following vision:

“Cornwall will have a world class thriving minerals industry that serves local needs as well as exporting minerals to serve regional and national markets by encouraging the sustainable use of resources.”

68. The principle objective for the Minerals Safeguarding DPD is:

“To safeguard mineral resources, sites and infrastructure from other forms of incompatible development.”

Mineral Safeguarding

69. Cornwall has been safeguarding mineral resources through the planning system for many years. The Minerals Local Plan 1997 safeguarded aggregate, building stone, china clay and metal resources. To ensure an approach that protects those resources and infrastructure currently or potentially of economic value and strikes a balance that avoids protecting large areas of mineral resources that have no prospect of future working, Cornwall Council has reviewed the potential mineral resources and infrastructure.

70. In defining the Mineral Safeguarding Areas, Cornwall Council has used the information contained in the British Geological Survey (BGS) ‘Mineral Resource Information for Development Plans’ along with information gathered for the adopted Cornwall Minerals Local Plan and mineral industry knowledge and other relevant resources such as H G Dines ‘The Metalliferous Mining Region of South West England’, Vols I & II’. Using this information Cornwall Council developed a range of criteria to assess the individual resources, these included scarcity, ability to identify the resource on geological mapping, viability, quality and potential conflicts.

The results of this assessment are set out in an evidence report titled ‘Mineral Resources and Infrastructure Assessment’, available at www.cornwall.gov.uk/mineralsdpd.

71. Guidance from the BGS suggests that safeguarding should extend beyond the known resource boundary, to create a buffer to reduce the risk of incompatible development occurring in close proximity to the mineral resource. The extent of these boundaries varies depending upon the type of mineral and the extraction method.
72. It is considered appropriate to safeguard the following mineral resources and associated buffer zones as set out in ‘Table 1 Mineral resources and associated buffer zones’. The buffer zones have been included within the identified Mineral Safeguarding Areas. For mineral infrastructure in some cases it is not considered appropriate to safeguard an area around the existing site, as these are, to a certain extent, footloose and able to be located in various locations. In such cases, their operational activity will be taken into account, as a material planning consideration, in the consideration of any non-mineral development. However, a buffer zone is incorporated within the Mineral Safeguarding Areas for infrastructure, where the effects of the operation of the facility are likely to result in planning impacts upon sensitive receptors.

Table 1. Mineral resources and associated buffer zones

	Mineral Resource	Buffer
Aggregate	Dolerite, Sandstone, Granite, Gritstone, Gabbro, Blue Elvan Existing mineral sites with planning permission	500m
Building Stone	Silica sand, Granite, Slate Existing mineral sites with planning permission	250m
Heritage Stone	Slate, Luxulyanite, Granite, Sandstone, Serpentine, Elvan, Gabbro Former quarries without mineral planning permission	100m
China Clay	China clay, St Austell (Hensbarrow) area	250m
Metals	Tin, Copper, Arsenic, Tungsten, Sulphur, Zinc, Silver, Lead Known strategically important shafts	500m radius around principal shafts 250m radius around secondary shafts
Infrastructure	Concrete batching plants, Railways, Rail sidings, Minerals wharves, Mineral haul roads	Up to 250m on a case-by-case basis

73. Safeguarding does not attempt to predict how much mineral resources will be needed over the plan period; instead it focuses on the viable mineral resources, taking into account evidence of them being a proven resource. Economic viability will change over time; resources that are not currently considered viable may well become viable in the future due to changing demands, economic circumstances or extraction technology. Cornwall Council does not rule out the possibility of safeguarding further sites in the future if clear evidence of substantial resources capable of being worked is identified. If, during the life of the Plan, it becomes apparent that extraction of any minerals which are not covered in detail in this Plan becomes a viable option or further minerals infrastructure may require safeguarding, the Mineral Planning Authority may address any deficiency through a focused review of the Plan.

Safeguarding Policy

74. The inclusion of land within a Mineral Safeguarding Area carries no presumption that mineral development would be acceptable or that planning permission would be forthcoming.
75. Equally, there is no presumption that non-mineral development within a Mineral Safeguarding Area is automatically precluded.
76. The Mineral Safeguarding Areas for Cornwall are shown on the Policy Map and as insets in Appendix 1. The areas are also available on the Council's [interactive mapping](#). As Cornwall Council is a Unitary Authority, mineral safeguarding will be considered during the planning application process and internal consultation between the local planning authority case officer and the mineral planning officer will be undertaken.
77. Applicants for non-mineral development within Mineral Safeguarding Areas will be required to demonstrate that there is no mineral resource or mineral infrastructure likely to be of current or future economic value that would be sterilised by the proposed development (criterion b). Applicants may be required to produce a Mineral Resource Assessment in cases where the mineral planning authority is minded to take a precautionary approach and recommend refusal. Where borehole evidence is needed, in order to demonstrate that there is no conflict with mineral uses, such investigations are required to be undertaken to a satisfactory standard by a suitably qualified person. There would be consultation with interested parties on the findings.
78. To demonstrate compliance with criterion d that “the mineral resource or infrastructure will not be subject to unacceptable detrimental effects and the proposed development would not suffer unacceptable adverse impacts as a result of the mineral operations”, any application for non-mineral planning permission within an Mineral Safeguarding Area may be required to be accompanied by technical assessments for aspects such as noise, dust, blast vibration and vehicular traffic impacts. The scope of any such assessment should be agreed in advance with the Council.
79. Criterion e “whether there is an overriding strategic need for the non-mineral development” should take into account the strategic importance of the non-mineral development and the availability of alternative locations for that development.
80. Development of land for non-mineral proposals may provide an opportunity to extract a mineral resource prior to that development taking place, with the mineral either being used as part of the development or sold. Prior extraction is easier to achieve with sand and gravel resources than hard rock resources. However, there are still opportunities for prior extraction with hard rock resources.
81. For some types of non-mineral development, the sterilising impact on mineral resources may be negligible. The following list specifies the circumstances when this applies:
- Extensions or alterations to an existing use/building which do not fundamentally change the scale and character of the use/building involved.

- Applications for householder development within the curtilage of a property.
- Details submitted as reserved matters unless consultation with the Minerals Planning Authority is specifically requested at the outline stage.
- Minor developments such as walls, fences, gates, elevation alterations, private gardens or bus shelters.
- Applications for advertisement control.
- Applications for works to trees.
- Applications for temporary planning permission, where the development can be completed and the site restored to a condition that does not inhibit extraction within the timescale that the mineral is likely to be needed.

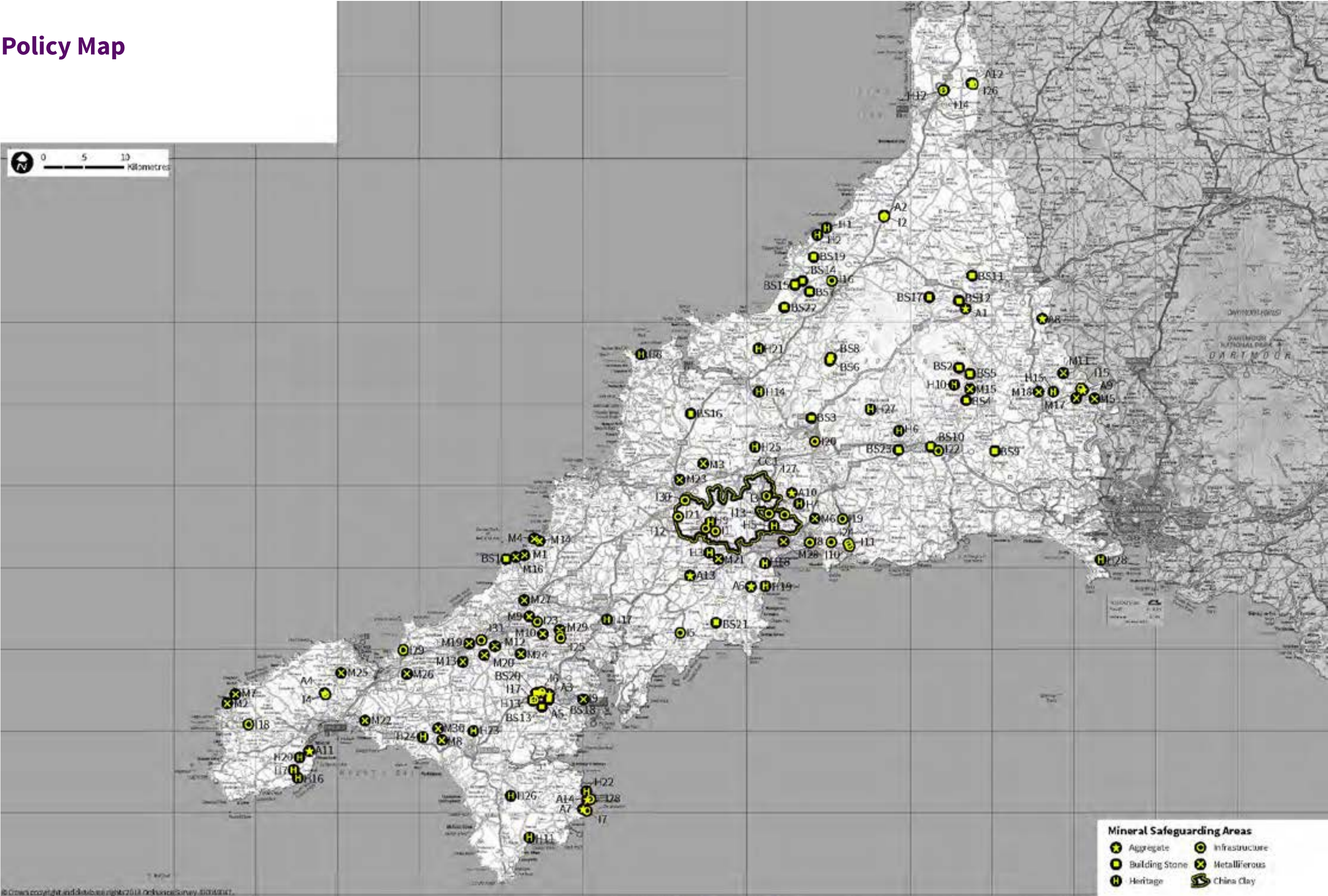
Policy: MS1

Mineral resources and infrastructure within Mineral Safeguarding Areas defined on the Policy Map shall be safeguarded from sterilisation.

Planning permission for non-mineral development will only be permitted within Mineral Safeguarding Areas where it can be demonstrated that;

- a. the proposed development would not conflict with mineral related use of the site or infrastructure; or
- b. the applicant has demonstrated, to the satisfaction of the mineral planning authority, that the mineral resource or infrastructure is not of current or potential economic value or that the mineral resource is not of value for heritage uses; or
- c. the mineral resource can be satisfactorily extracted prior to the development taking place; or
- d. that the mineral resource or infrastructure will not be subject to unacceptable detrimental effects and the proposed development would not suffer unacceptable adverse impacts as a result of the mineral operations; or
- e. there is overriding strategic need for the non-mineral development that outweighs the need to safeguard the minerals; or
- f. the non-mineral development within the Mineral Safeguarding Area is exempt as set out in the exemption list in paragraph 81.

Policy Map



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Appendix 1

Mineral and Infrastructure Safeguarding Areas

Table 2. Mineral and Infrastructure Safeguarding Areas

Site reference	Site name	Page no.
AGGREGATES		
A1	Blackhill Quarry and plant	23
A2	Cansford Quarry and plant (H)	24
A3	Carnsew Quarry and plant (H)	25
A4	Castle-an-Dinas Quarry and plant (H)	26
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BS12	Polyphant Quarry (H)	48
BS13	Spargo Downs Quarry	49
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BS15	Trecarne Quarry	51
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CC1	St Austell China Clay Area	60

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H18	Penrice Quarry	79
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M5	Drakewalls Mine	94
M6	Fowey Consols Mine	95
M7	Geevor, Levant and Boscawell Mines	96
M8	Great Fortune Mine, Breage	97
M9	Killifreth Mine, Scorrier	98
M10	Mount Wellington, United Downs and Wheal Maid Mines, Bissoe	99
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M12	North Wheal Bassett, Wheal Uny Mines, Carn Brea	101
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M15	Phoenix United and Marke Valley Mines	104
M16	Polberro Consols Mine	105
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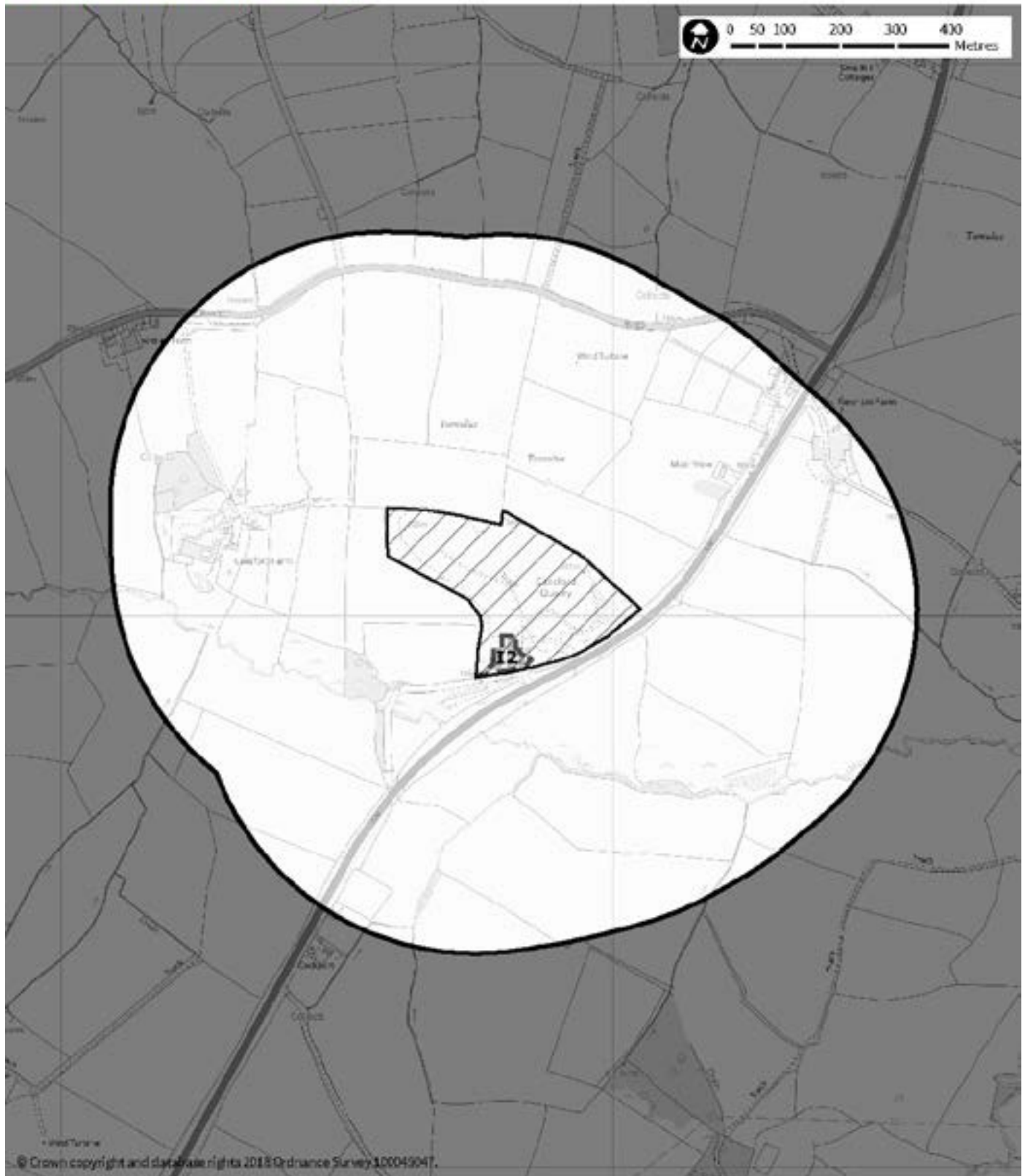
Site reference	Site name	Page no.
M18	Redmoor and Holmbush Mines	107
M19	South Crofty Mine	108
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M21	St Austell Consols Mine, Sticker	111
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M24	Tresavean Mine, Carn Brea	114
M25	Trink (Giew) Mine, Trencrom	115
M26	Wheal Alfred Mine, Hayle	116
M27	Wheal Concord Mine, Blackwater	117
M28	Wheal Eliza Consols Mine, St Austell	118
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M30	Wheal Vor and Wheal Metal Mine, Breage	120
INFRASTRUCTURE		
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I30	Wheal Remfry Secondary Aggregate Plant	150
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A1
Blackhill Quarry and plant

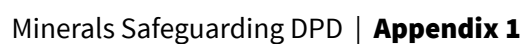


A2

Cansford Quarry and plant (H)

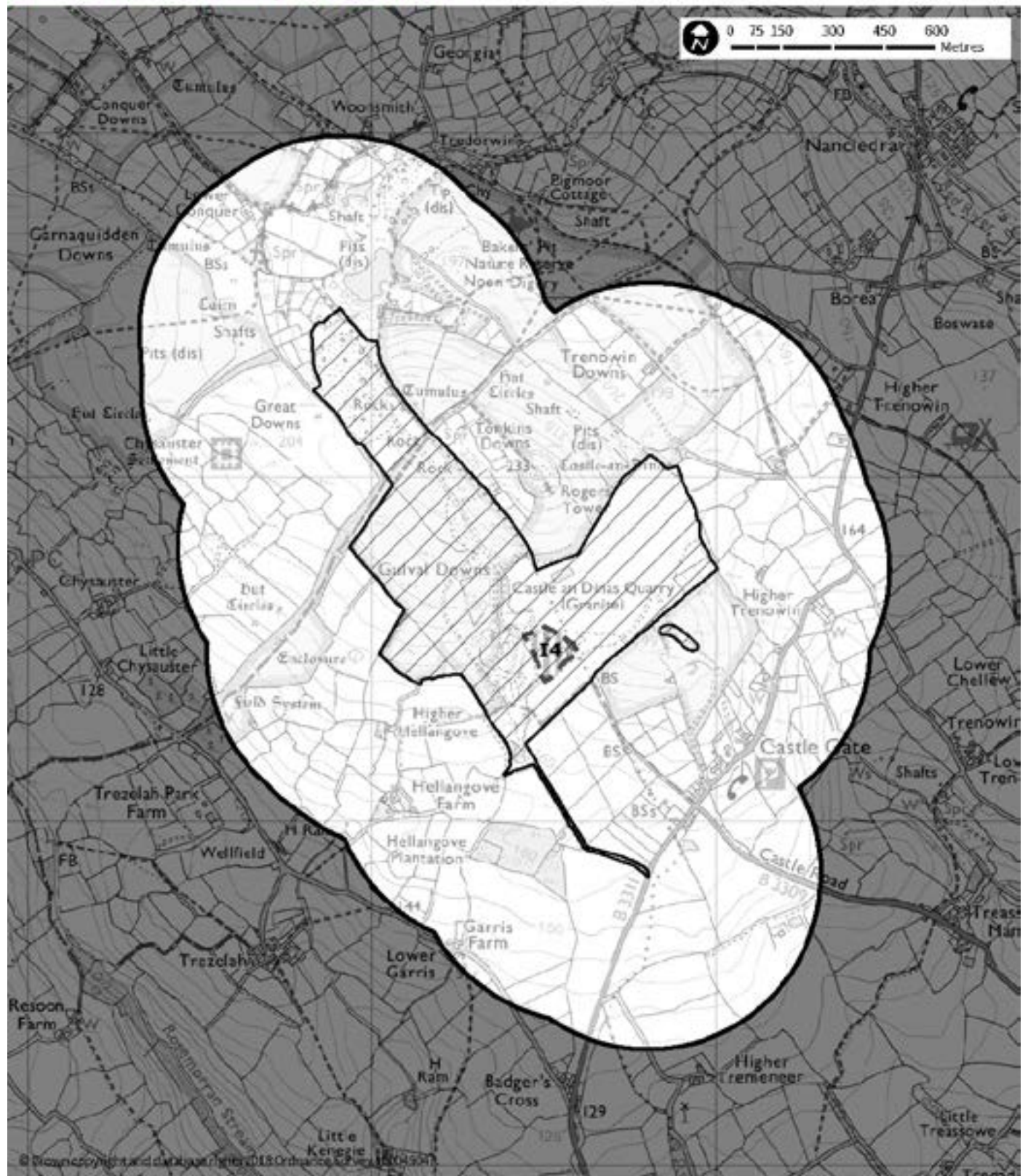


Carnsew Quarry and plant (H)



A4

Castle-an-Dinas Quarry and plant (H)



A5

Chywoon Quarry and plant (H)



A6

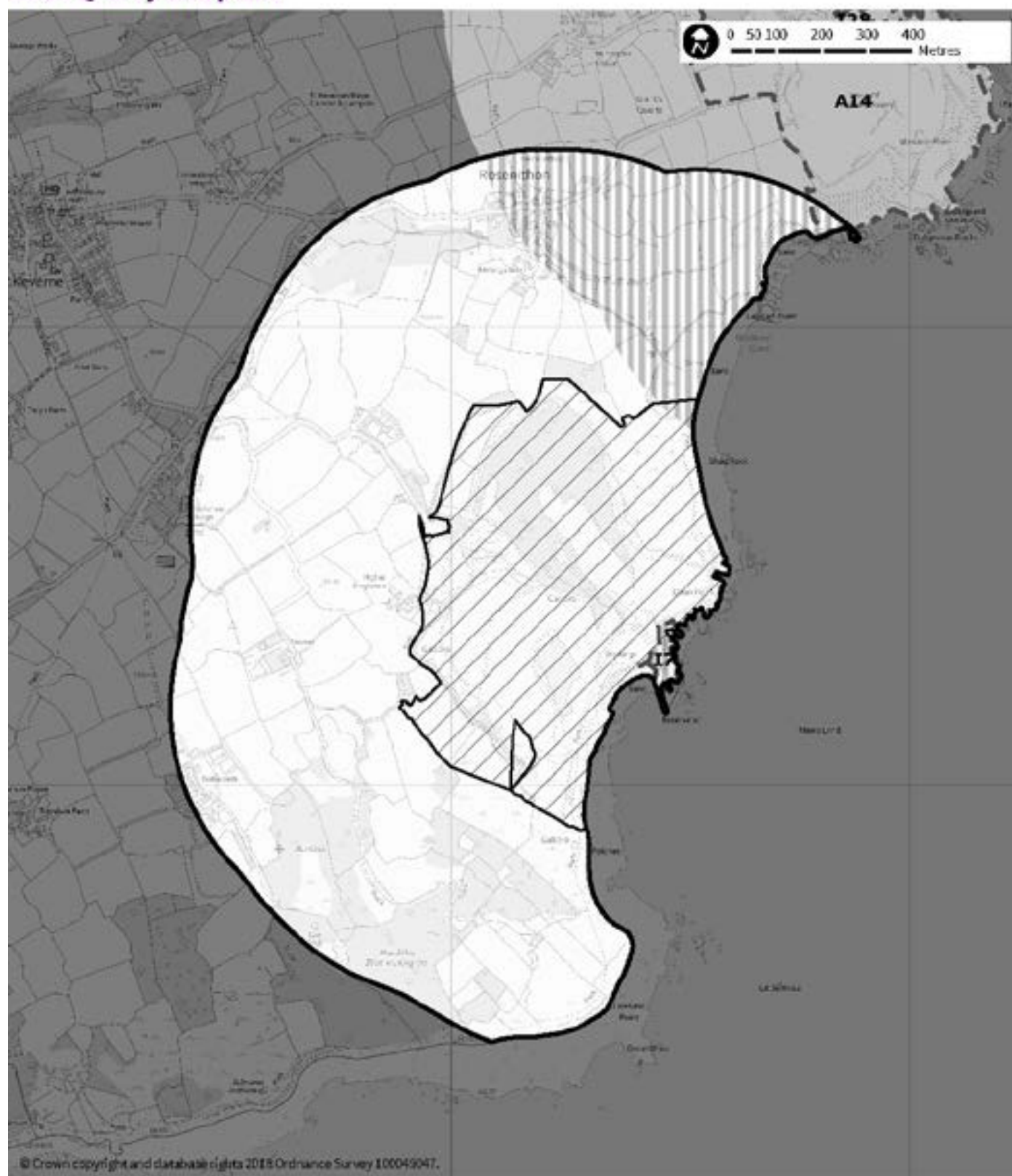
Dairy Quarry and plant



- Mineral Safeguarding Area
- Mineral Planning Permission

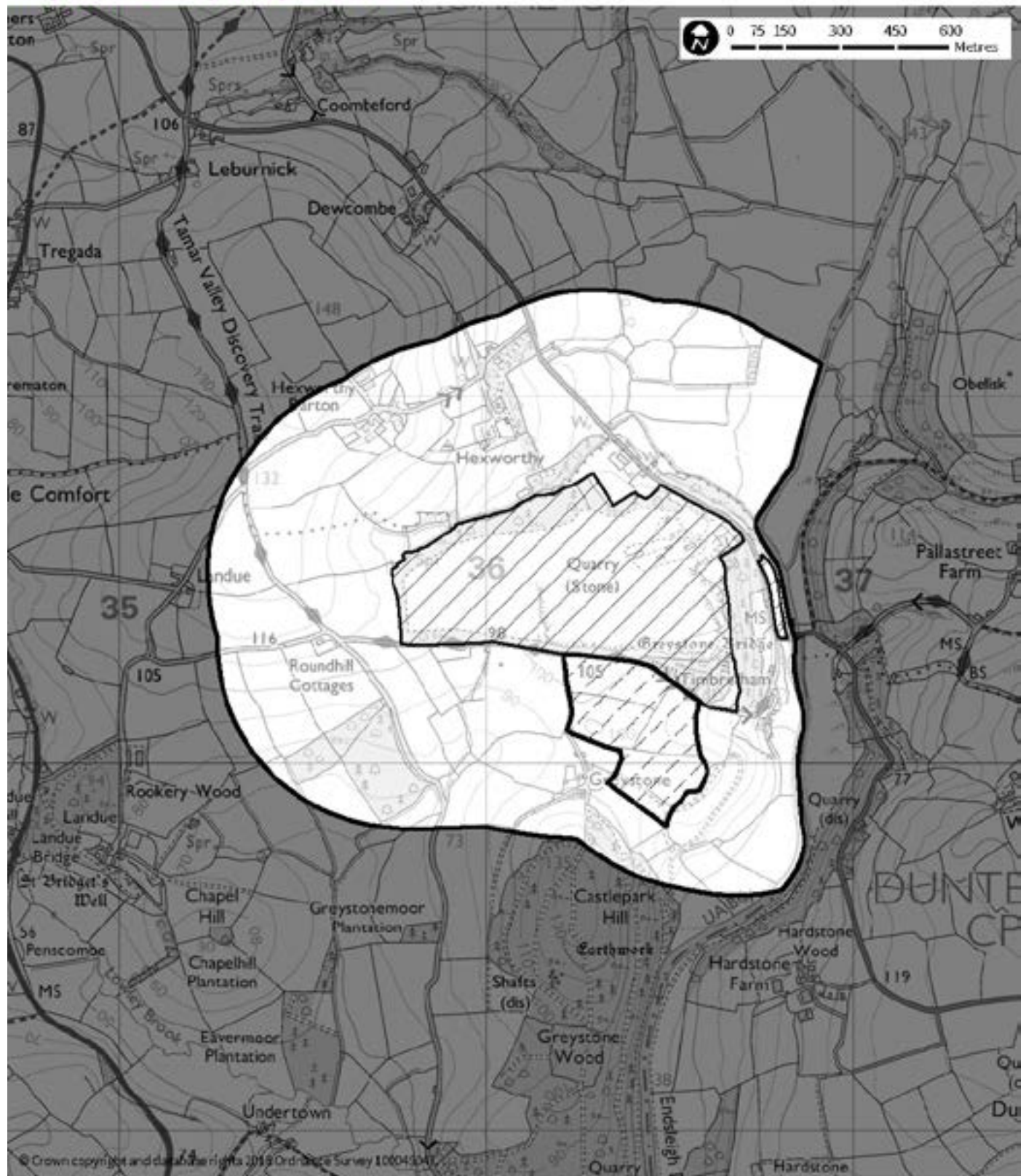
A7

Dean Quarry and plant



A8

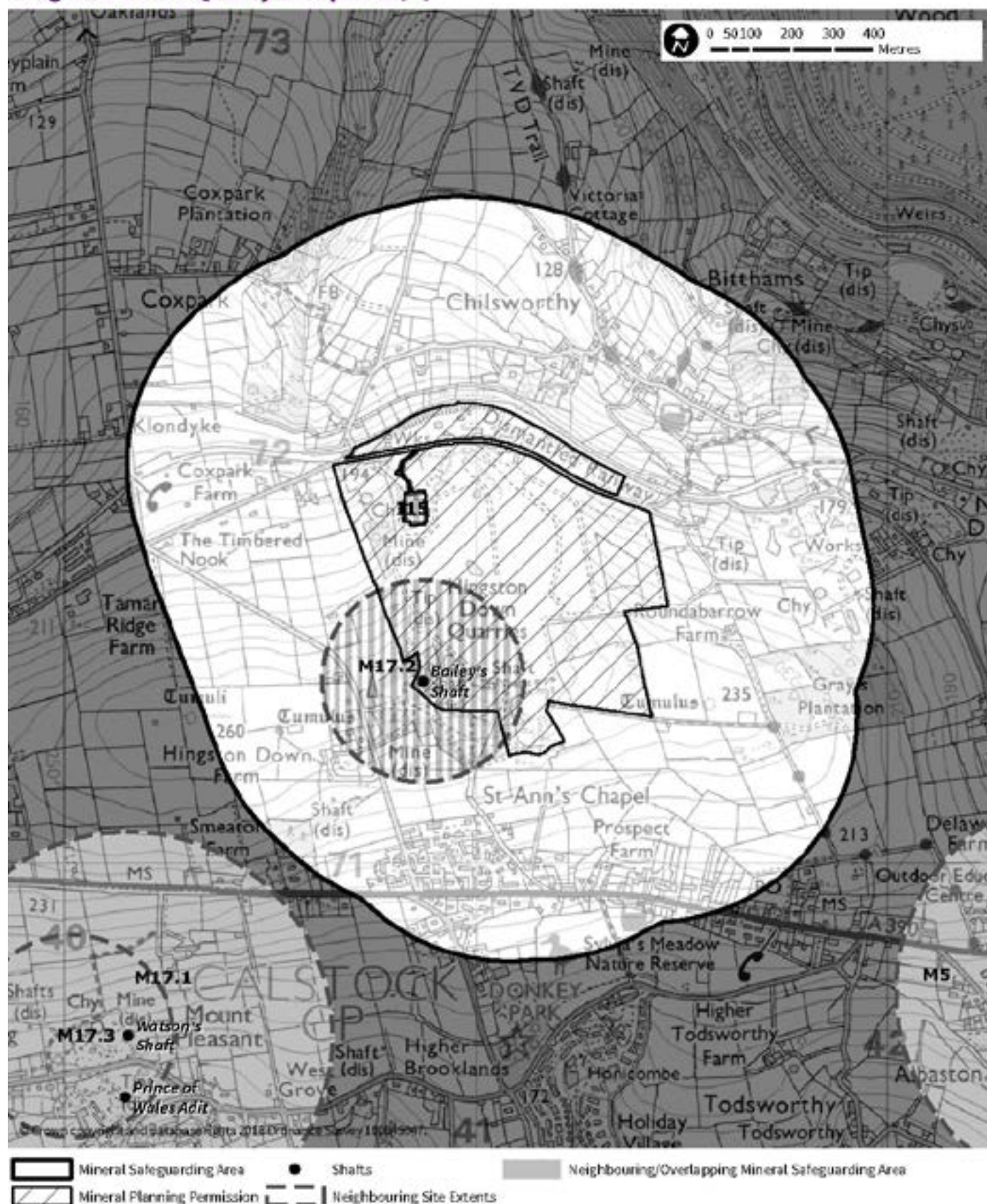
Greystone Quarry and plant (H)



Mineral Safeguarding Area
 Unimplemented Mineral Planning Permission (subject to S106)
 Mineral Planning Permission

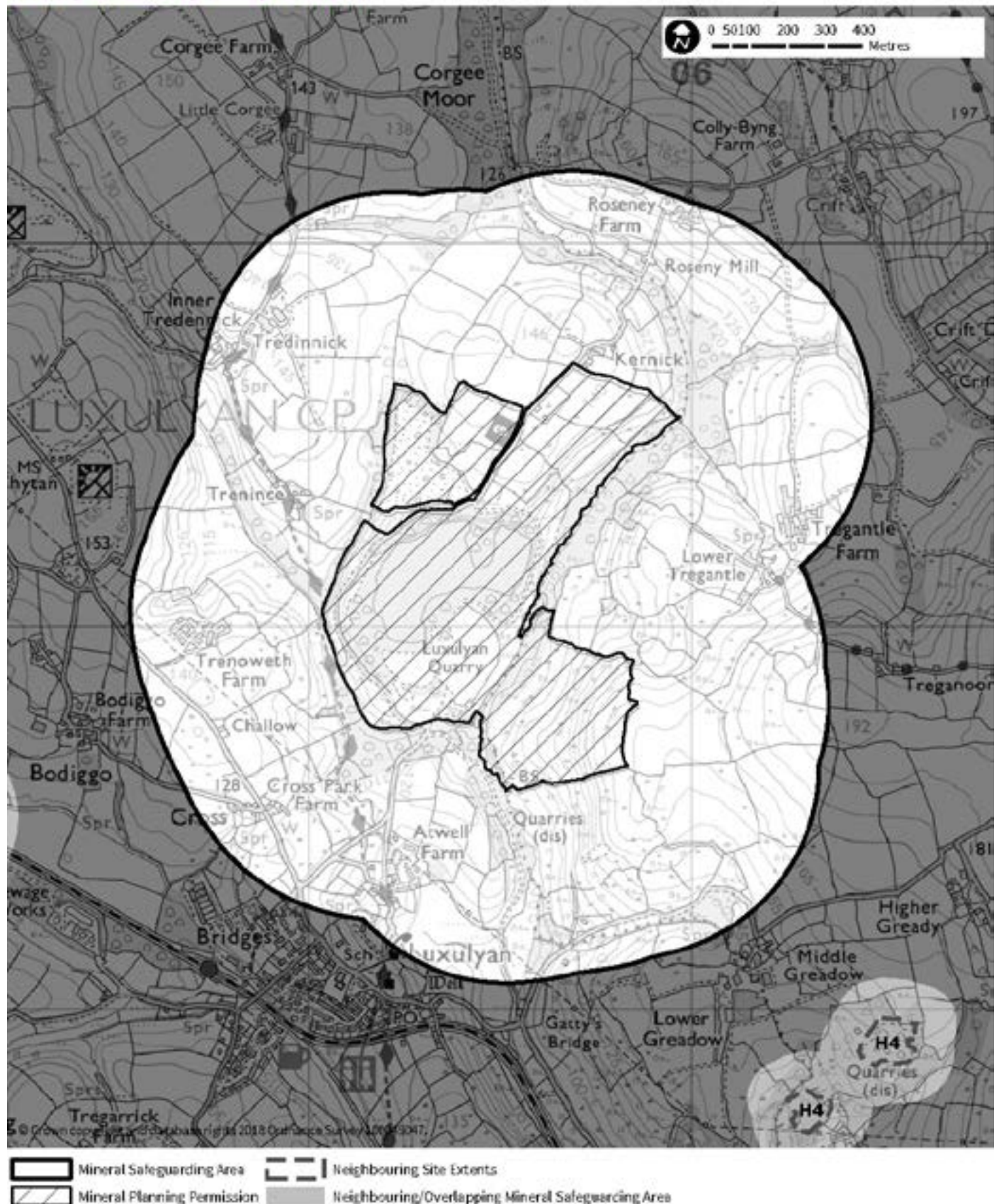
A9

Hingston Down Quarry and plant (H)



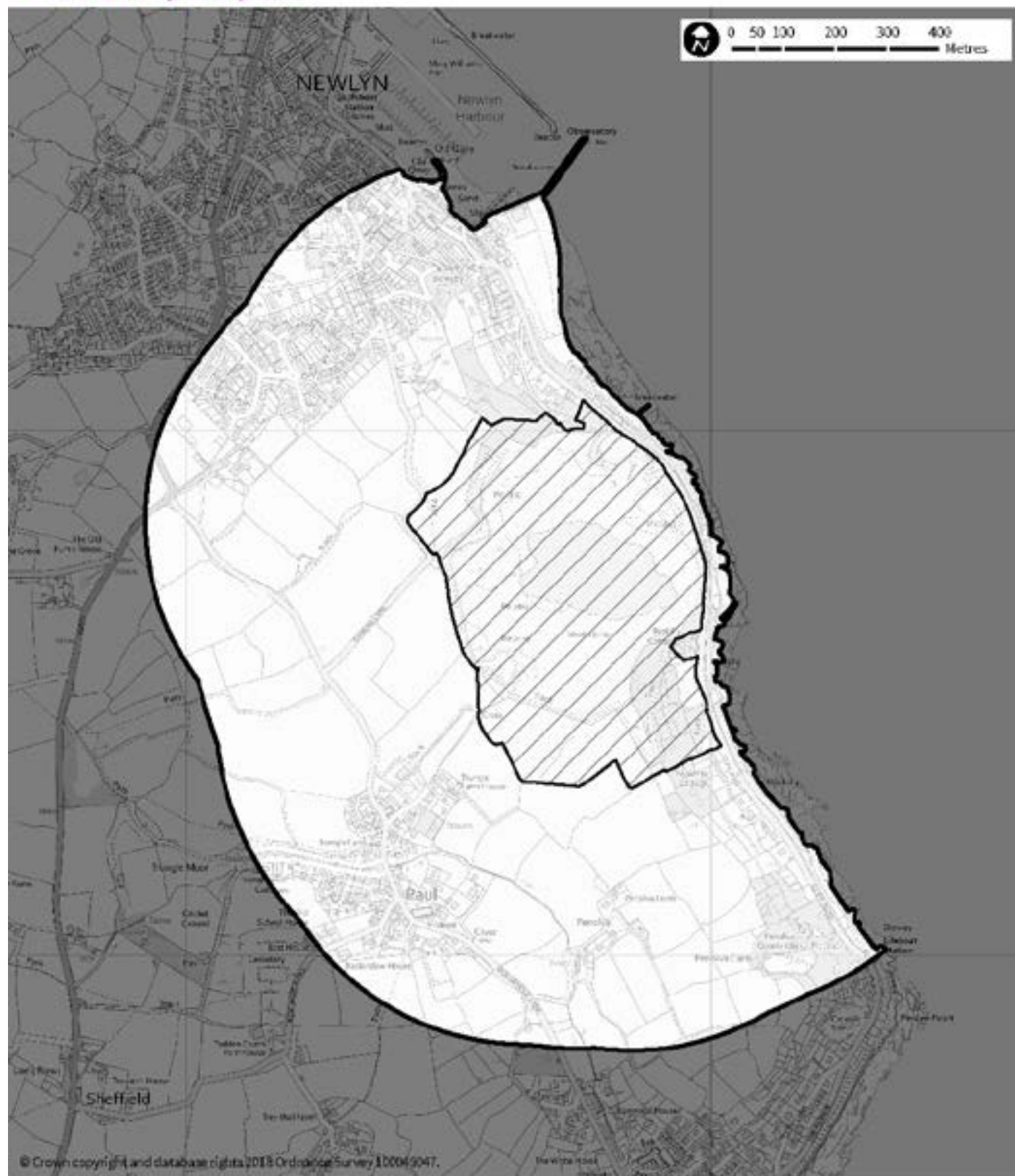
A10

Luxulyan Quarry and plant (H)



A11

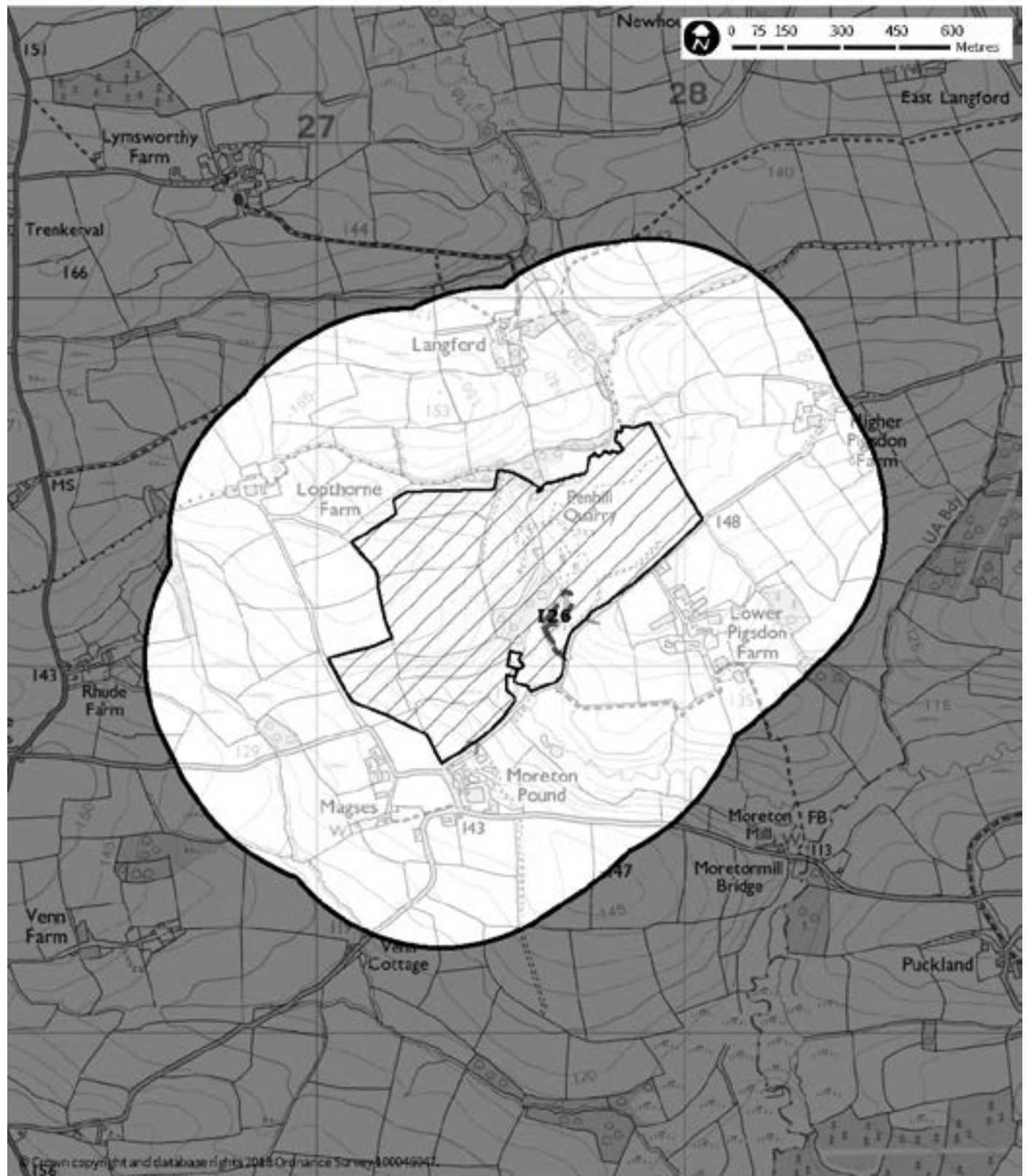
Penlee Quarry and plant



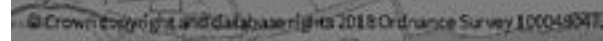
- Mineral Safeguarding Area
- Mineral Planning Permission


A12

Pigsdon Quarry and plant (H)



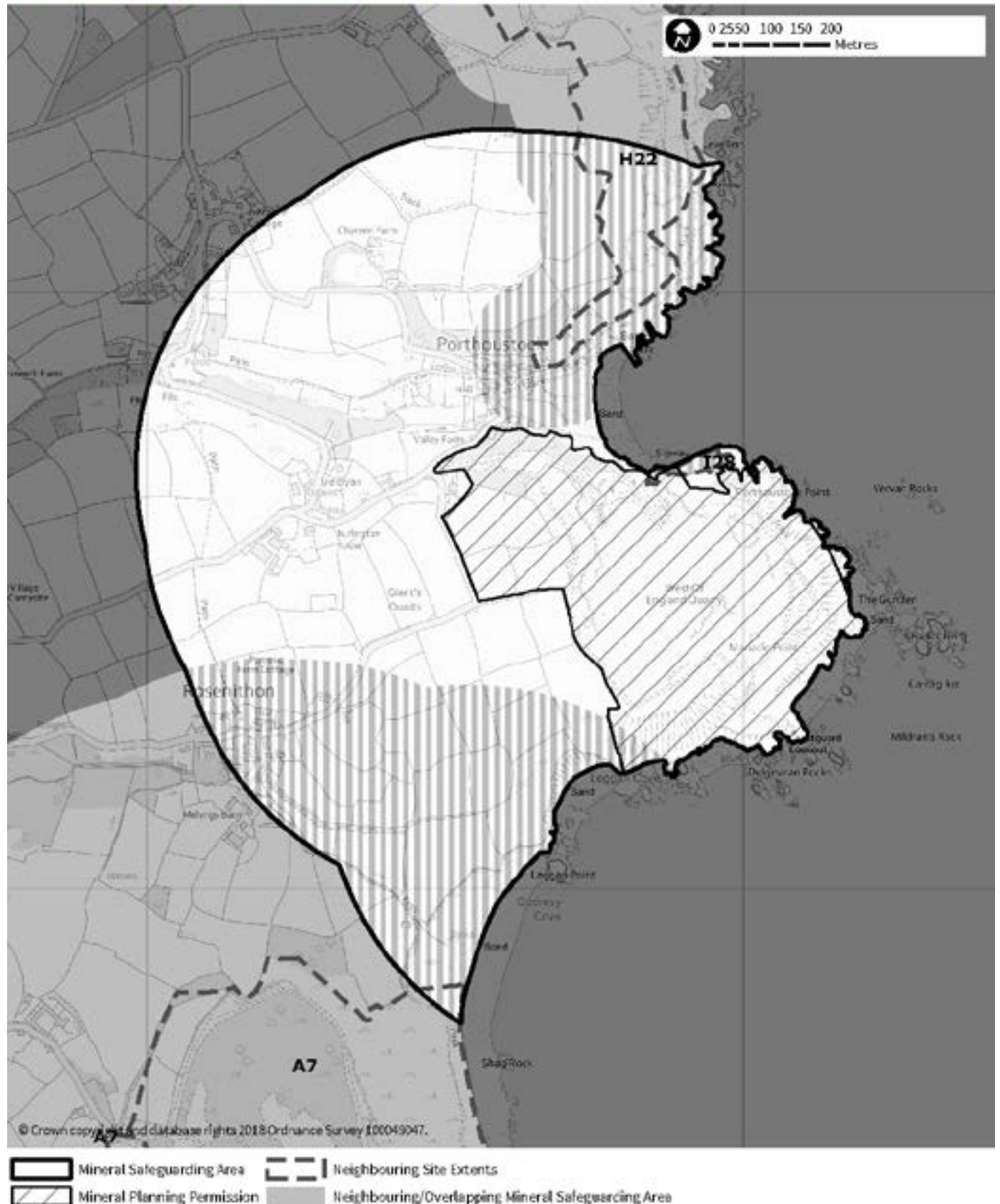
Tredinnick Quarry and plant (H)



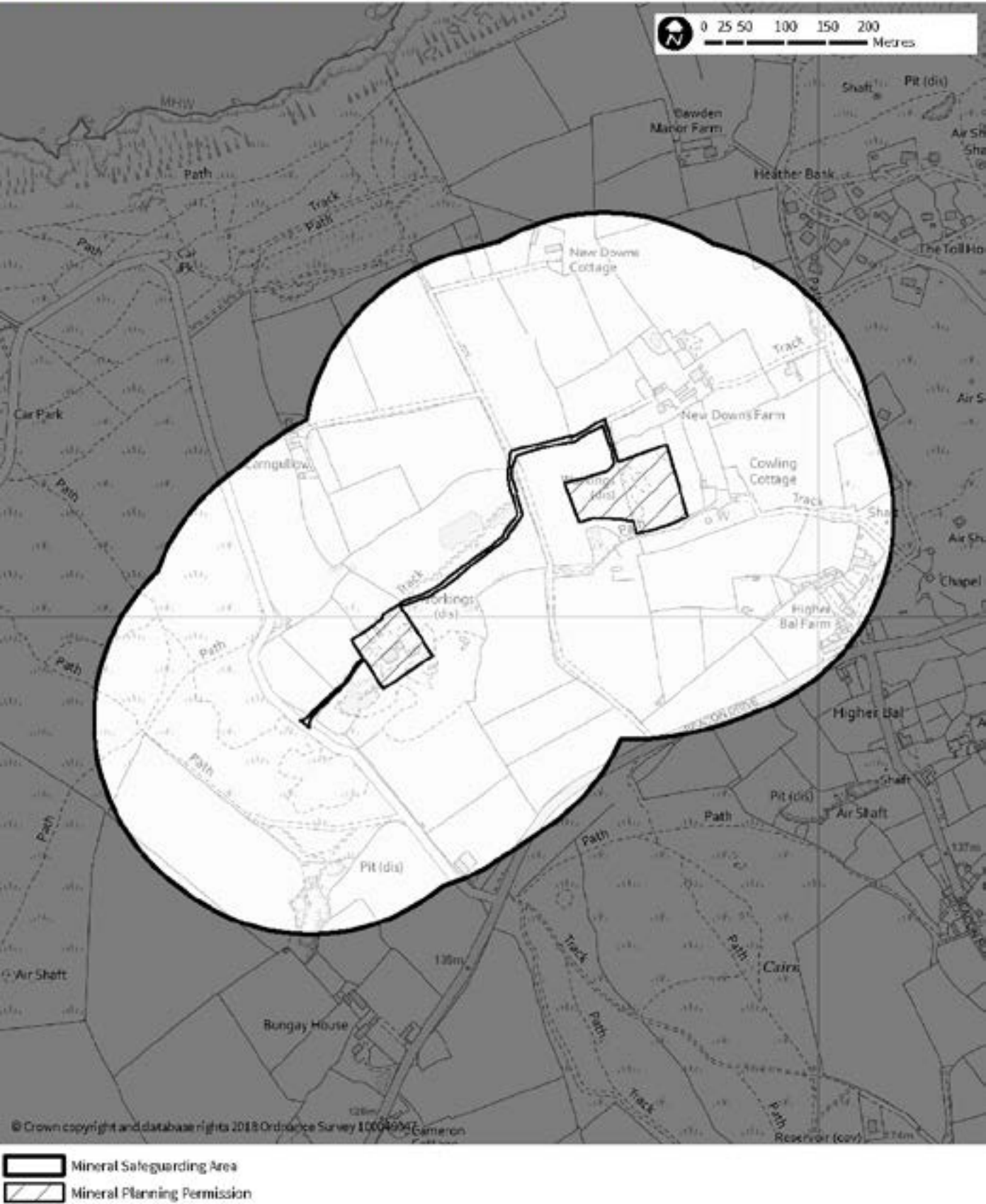
- Mineral Safeguarding Area
 Mineral Planning Permission

A14

West of England Quarry and plant (H)

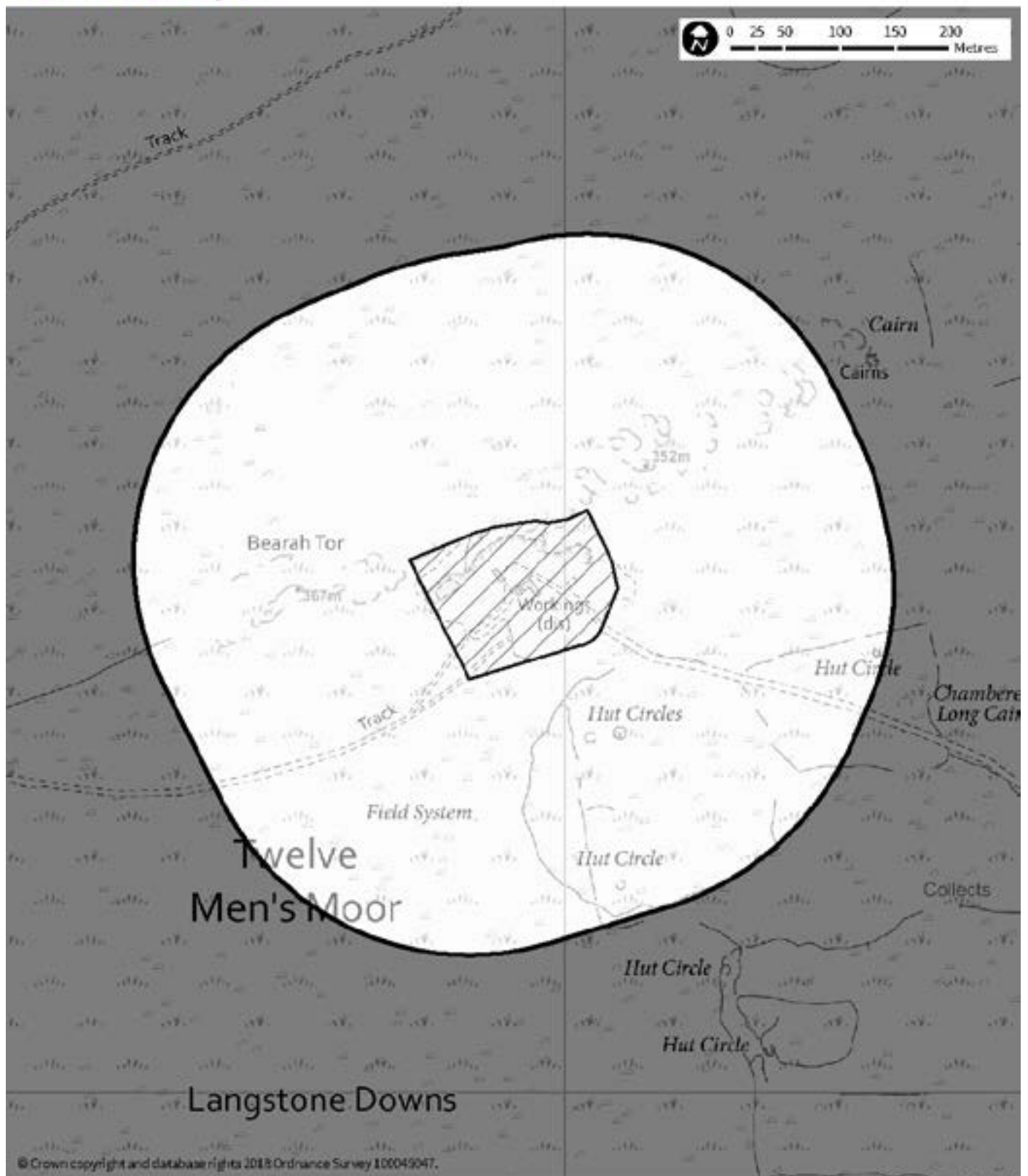


BS1
Beacon Pits (Newdowns)



BS2

Bearah Tor Quarry (H)

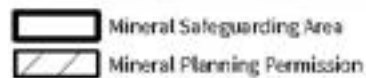


- Mineral Safeguarding Area
- Mineral Planning Permission

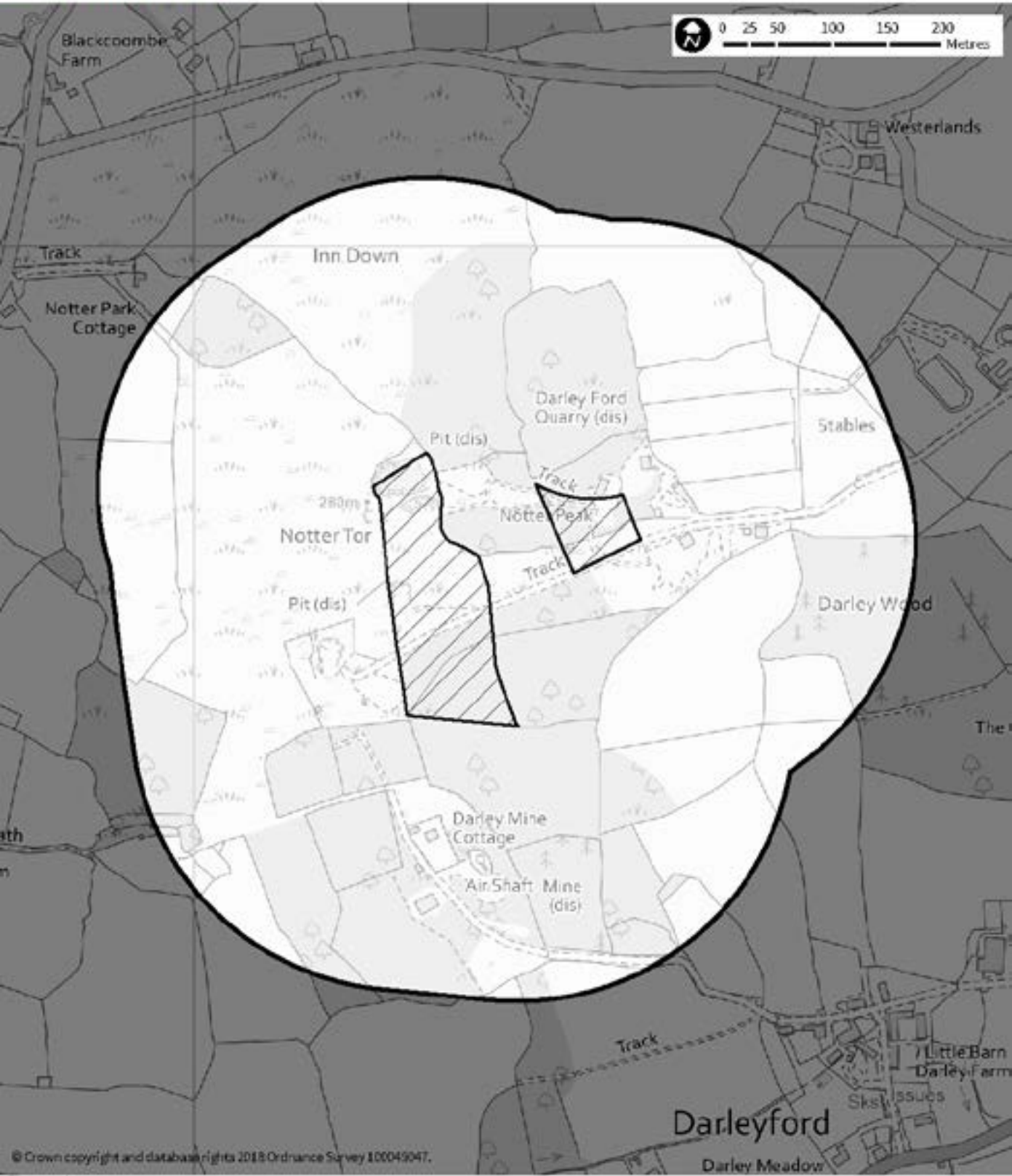
Callywith Quarry (H)



Caradon Gonamena Quarry (H)



BS5
Darley Ford Quarry



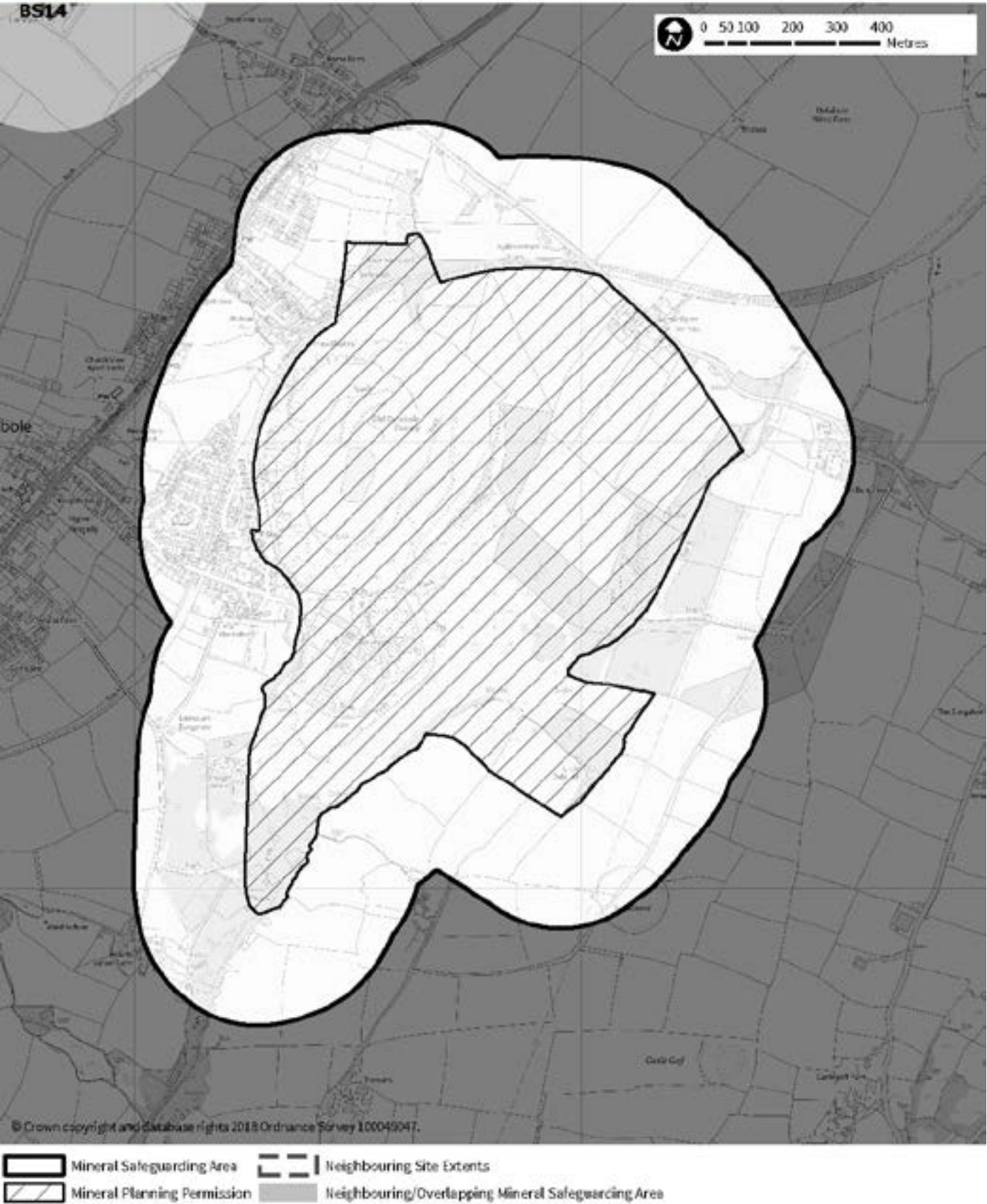
- Mineral Safeguarding Area
- Mineral Planning Permission

BS6

De Lank Quarry (H)

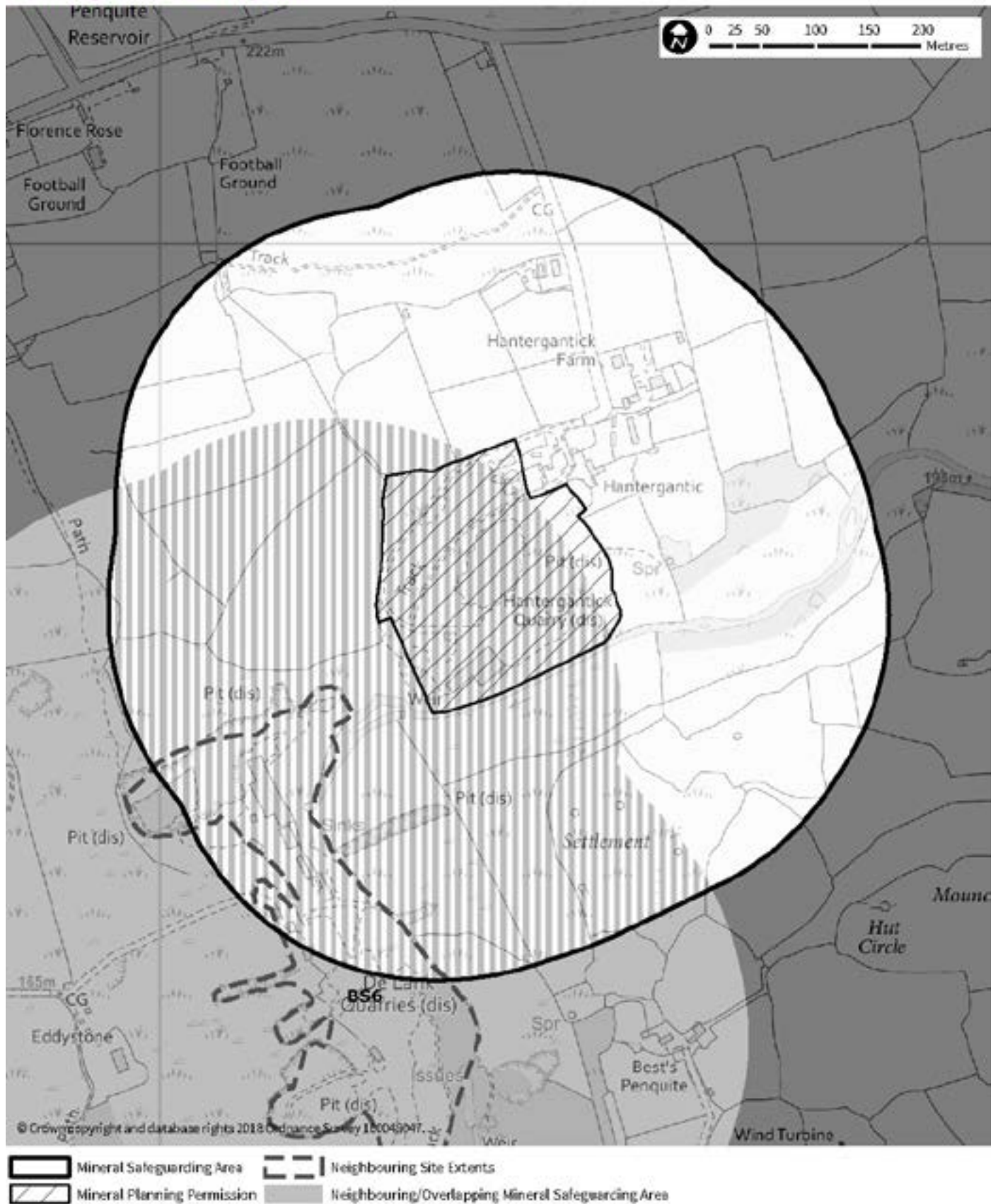


BS7
Delabole Quarry (H)



BS8

Hantergantick Quarry (H)



BS9
Lambest Quarry



- Mineral Safeguarding Area
- Mineral Planning Permission

BS10

Lantoom Quarry (H)



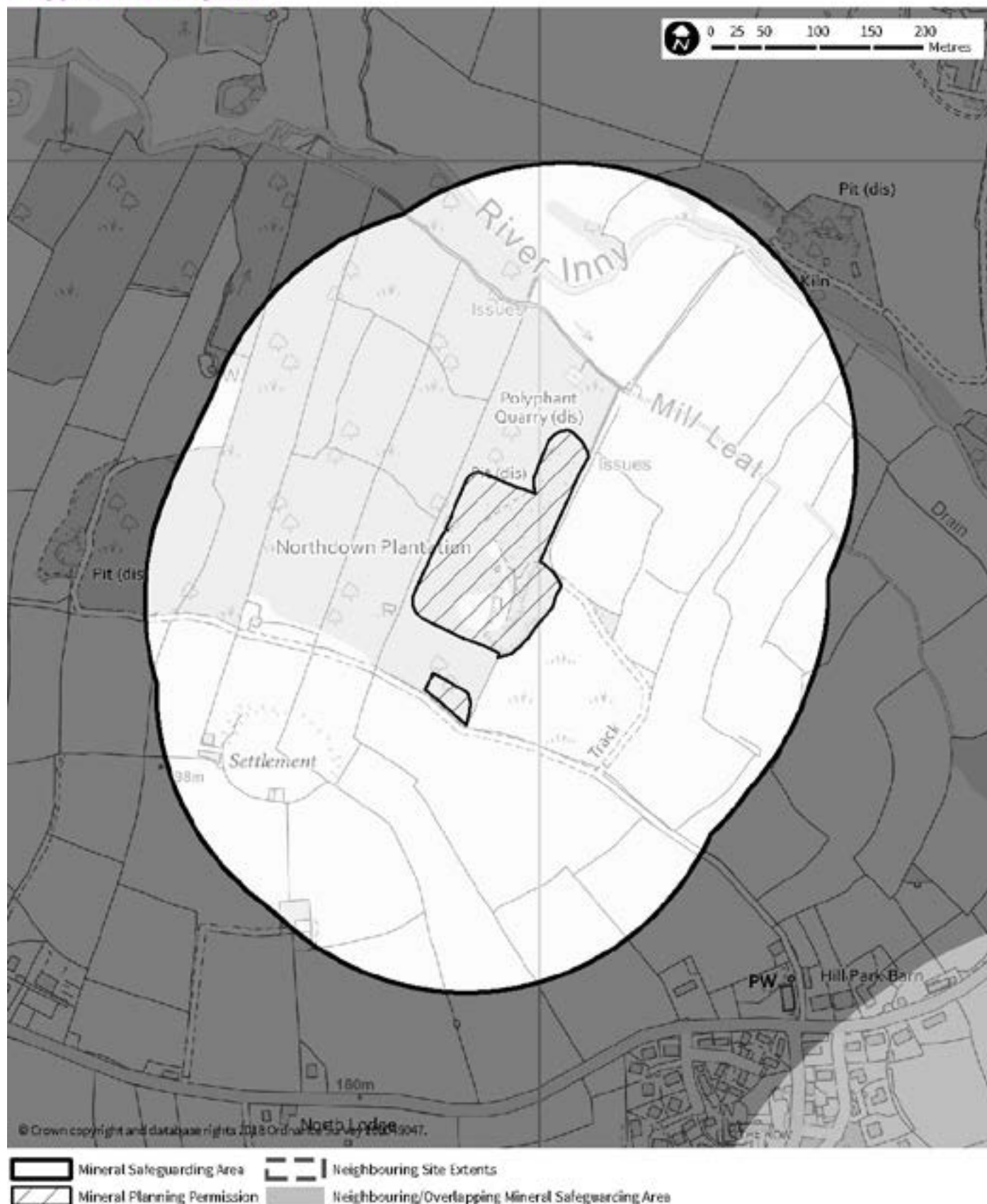
BS11
Pilsamoor Quarry (H)



- Mineral Safeguarding Area
- Mineral Planning Permission

BS12

Polyphant Quarry (H)



BS13
Spargo Downs Quarry



Mineral Safeguarding Area
Mineral Planning Permission

BS14

Trebarwith Slate Quarry



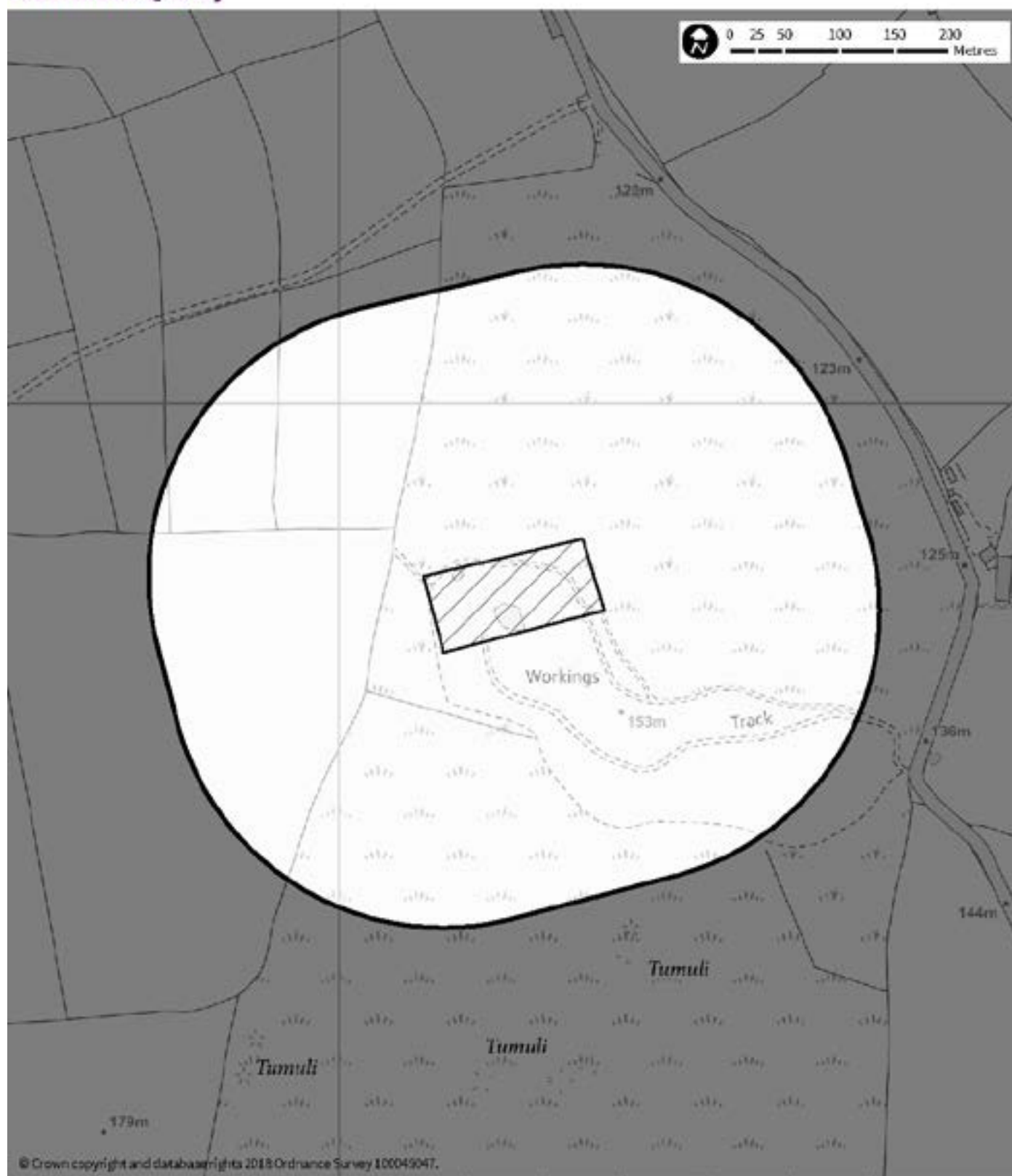
BS15
Trecarne Quarry



-  Mineral Safeguarding Area
-  Mineral Planning Permission

BS16

Tredinnick Quarry



-  Mineral Safeguarding Area
-  Mineral Planning Permission

BS17
Tregunnon Quarry



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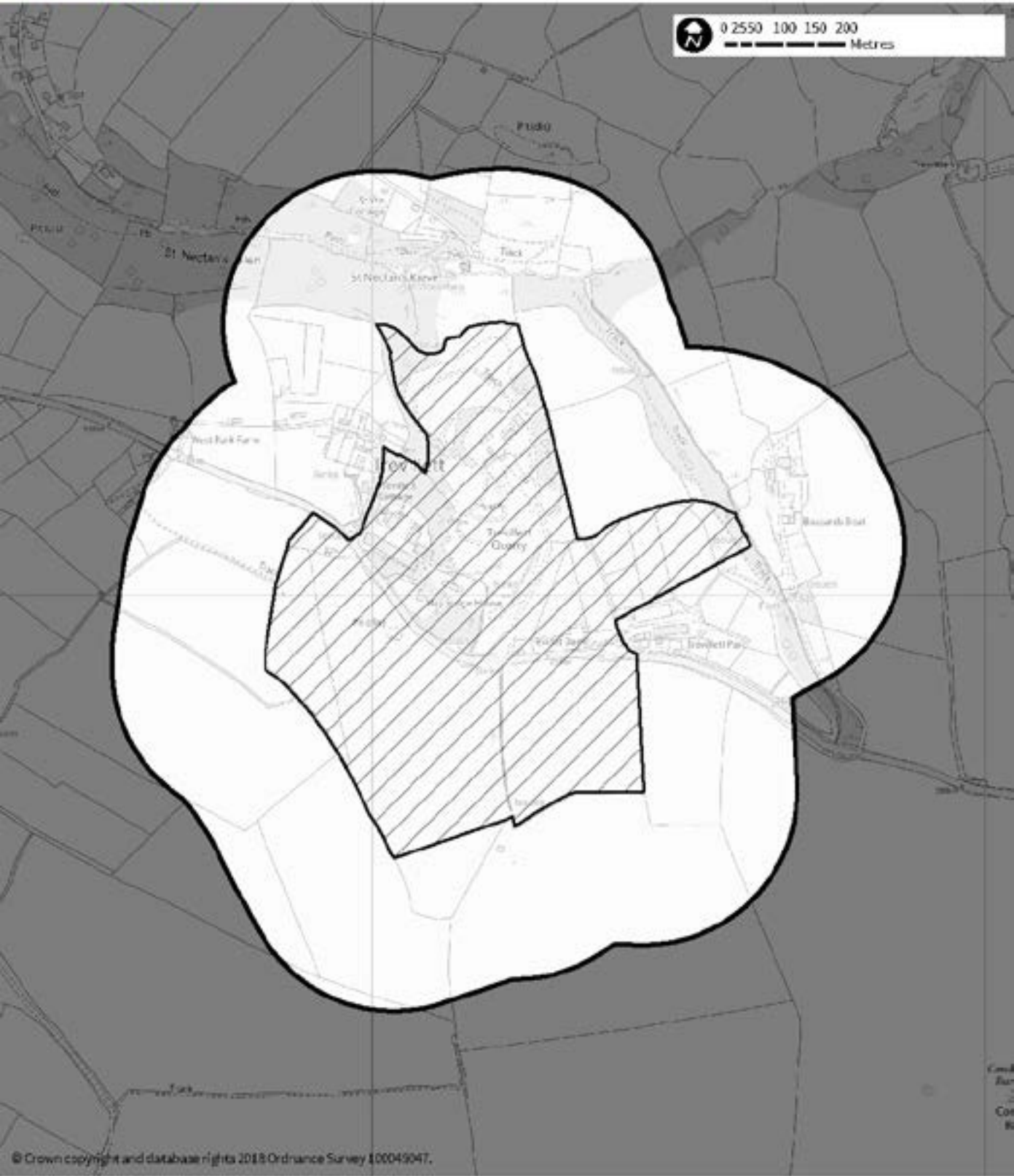
-  Mineral Safeguarding Area
-  Mineral Planning Permission



BS18

Trenoweth Quarry



BS19
Trevillet Quarry (H)



-  Mineral Safeguarding Area
-  Mineral Planning Permission



BS20

Trolvis Quarry

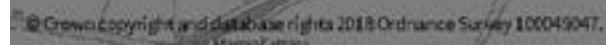


BS21
Tubbs Mill Quarry



 Mineral Safeguarding Area
 Dormant Site

Tynes Quarry (H)



BS23

Westwood Quarry (H)

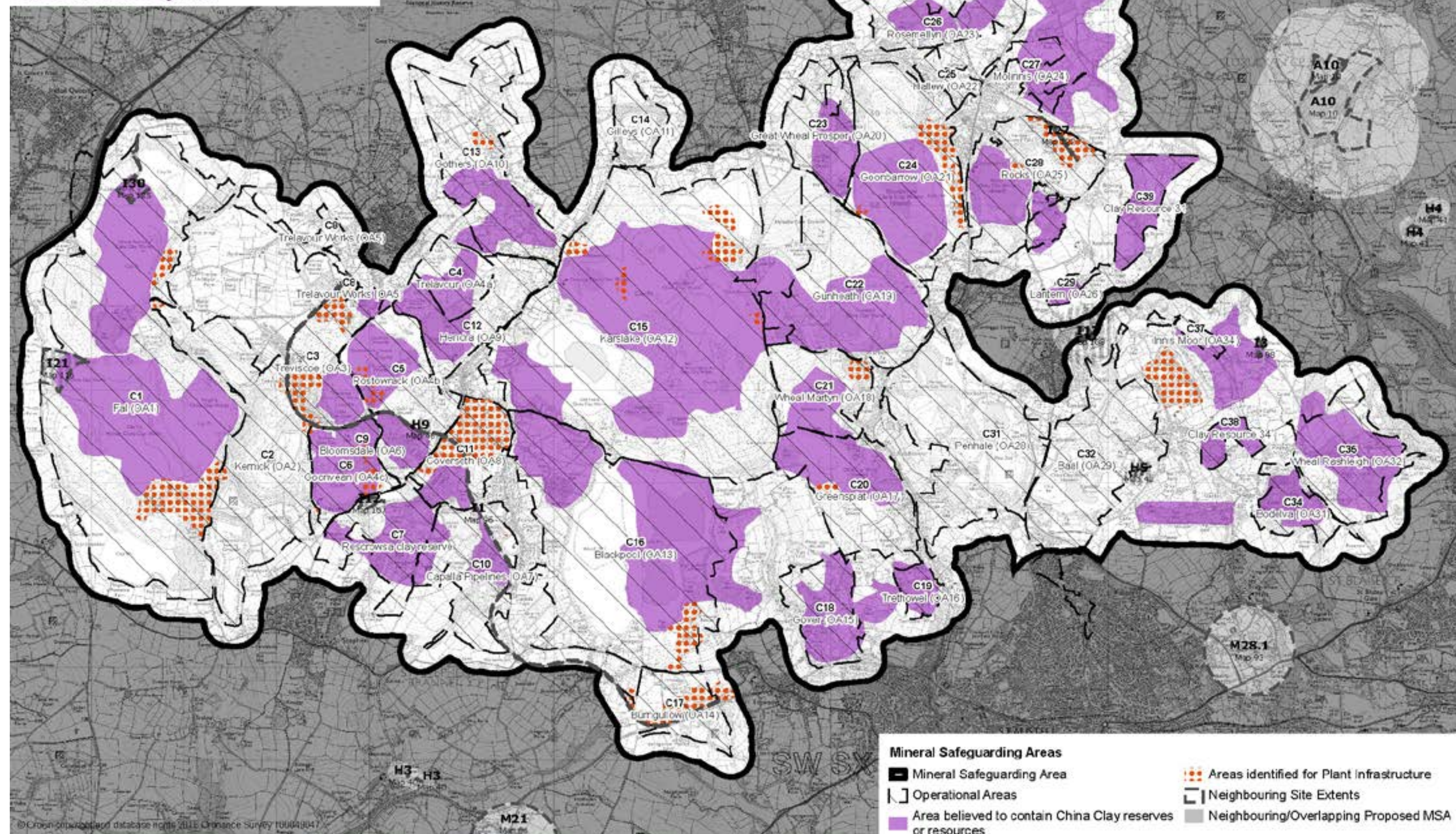


- Mineral Safeguarding Area
- Mineral Planning Permission

China Clay

CC1

St Austell China Clay MSA



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H1

Boscastle Quarry



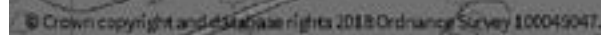
H3

Brannel Quarry



- Mineral Safeguarding Area
- Site with no Mineral Planning Permission

Carbean Colcerrow Quarry



H5

Carn Grey Quarry



H6
Carnglaze Caverns



- Mineral Safeguarding Area
- Site with no Mineral Planning Permission

H7

Castallack Quarry



- Mineral Safeguarding Area
- x x x Dormant Site

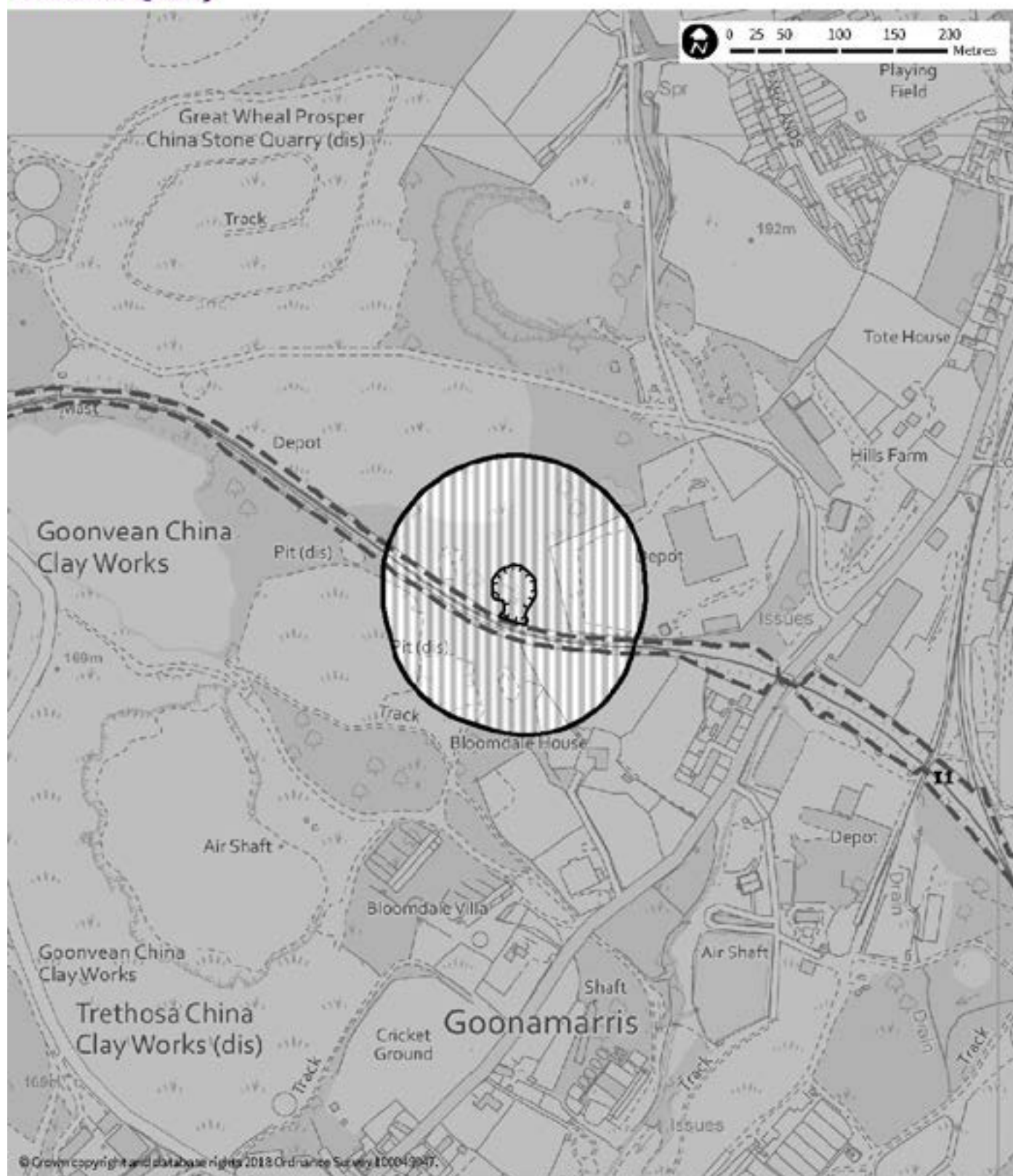
H8

Cataclews Quarry



H9

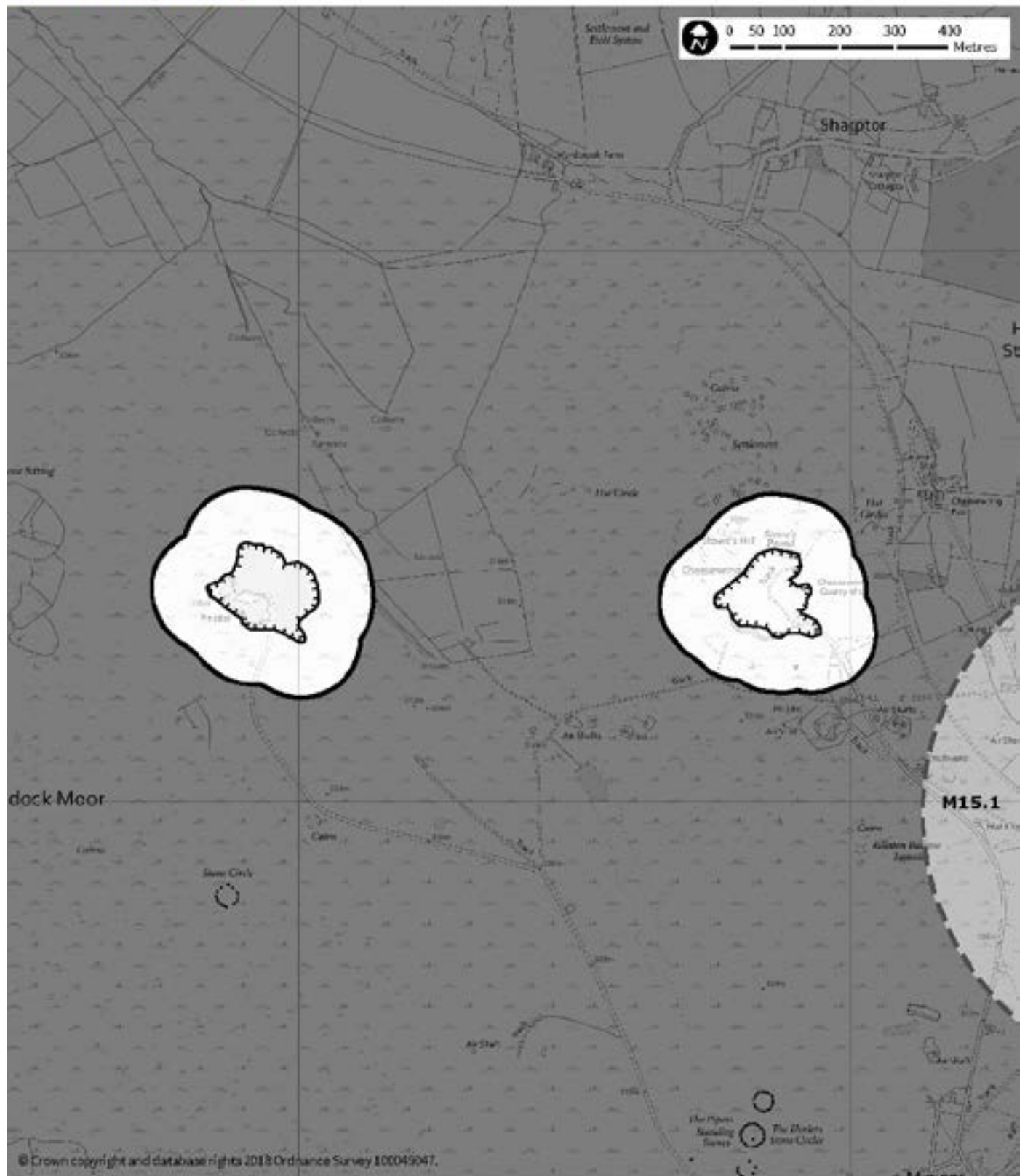
Cathedral Quarry



Mineral Safeguarding Area
 Neighbouring Site Extents
 Site with no Mineral Planning Permission
 Neighbouring/Overlapping Mineral Safeguarding Area

H10

Cheesewring Quarry



H11

Gwendreath Quarry



H12

Herdbury Quarry



H13

Kessel Downs Quarry



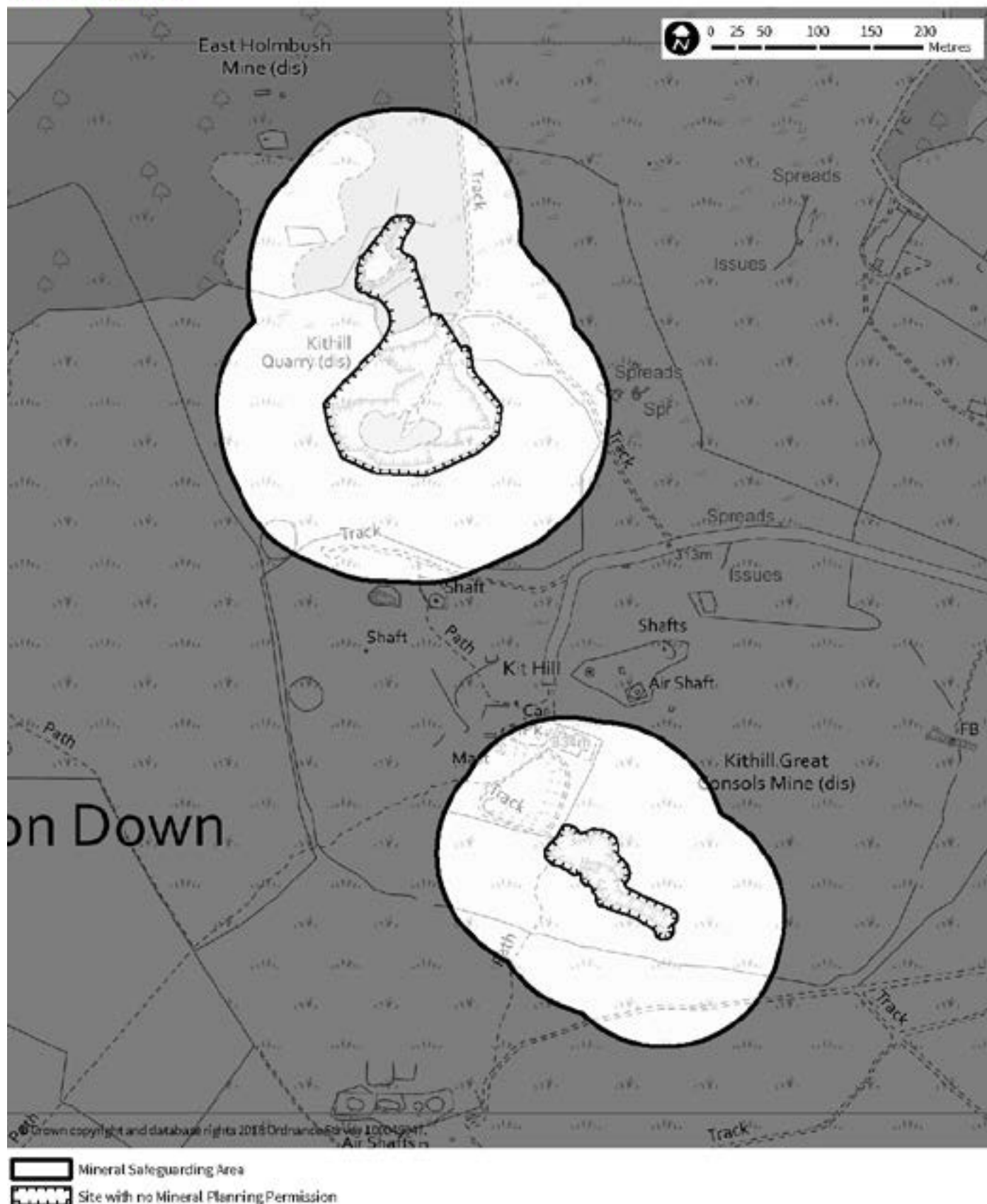
H14
Kestle Quarry



Mineral Safeguarding Area
Dormant Site

H15

Kit Hill Quarries



H16

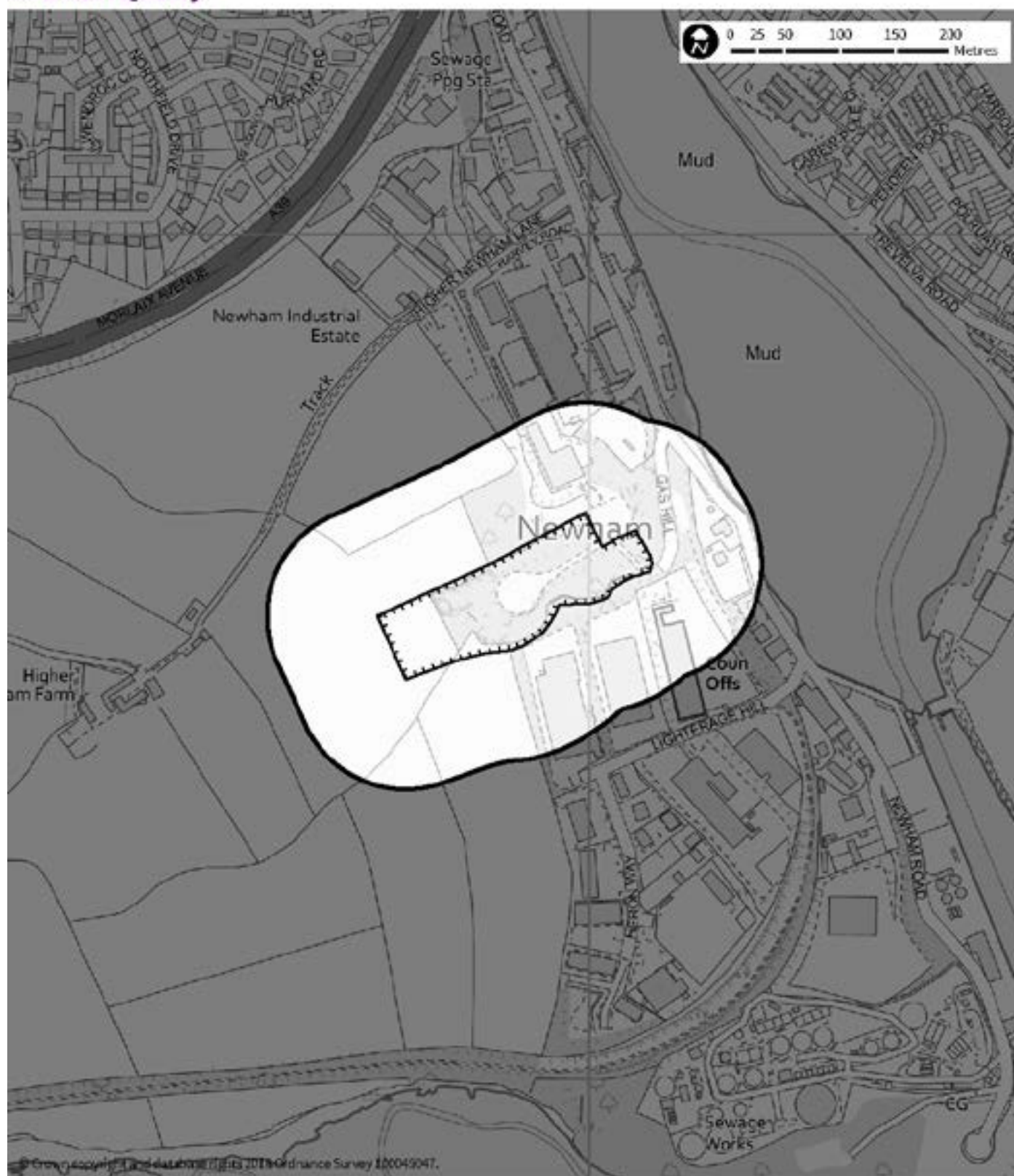
Lamorna Quarry



- Mineral Safeguarding Area
- Site with no Mineral Planning Permission

H17

Newham Quarry



H18

Penrice Quarry



Mineral Safeguarding Area
Site with no Mineral Planning Permission

H19

Pentewan Quarry



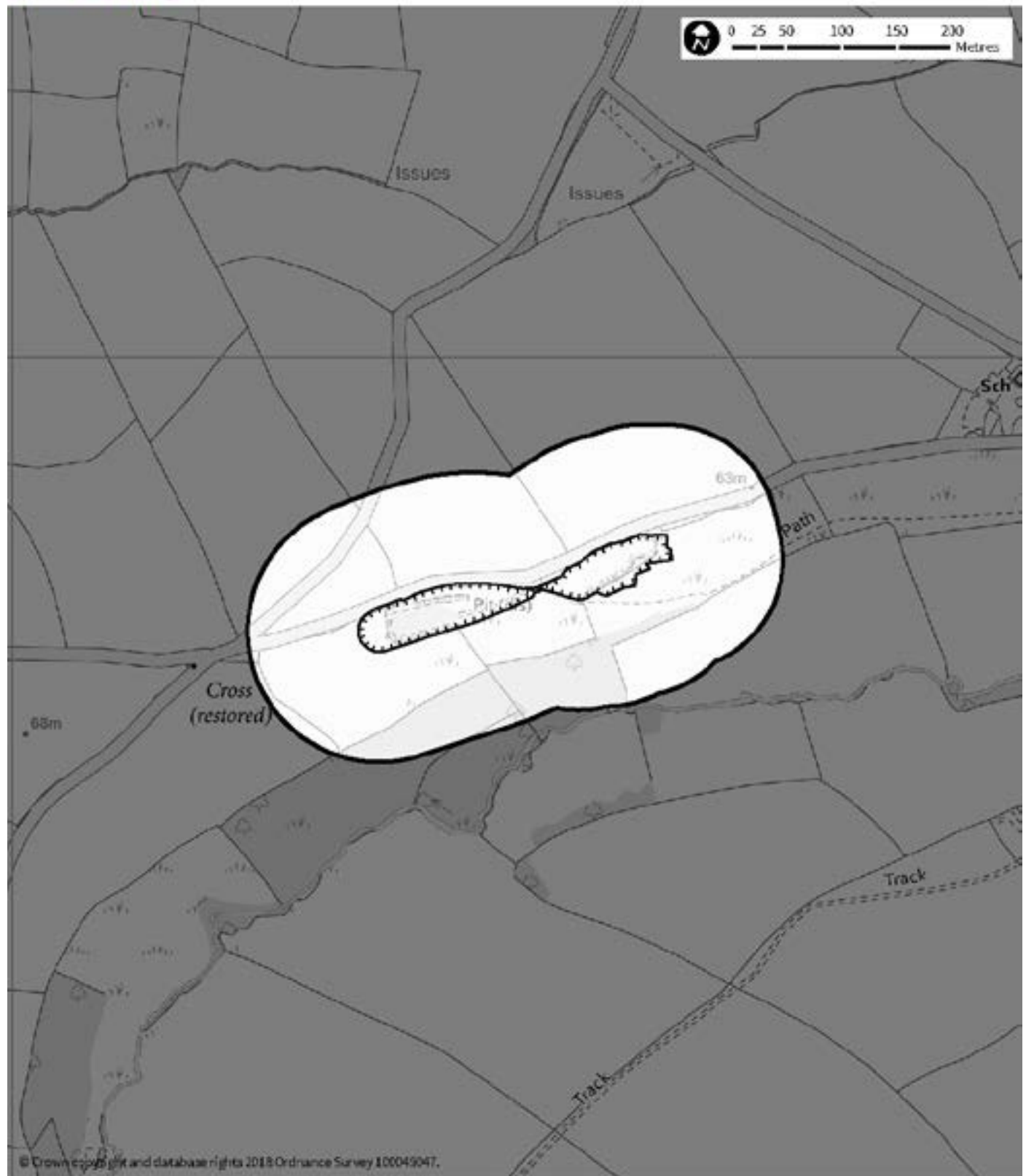
Mineral Safeguarding Area
Site with no Mineral Planning Permission

H20
Sheffield Quarry



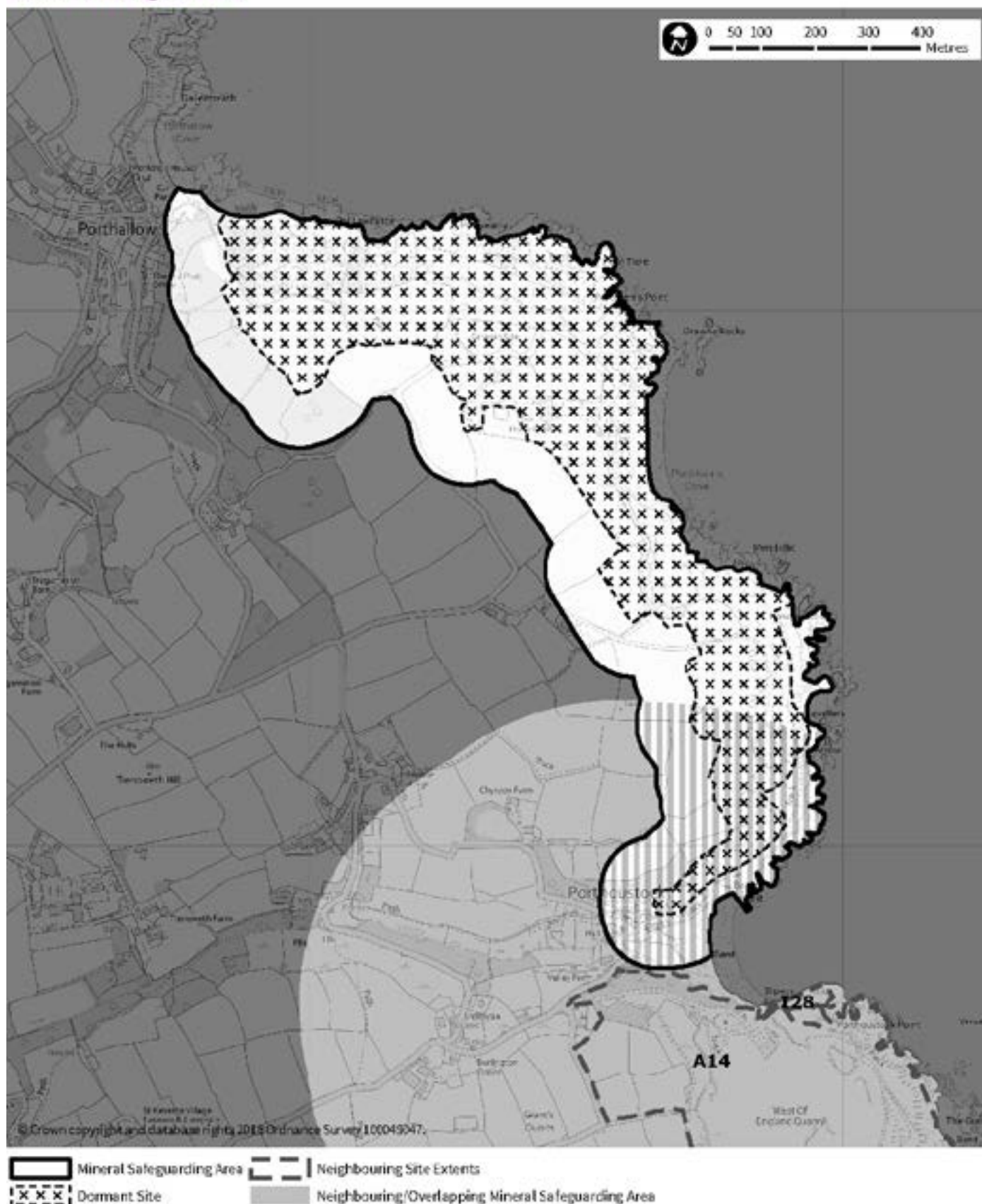
H21

St Kew Quarry



-  Mineral Safeguarding Area
-  Site with no Mineral Planning Permission

St Keverne Quarries



H23

Trannack Quarry



H24

Tregonning Hill Quarry



- Mineral Safeguarding Area
- Site with no Mineral Planning Permission

H25

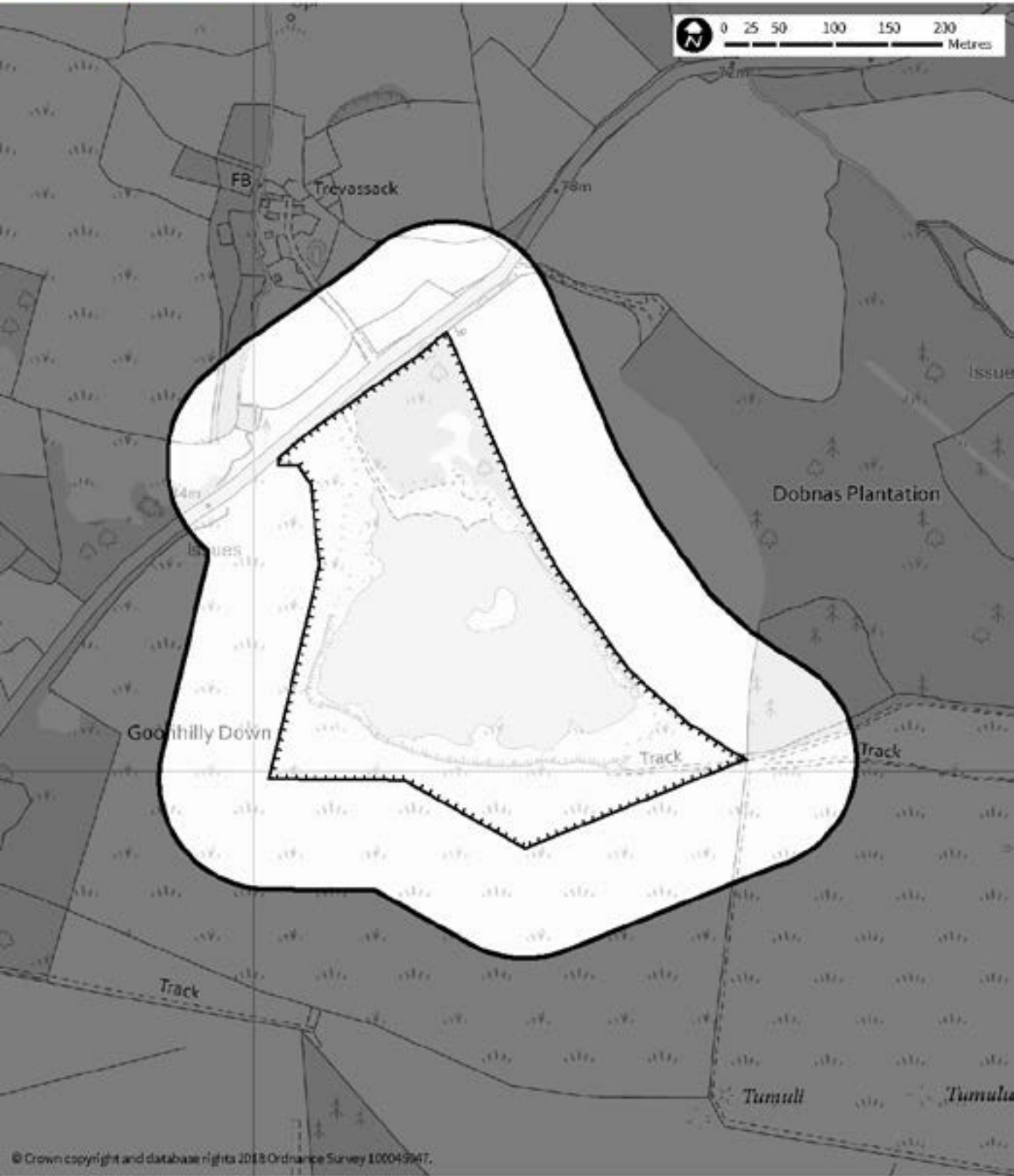
Tremore Quarry



-  Mineral Safeguarding Area
-  Site with no Mineral Planning Permission

H26

Trevassack Quarry



Mineral Safeguarding Area
Site with no Mineral Planning Permission

H27

Treveddoe Quarry



-  Mineral Safeguarding Area
-  Site with no Mineral Planning Permission

H28

Watergate (Kingsand) Quarry



Mineral Safeguarding Area

Site with no Mineral Planning Permission

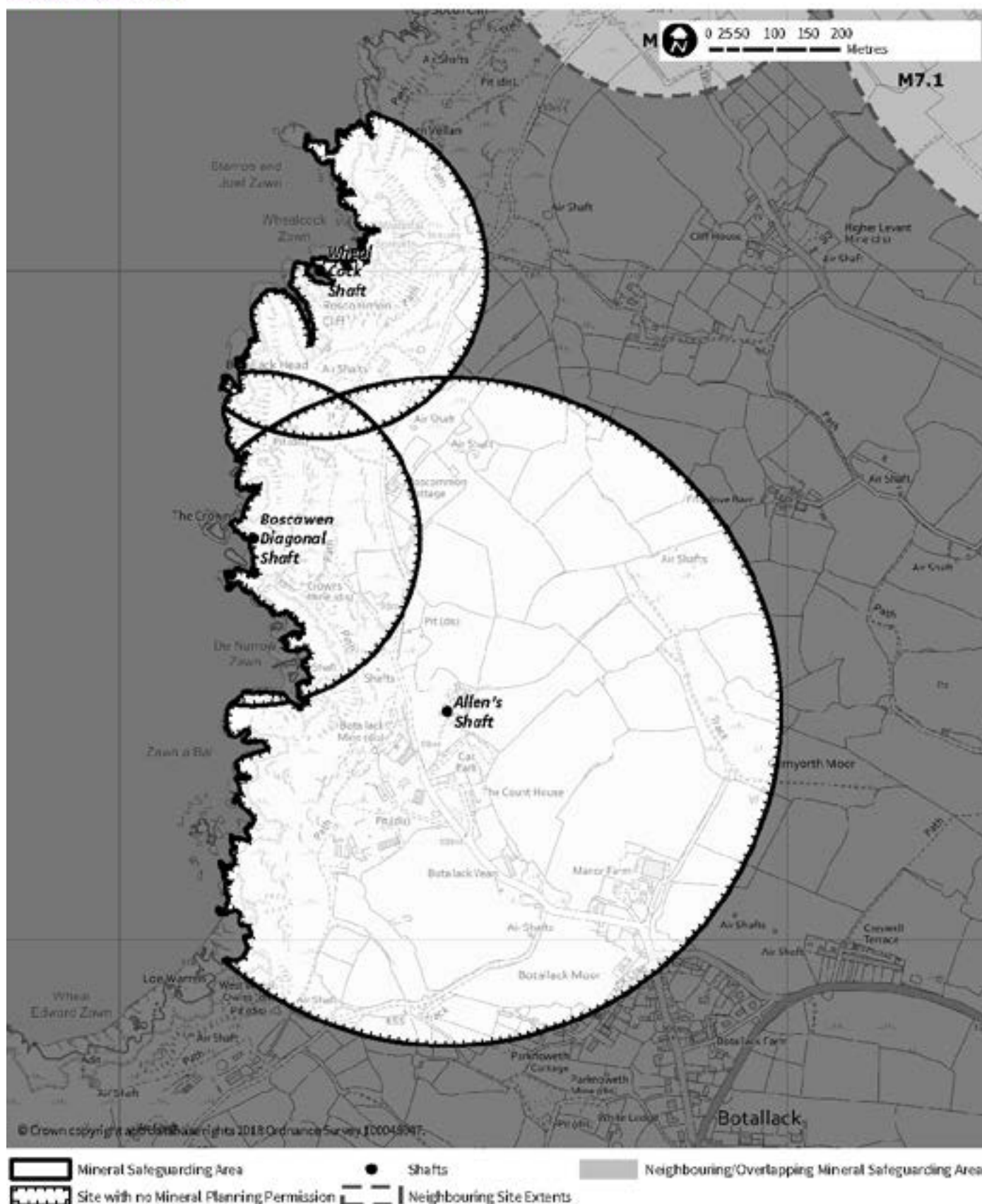
M1

Blue Hills, St Agnes



- Mineral Safeguarding Area
- Mineral Planning Permission

Botallack Mine

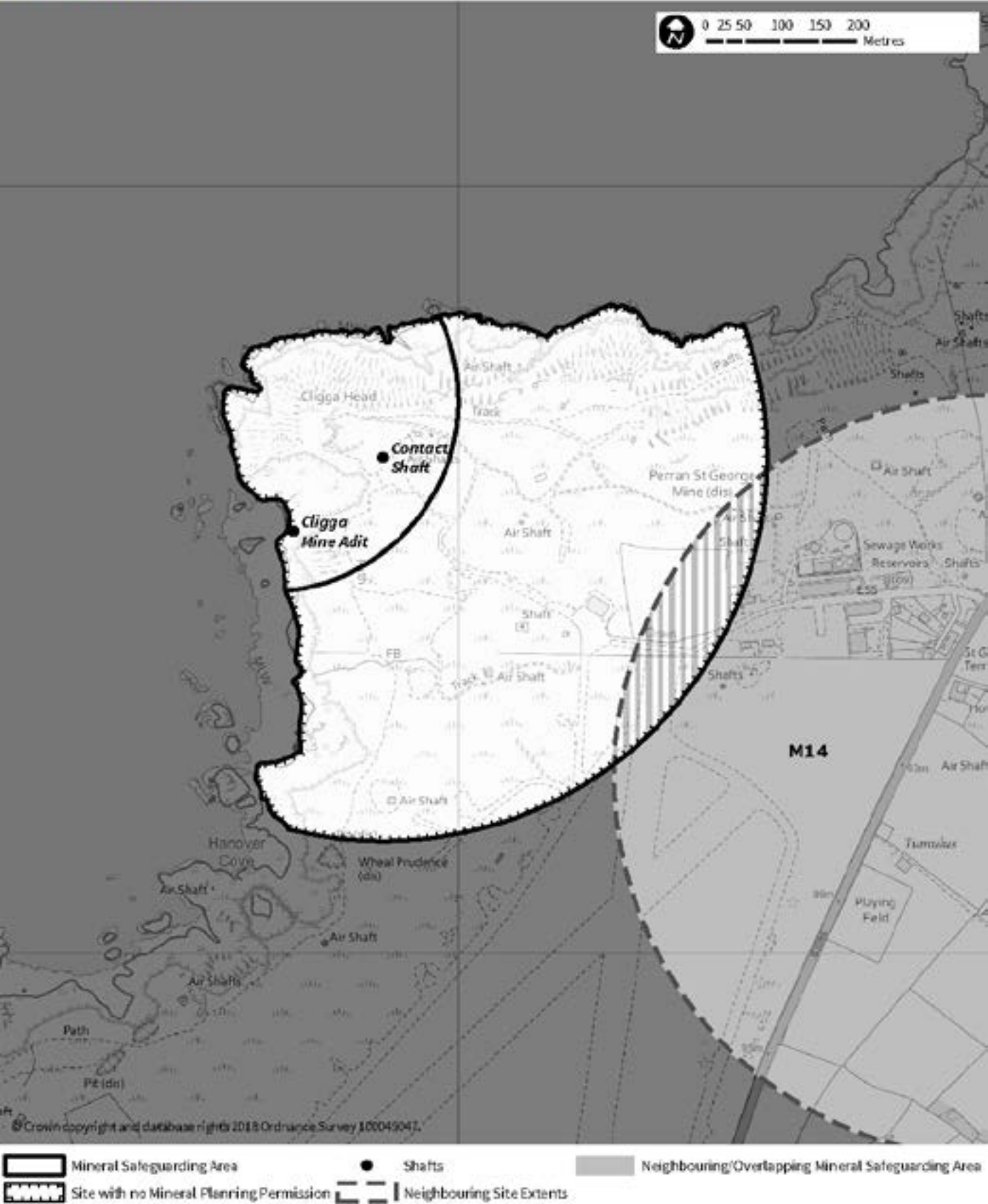


Castle-an-Dinas Mine



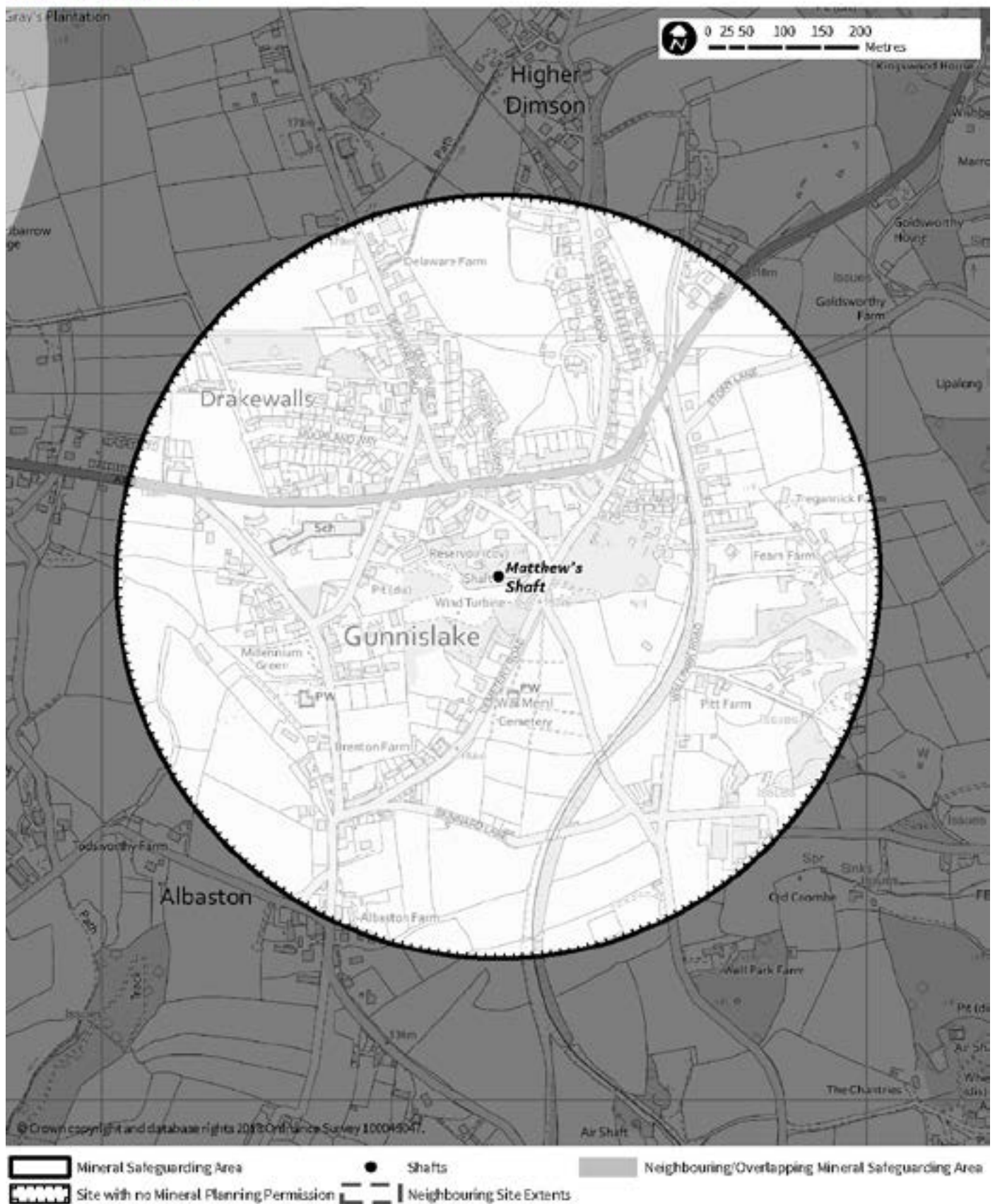
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Cligga Head Mine



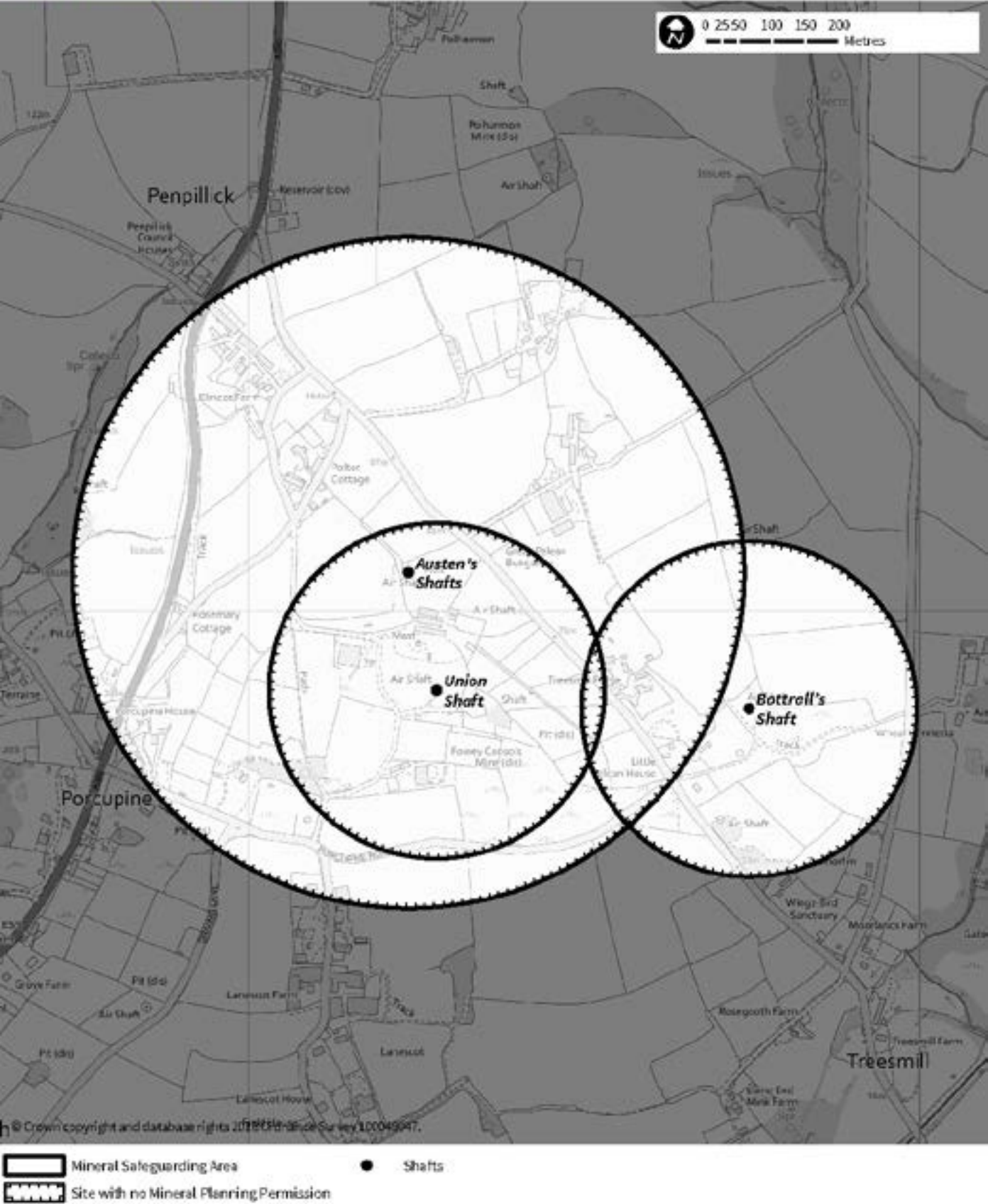
M5

Drakewalls Mine



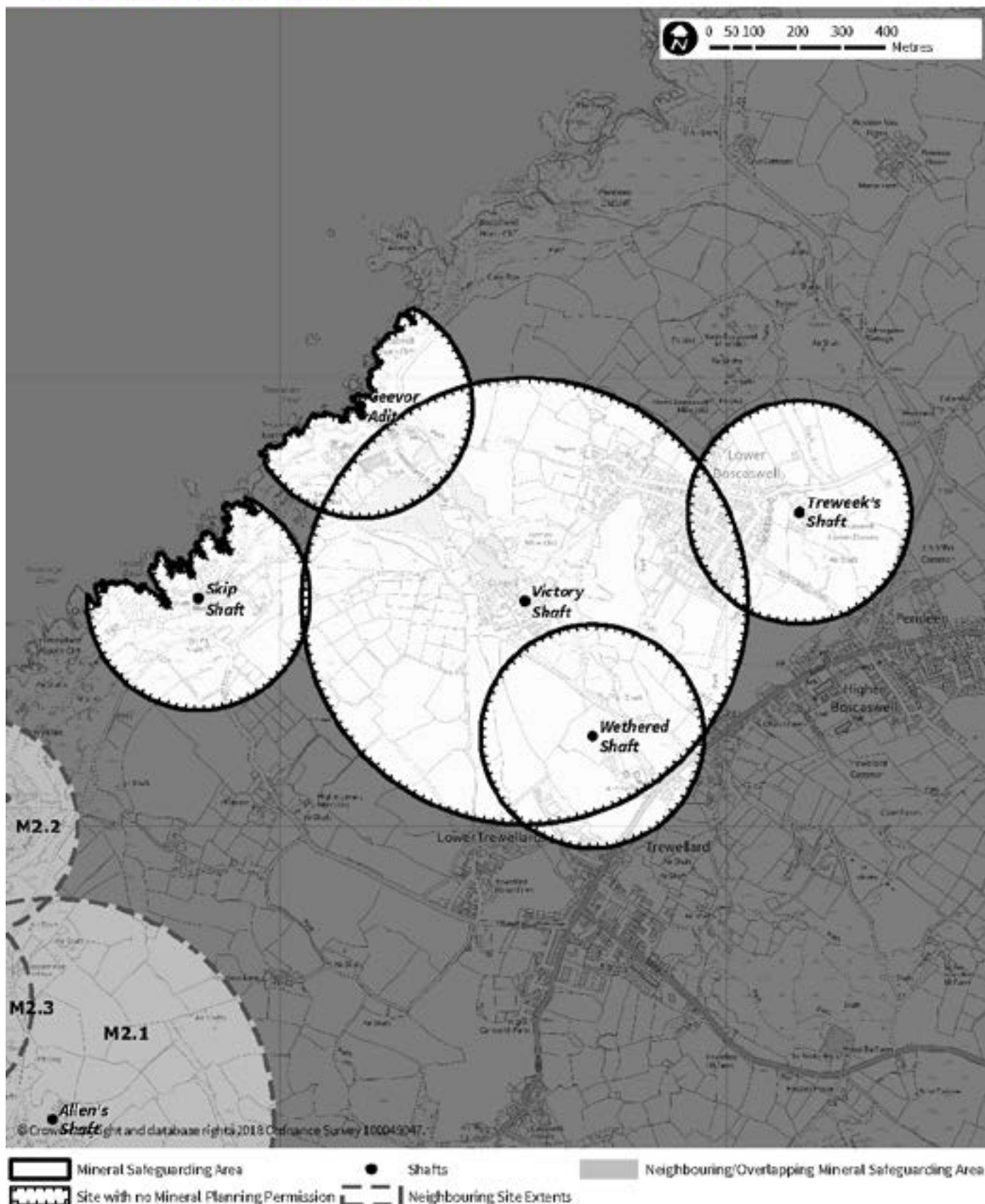
M6

Fowey Consols Mine



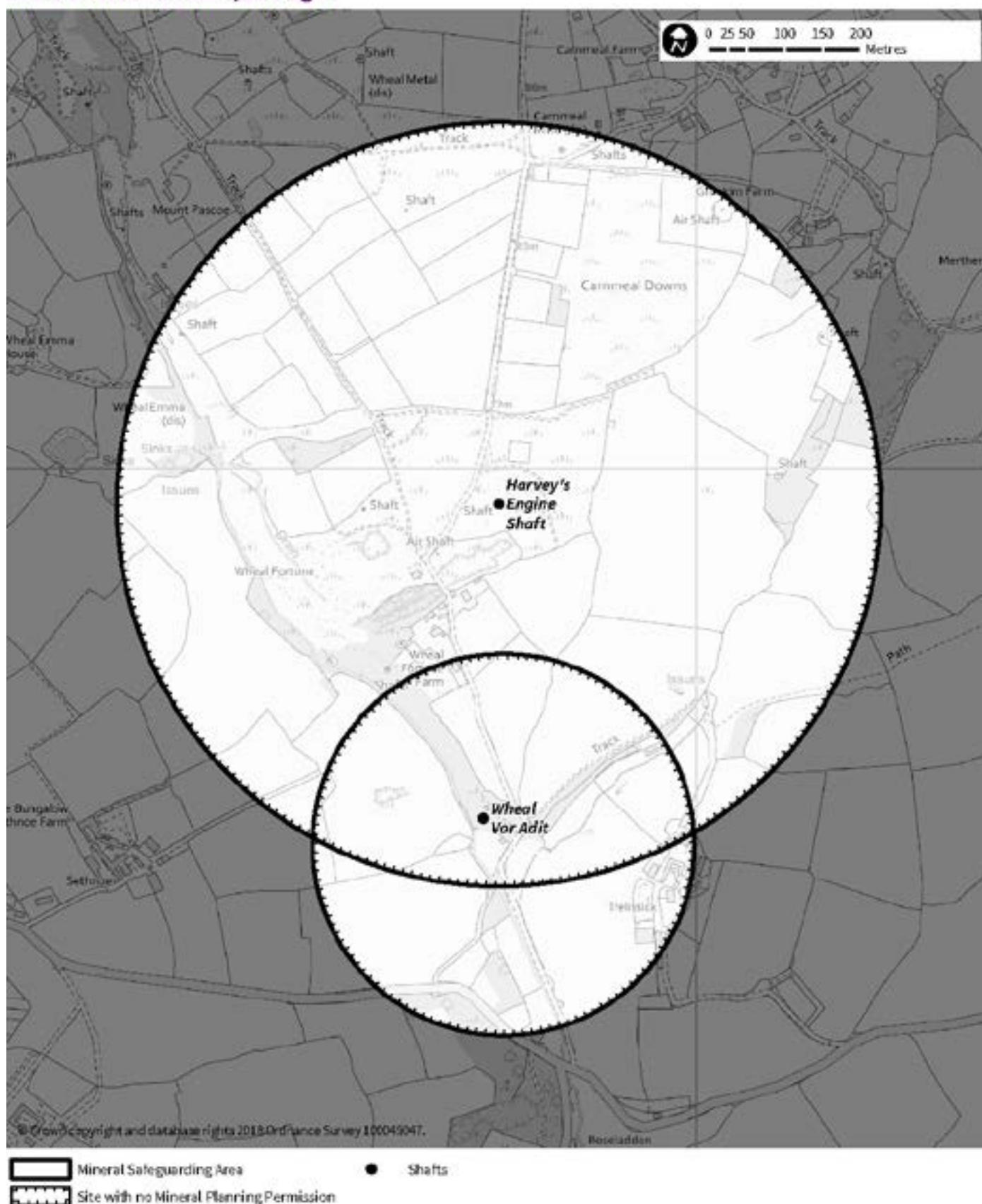
M7

Geevor, Levant and Boscaswell Mines



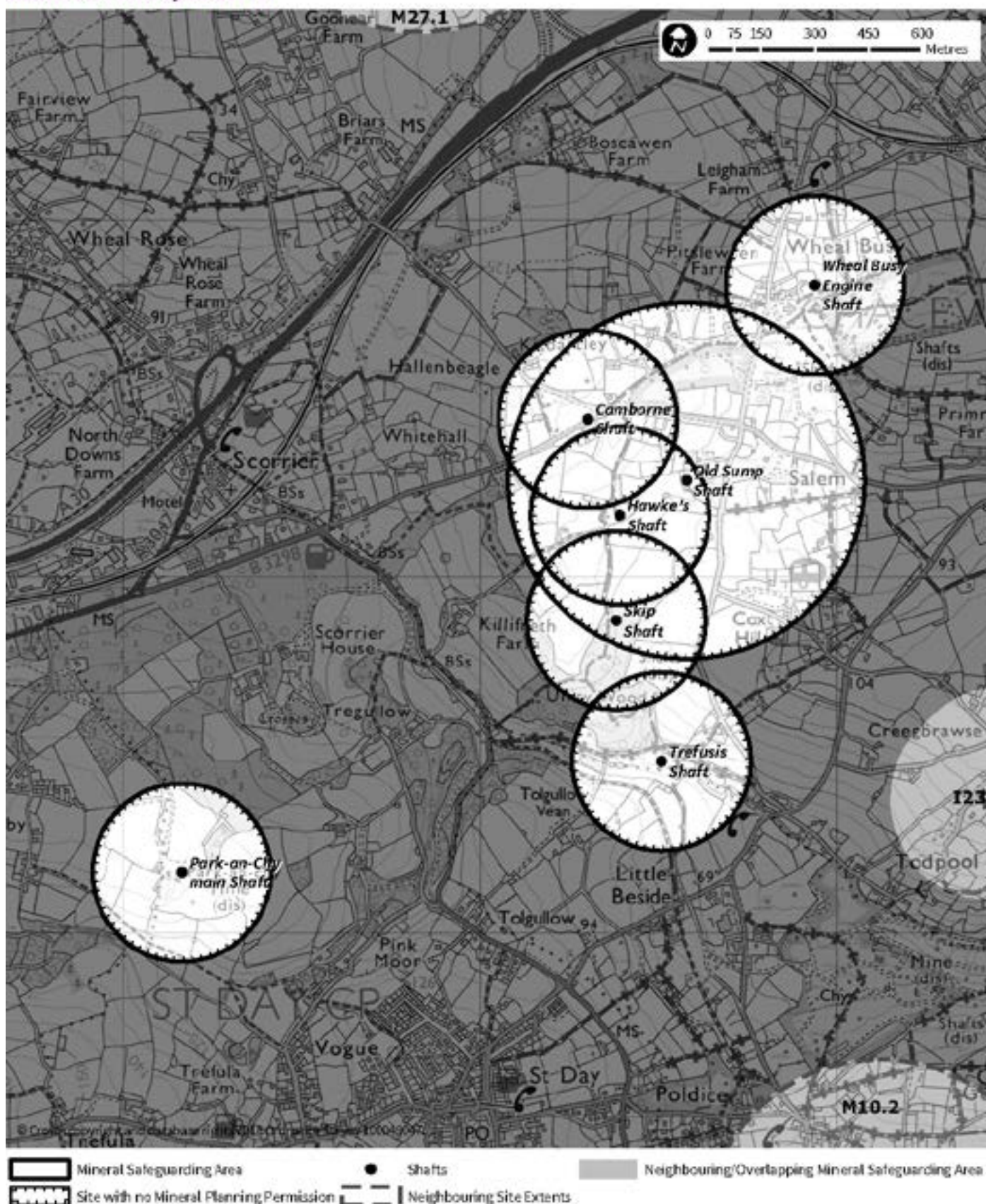
Great Fortune Mine, Breage

Great Fortune Mine, Breage



M9

Killifreth Mine, Scorrier



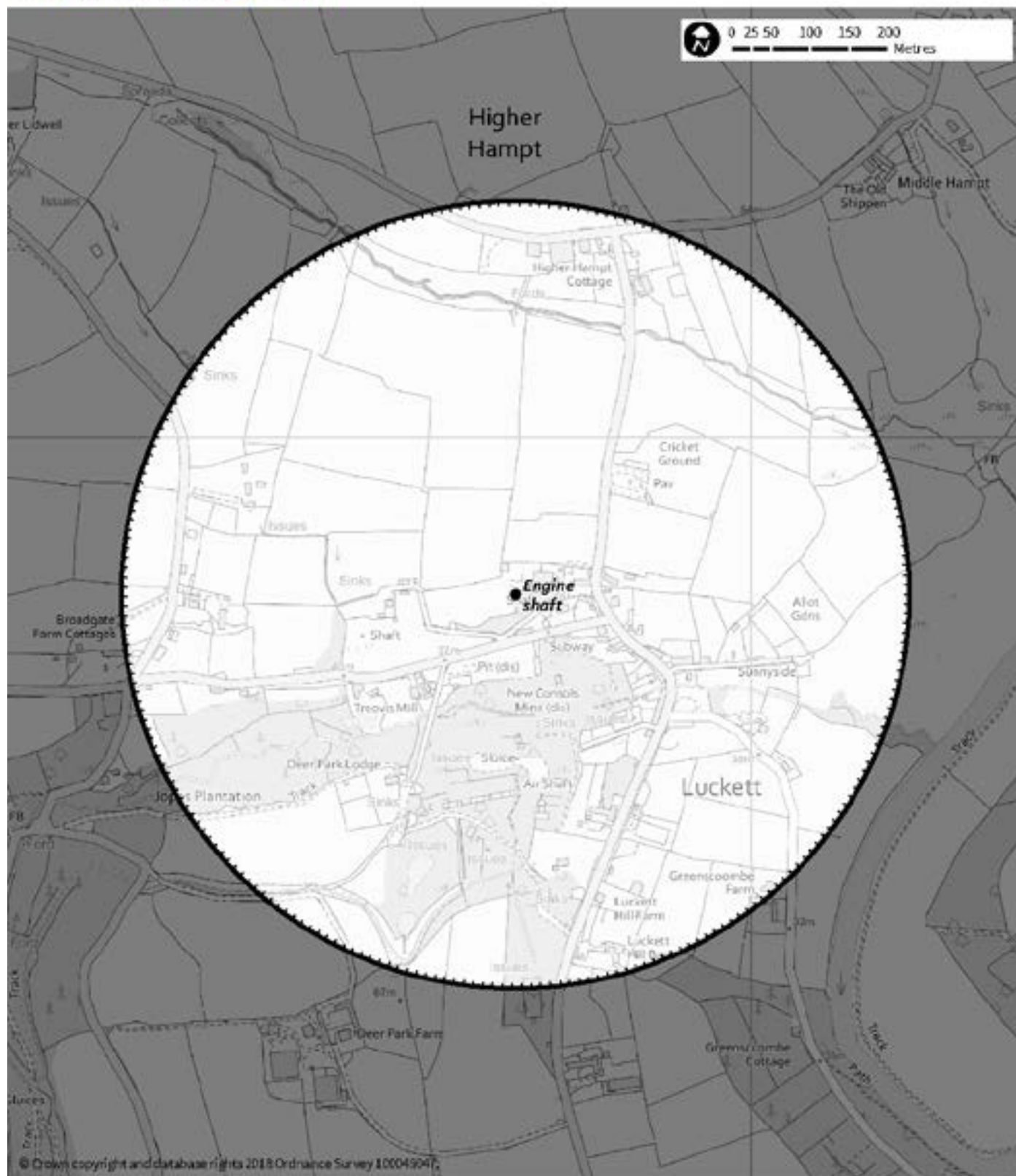
M10

Mount Wellington, United Downs and Wheal Maid Mines, Bissoe



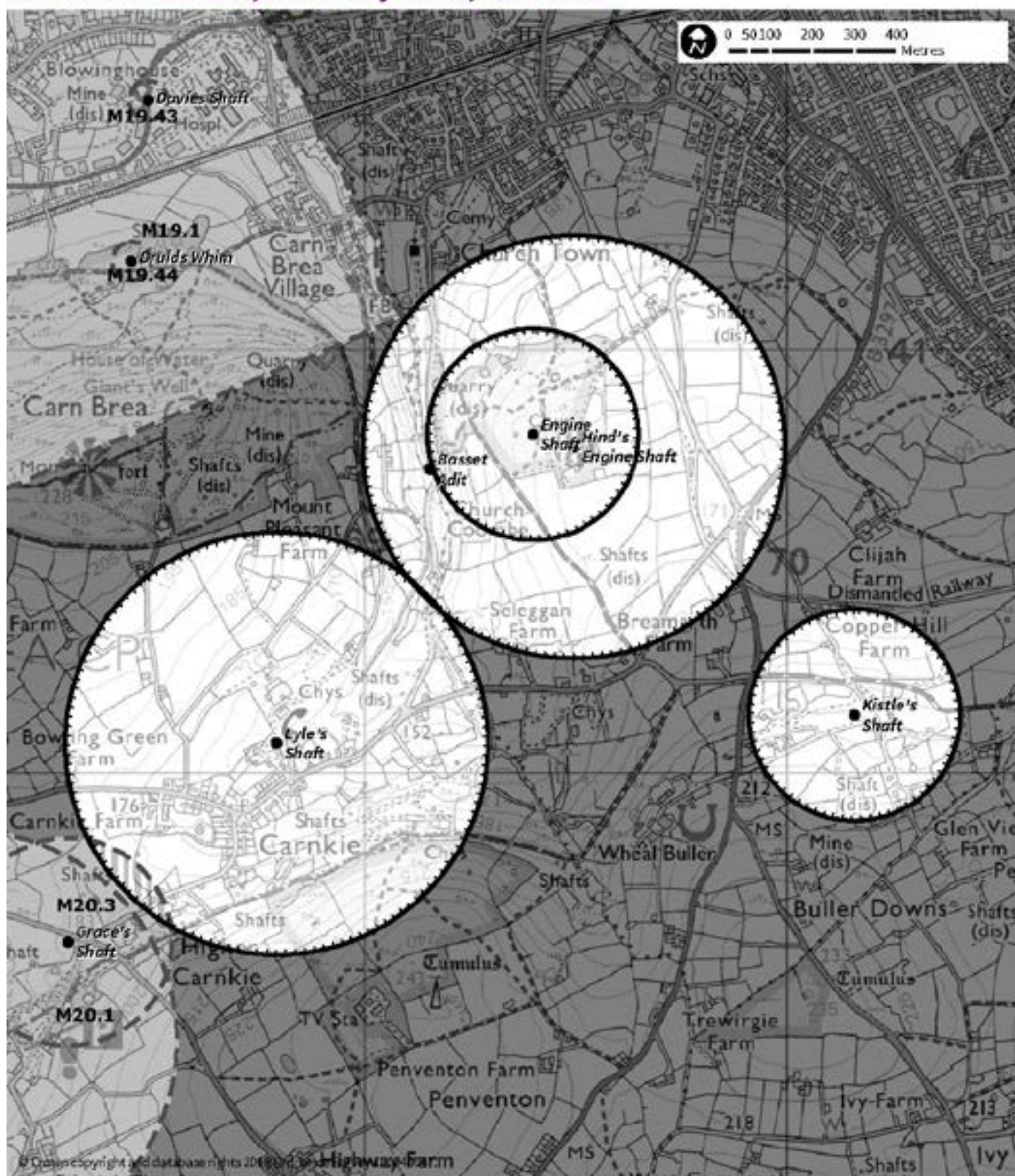
M11

New Consols Mine, Lockett



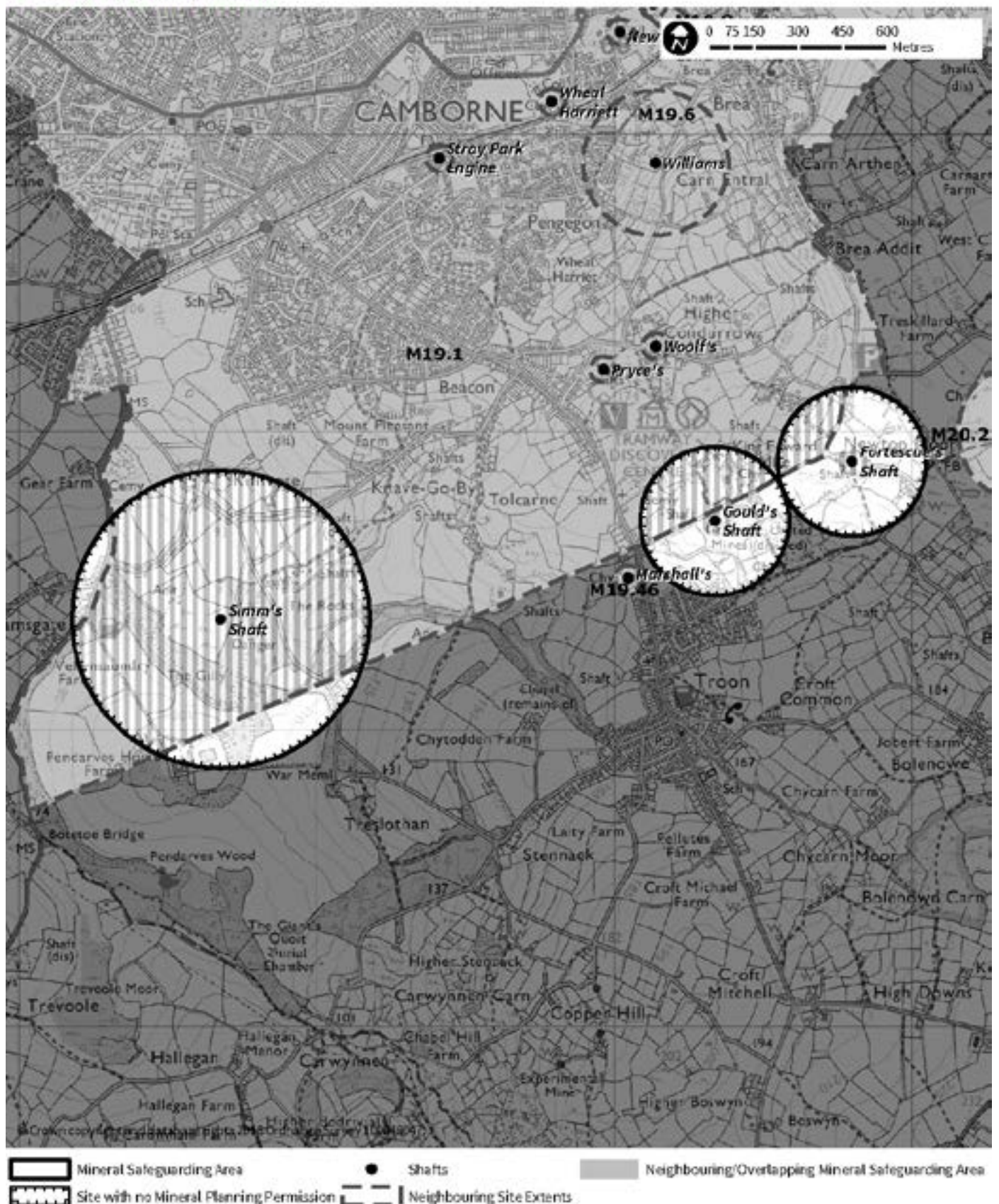
M12

North Wheal Bassett, Wheal Uny Mines, Carn Brea



M13

Pendarves Mine, Troon



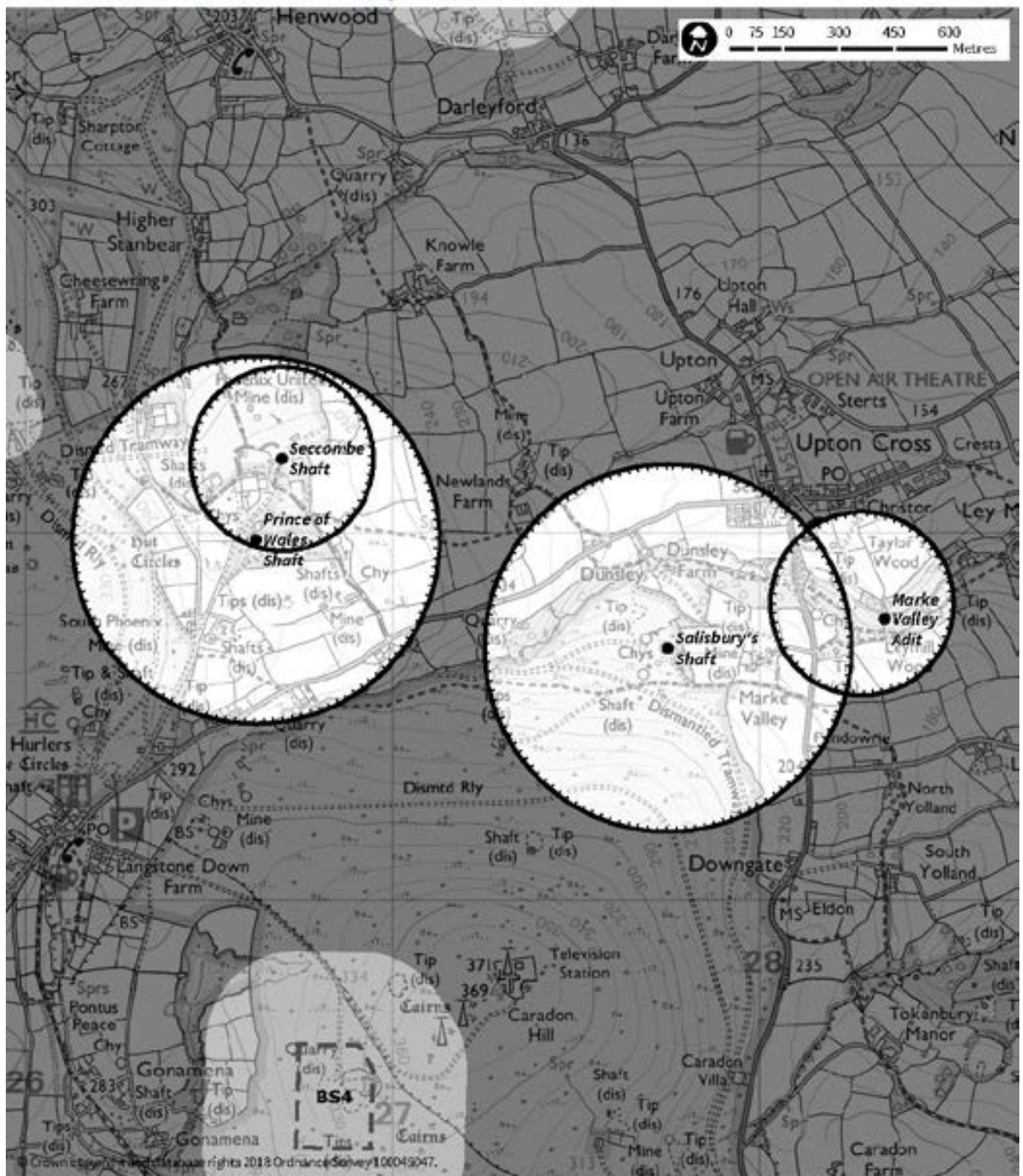
M14

Perran St George Mine, North Trevelas, Perranporth



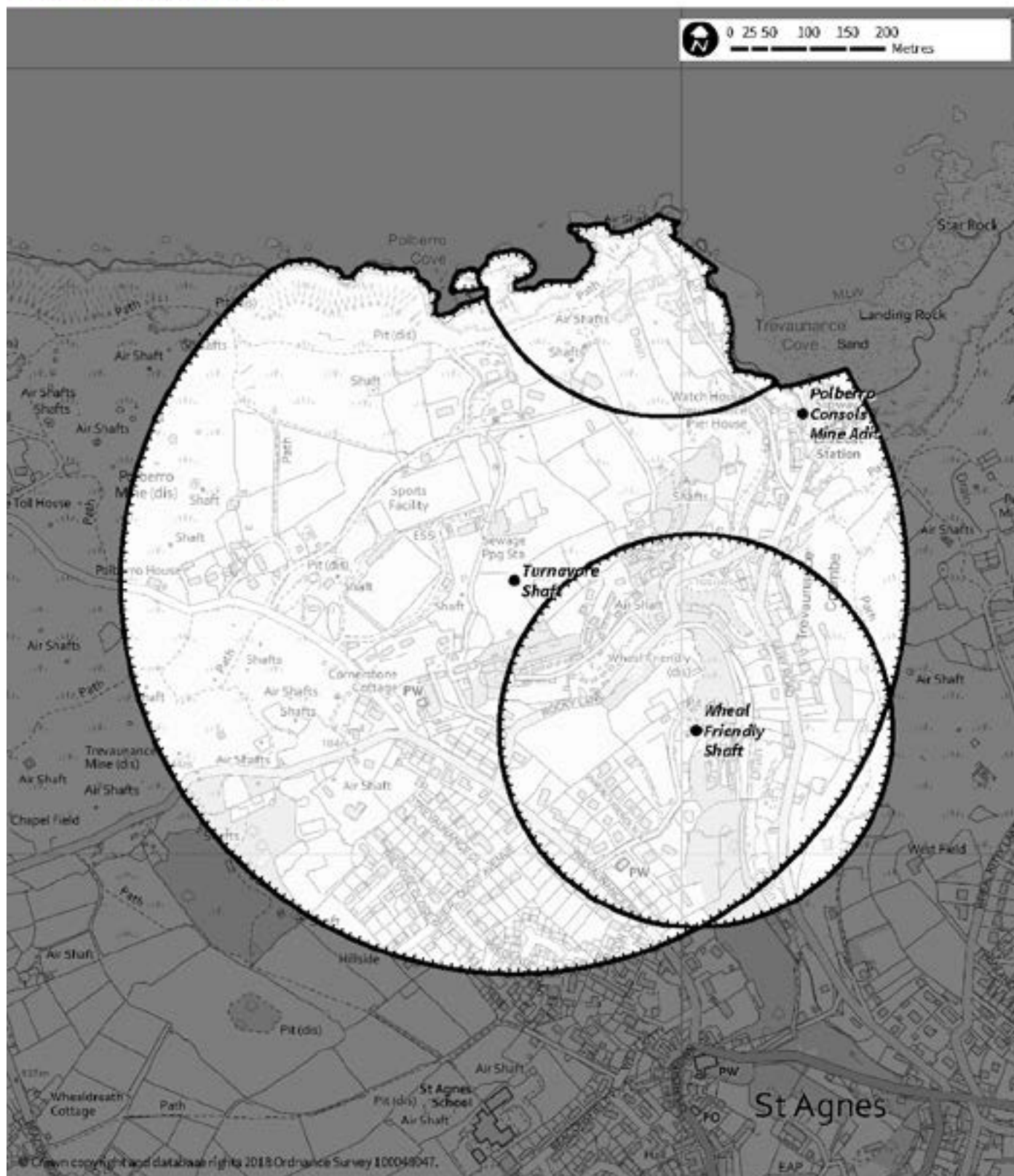
M15

Phoenix United and Marke Valley Mines



M16

Polberro Consols Mine



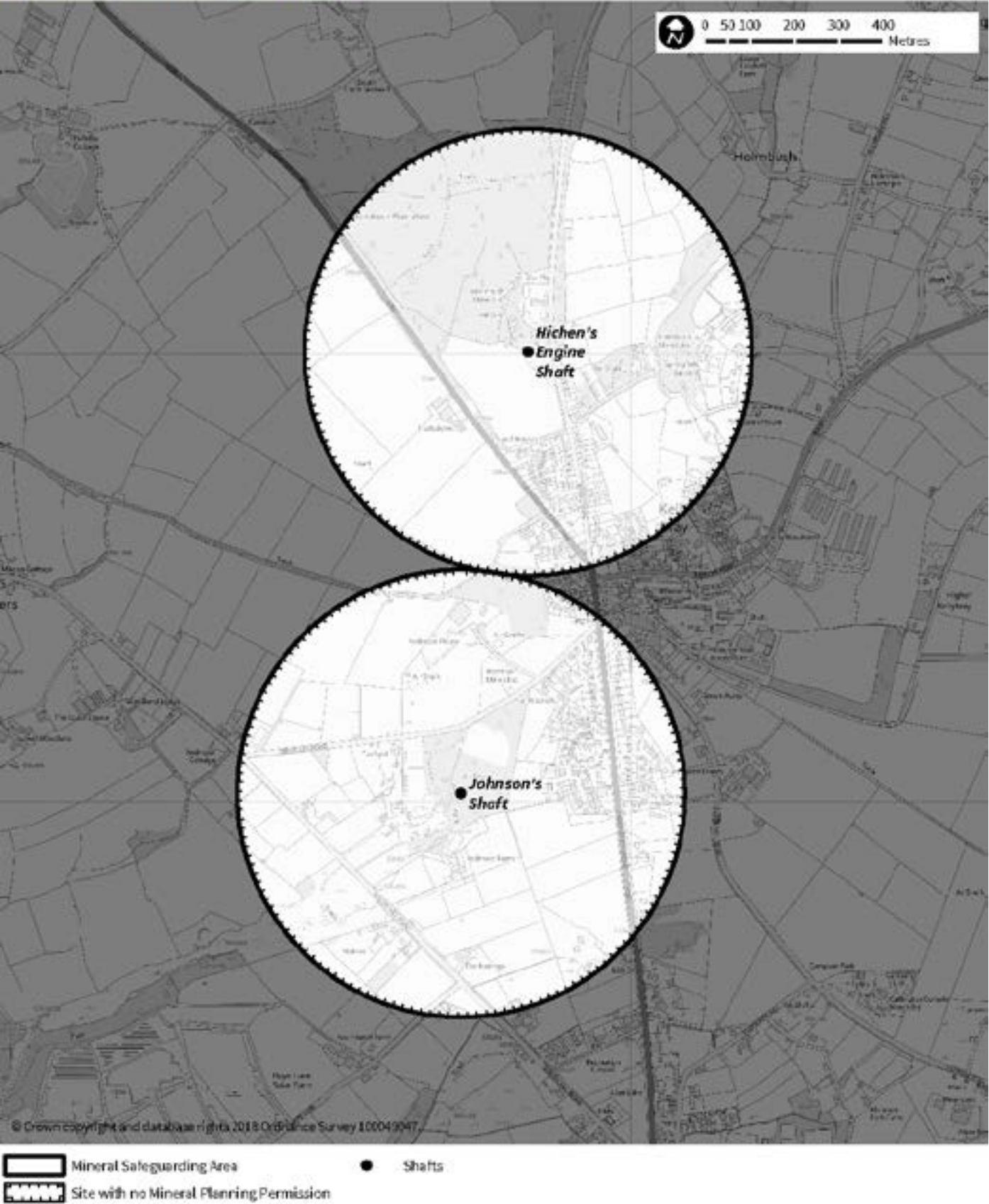
M17

Prince of Wales Mine

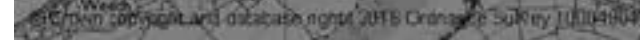


M18

Redmoor and Holmbush Mines



A scale bar with a north arrow icon on the left. The bar is marked with numbers 0, 100, 200, 400, 600, 800, and 1,000. The word 'Metres' is written at the right end of the bar.

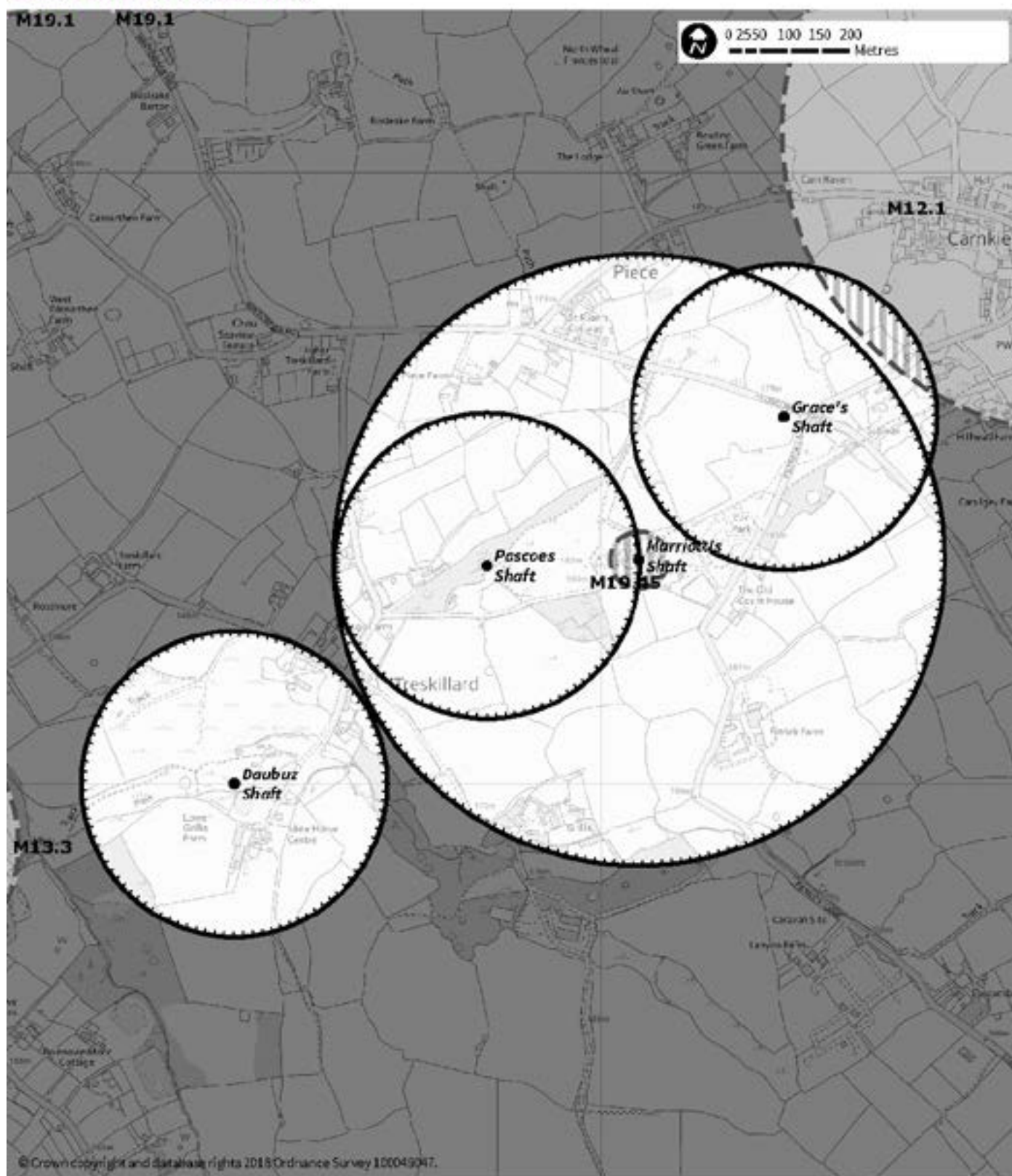


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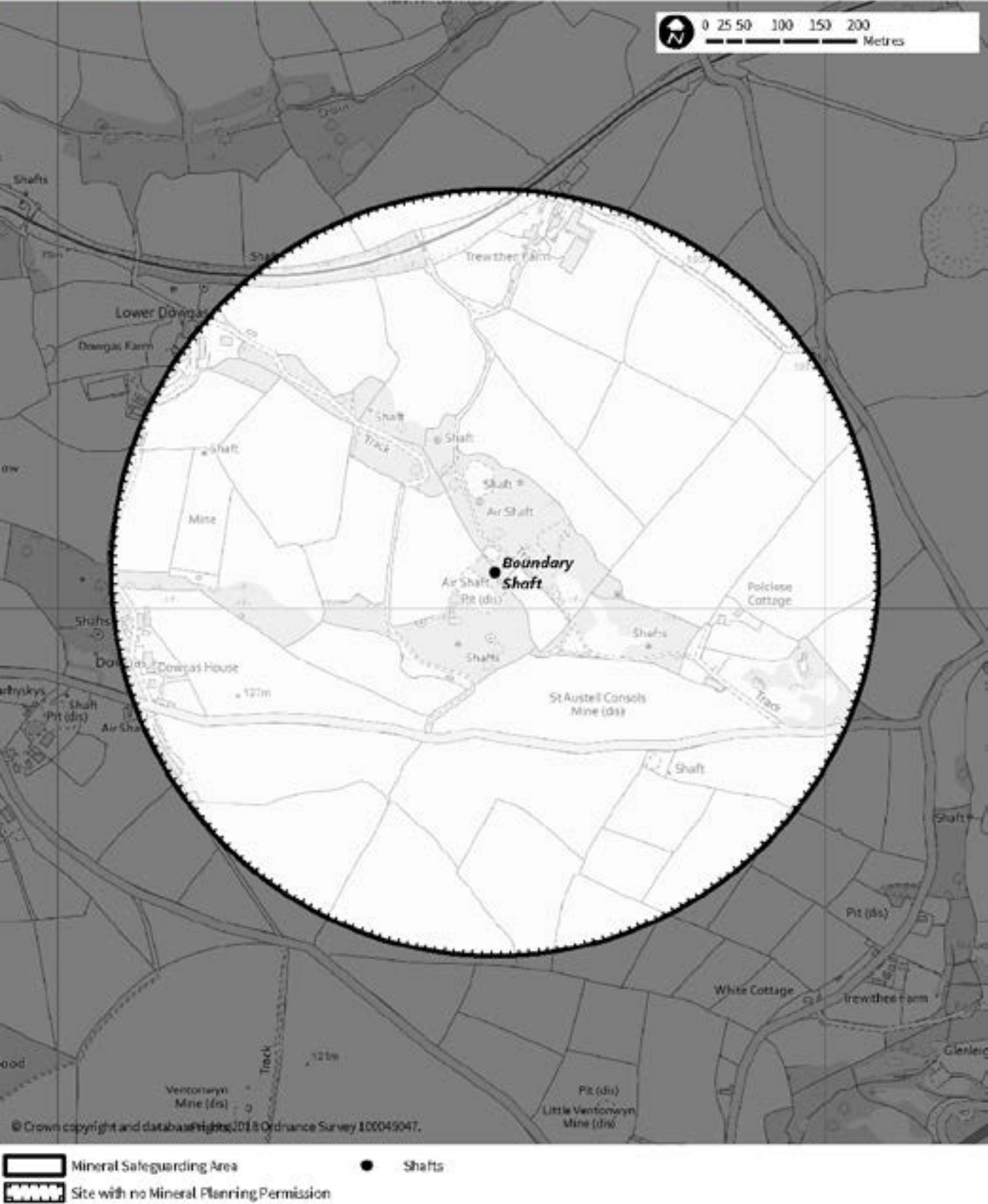
M20

South Wheal Francis Mine



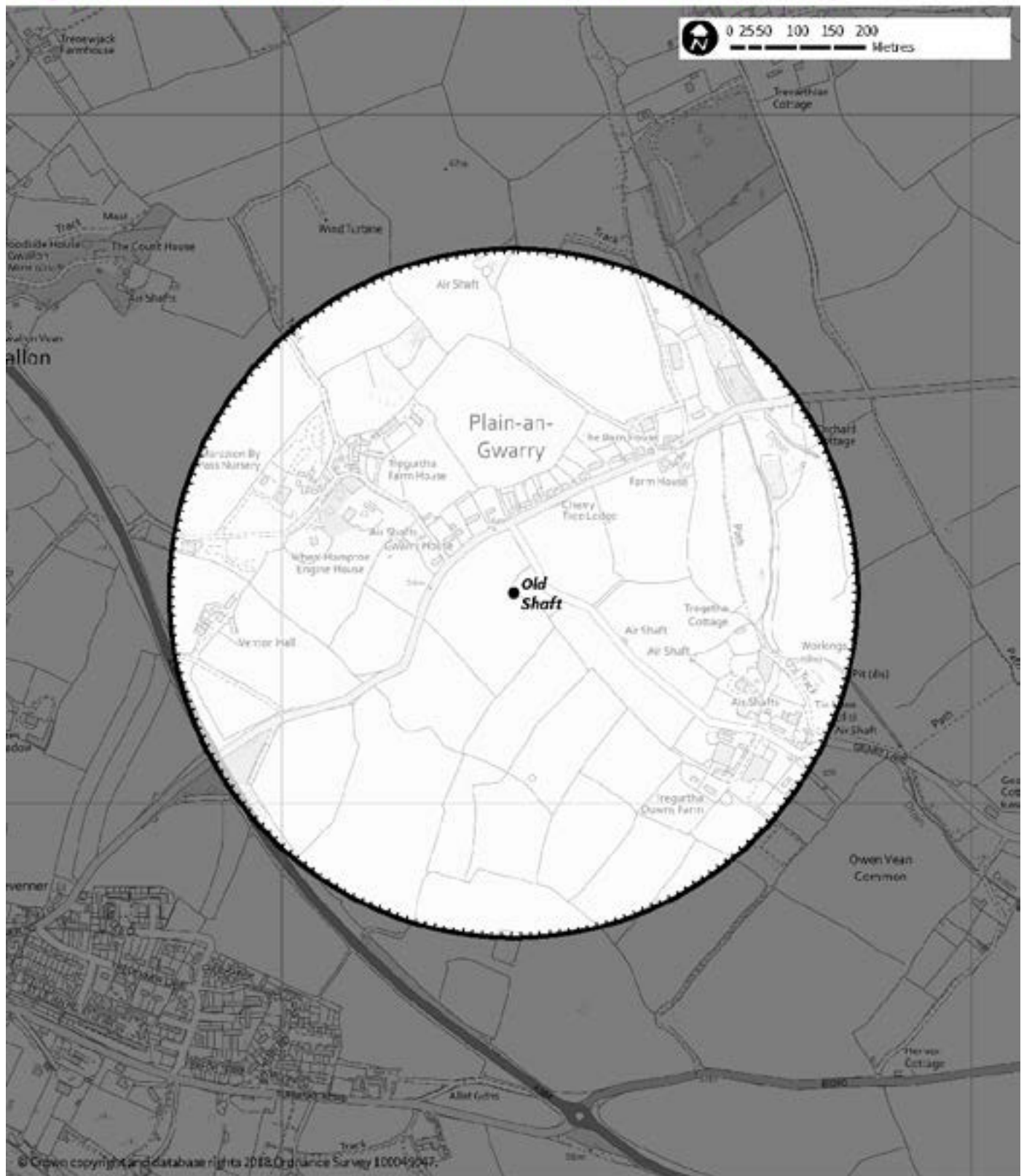
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St Austell Consols Mine, Sticker

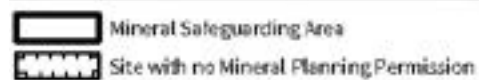


M22

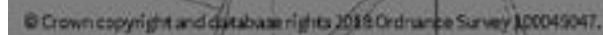
Tregurtha Downs, Wheal Rodney & Wheal Hampton Mine, Goldsithney



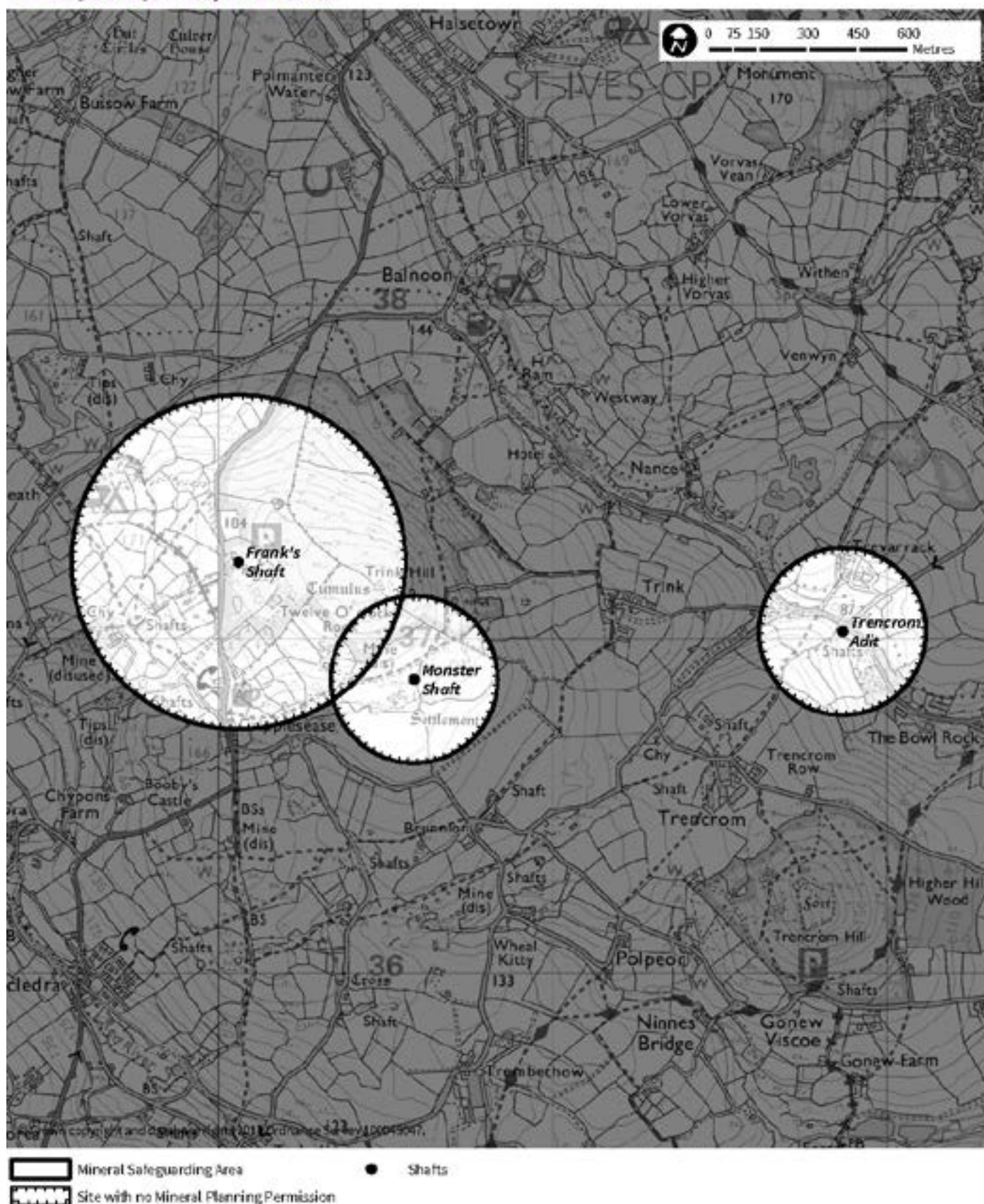
Treliver Farm, St Columb



Tresavean Mine, Carn Brea



Trink (Giew) Mine, Trencrom



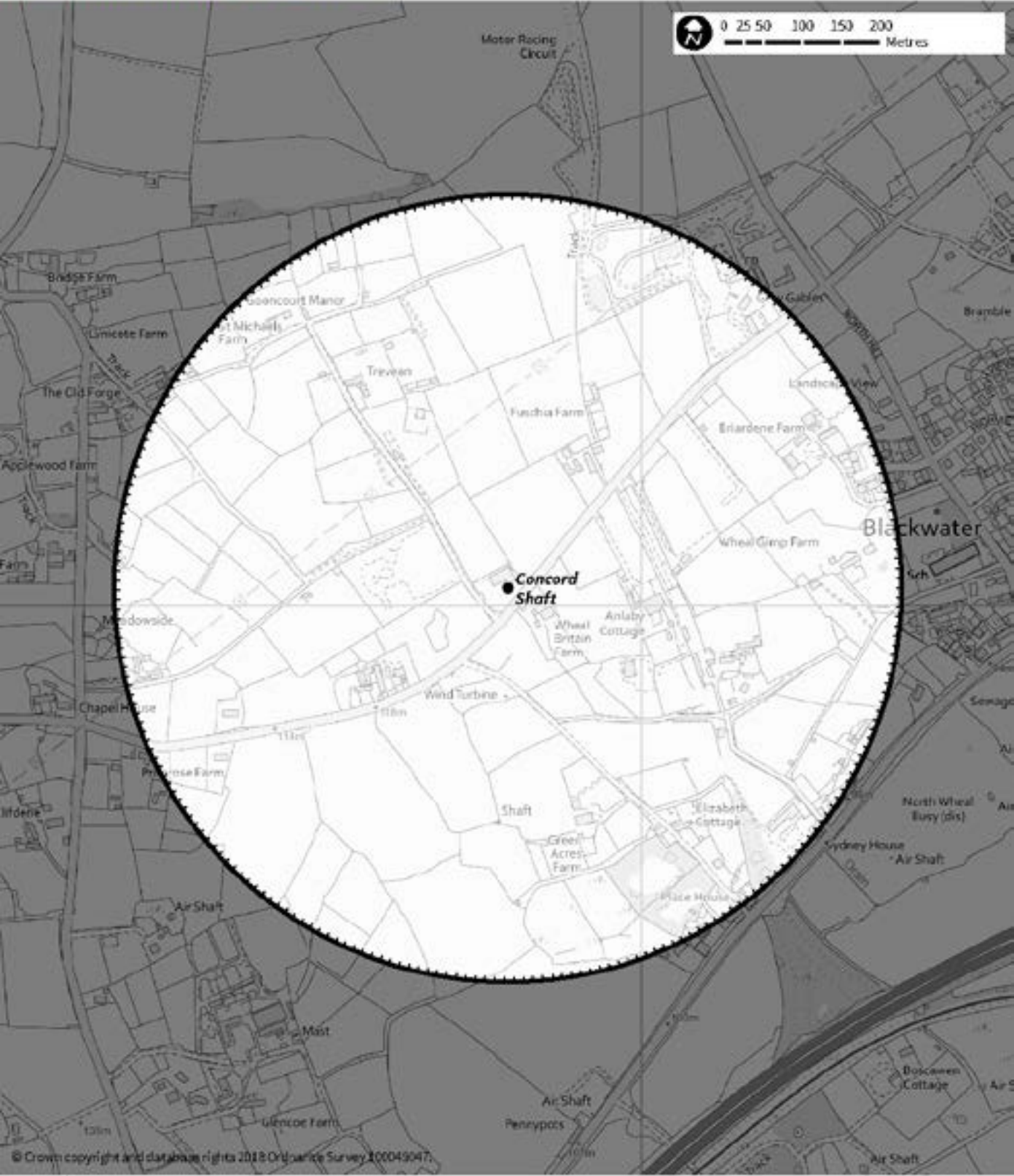
M26

Wheal Alfred Mine, Hayle



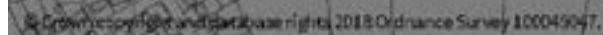
M27

Wheal Concord Mine, Blackwater



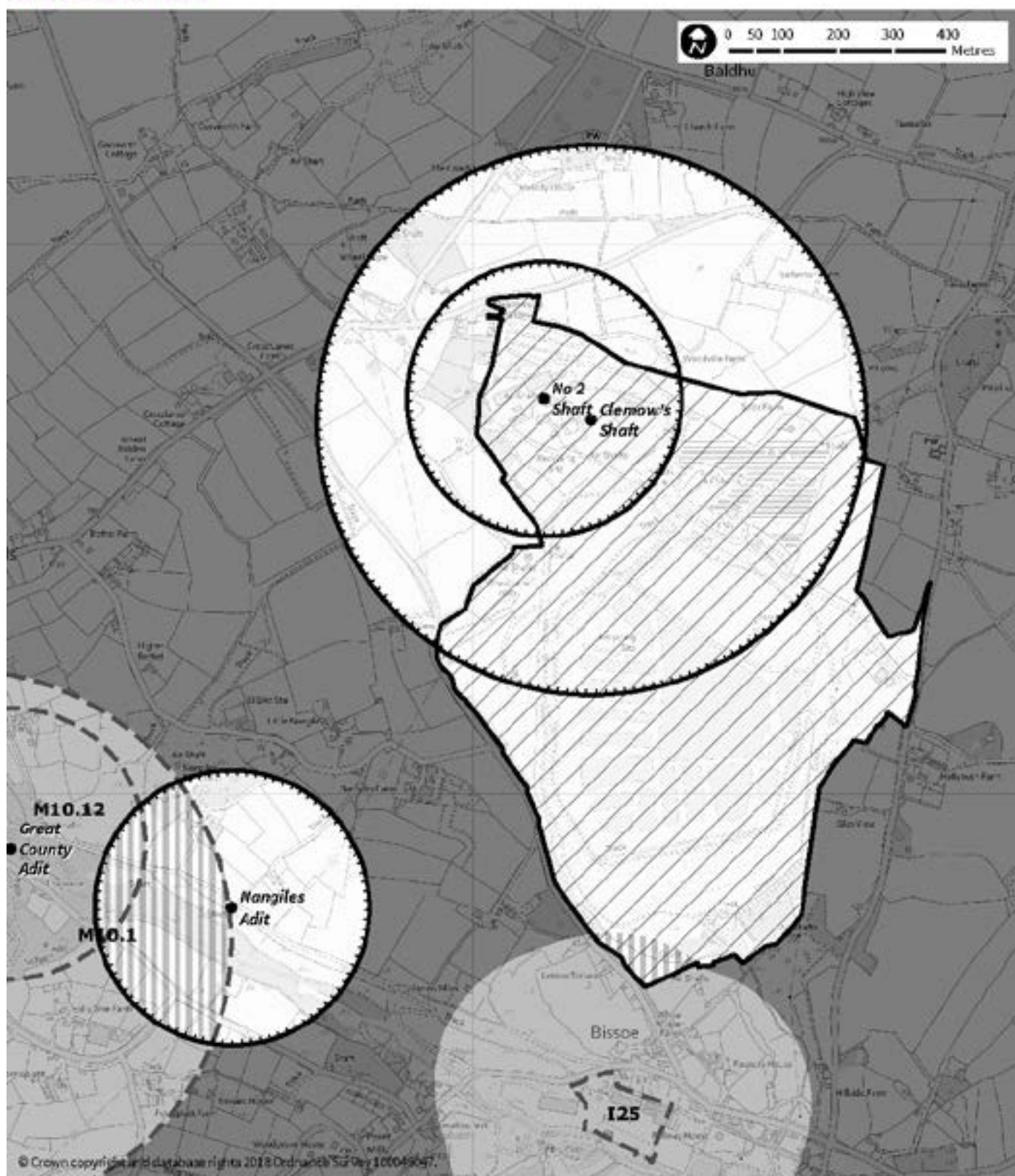
Mineral Safeguarding Area
Site with no Mineral Planning Permission
Shafts

Wheal Eliza Consols Mine, St Austell



M29

Wheal Jane Mine



M30

Wheal Vor and Wheal Metal Mines, Breage



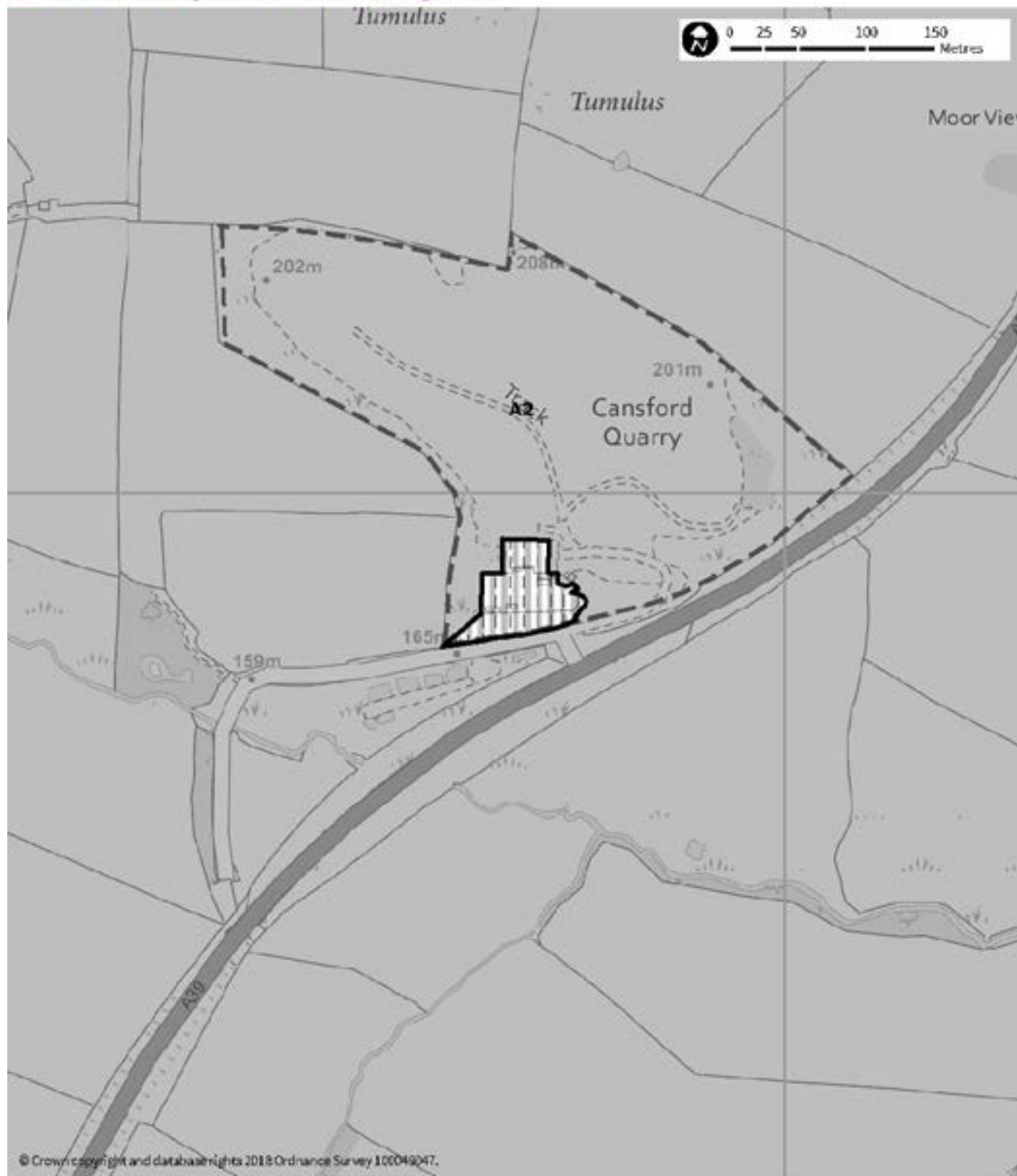
I1

Burngullow to St Dennis China Clay Railway



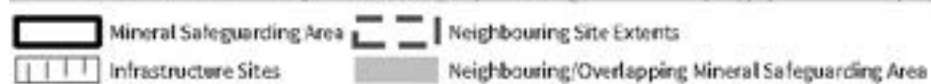
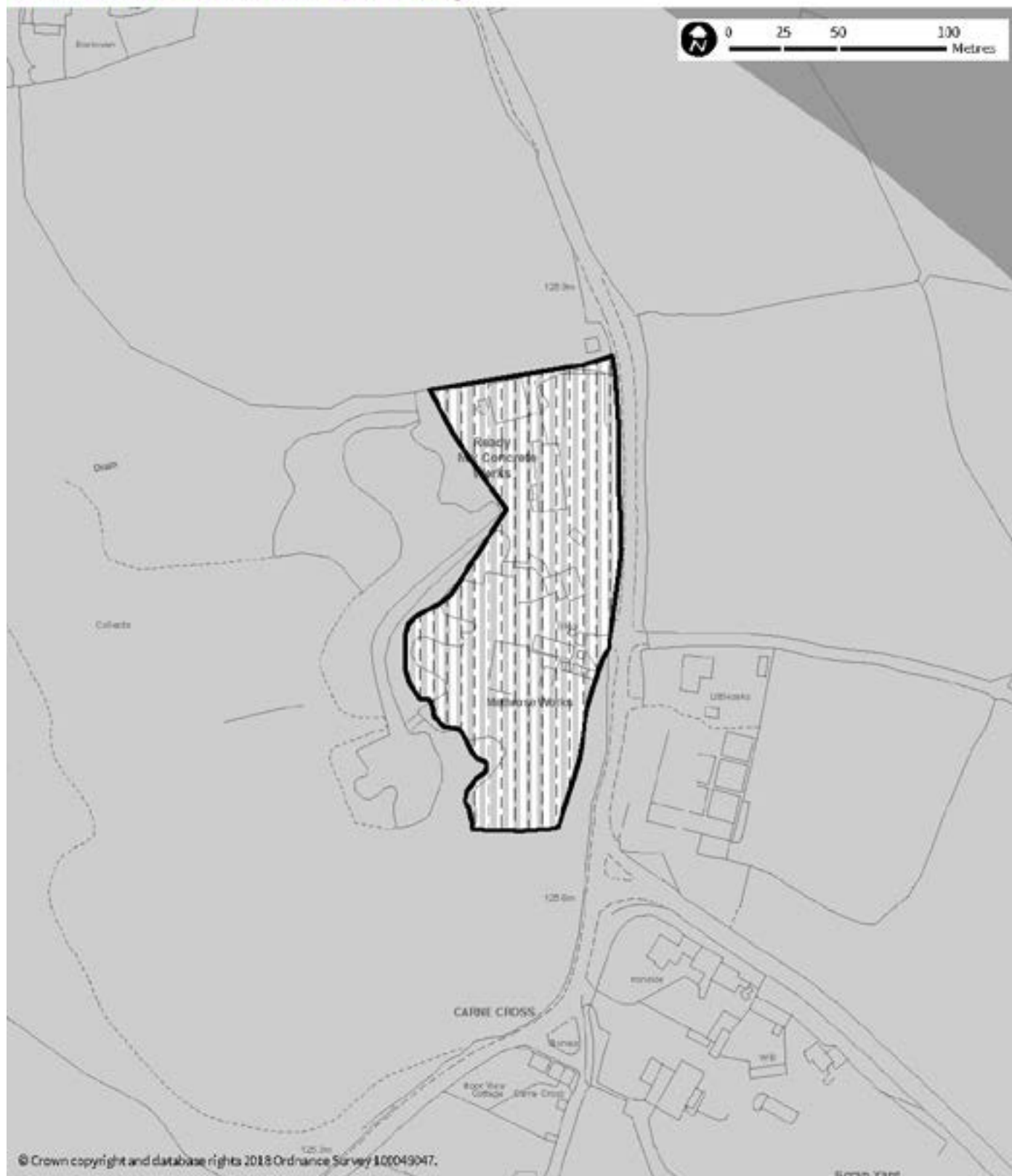
I2

Cansford Quarry Concrete Batching Plant



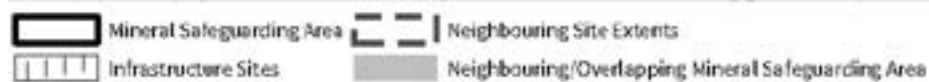
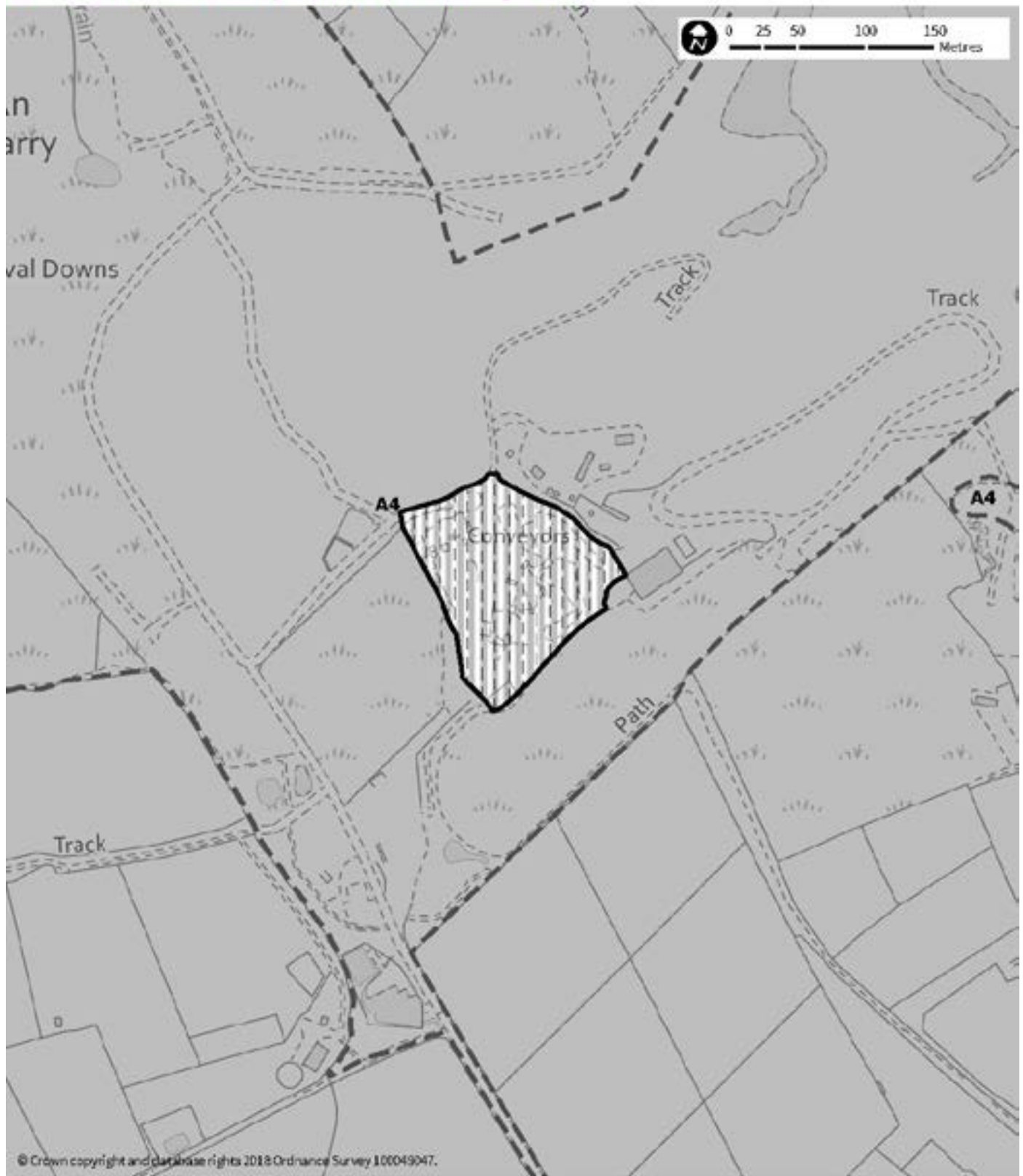
13

Carne Cross Concrete Works, St Blazey



14

Castle-an-Dinas Quarry Concrete Batching Plant



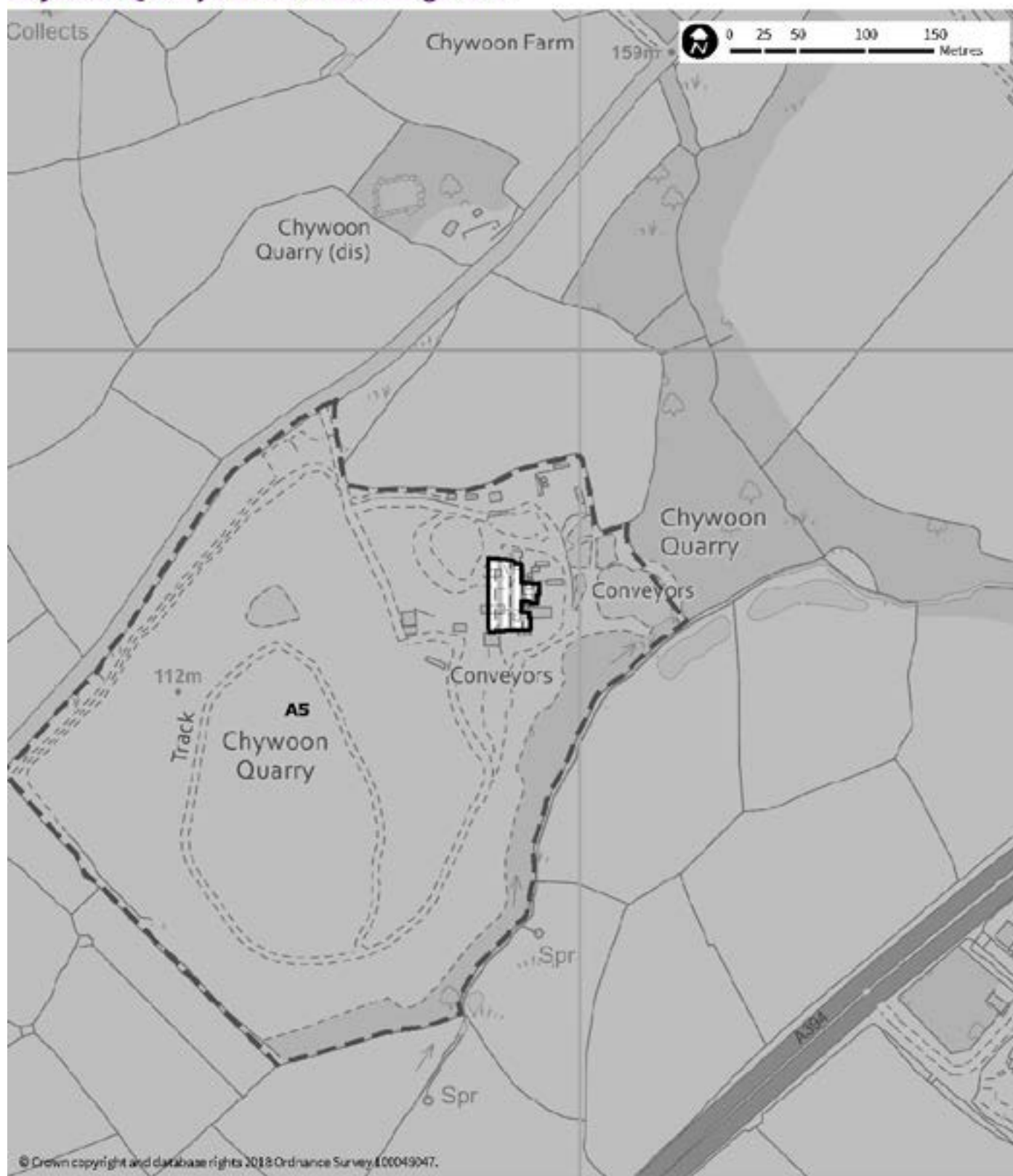
15

Chenoweths Concrete Works, Ruan High Lanes



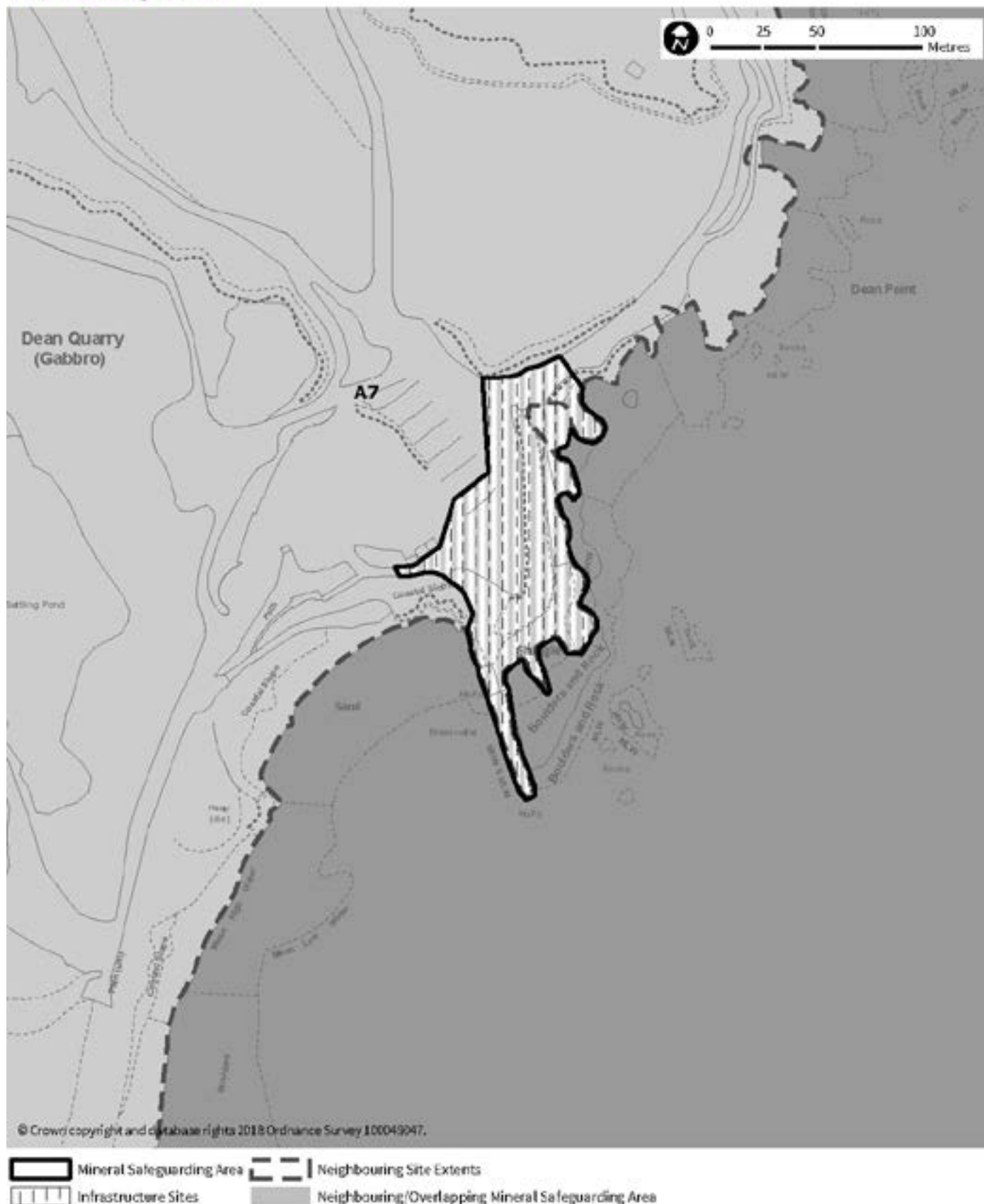
I6

Chywoon Quarry Concrete Batching Plant



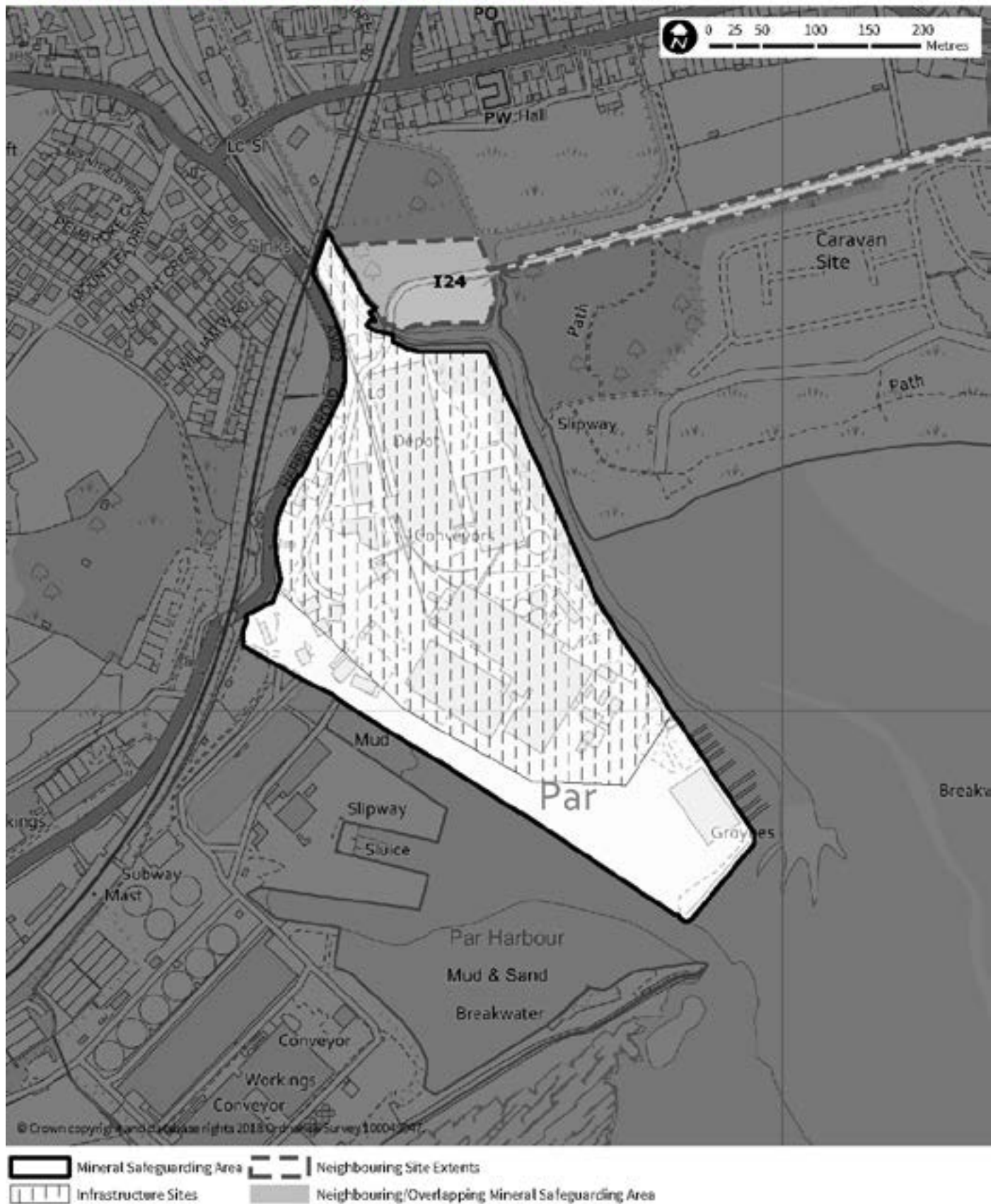
17

Dean Quarry Wharf



18

East Par China Clay Processing Infrastructure



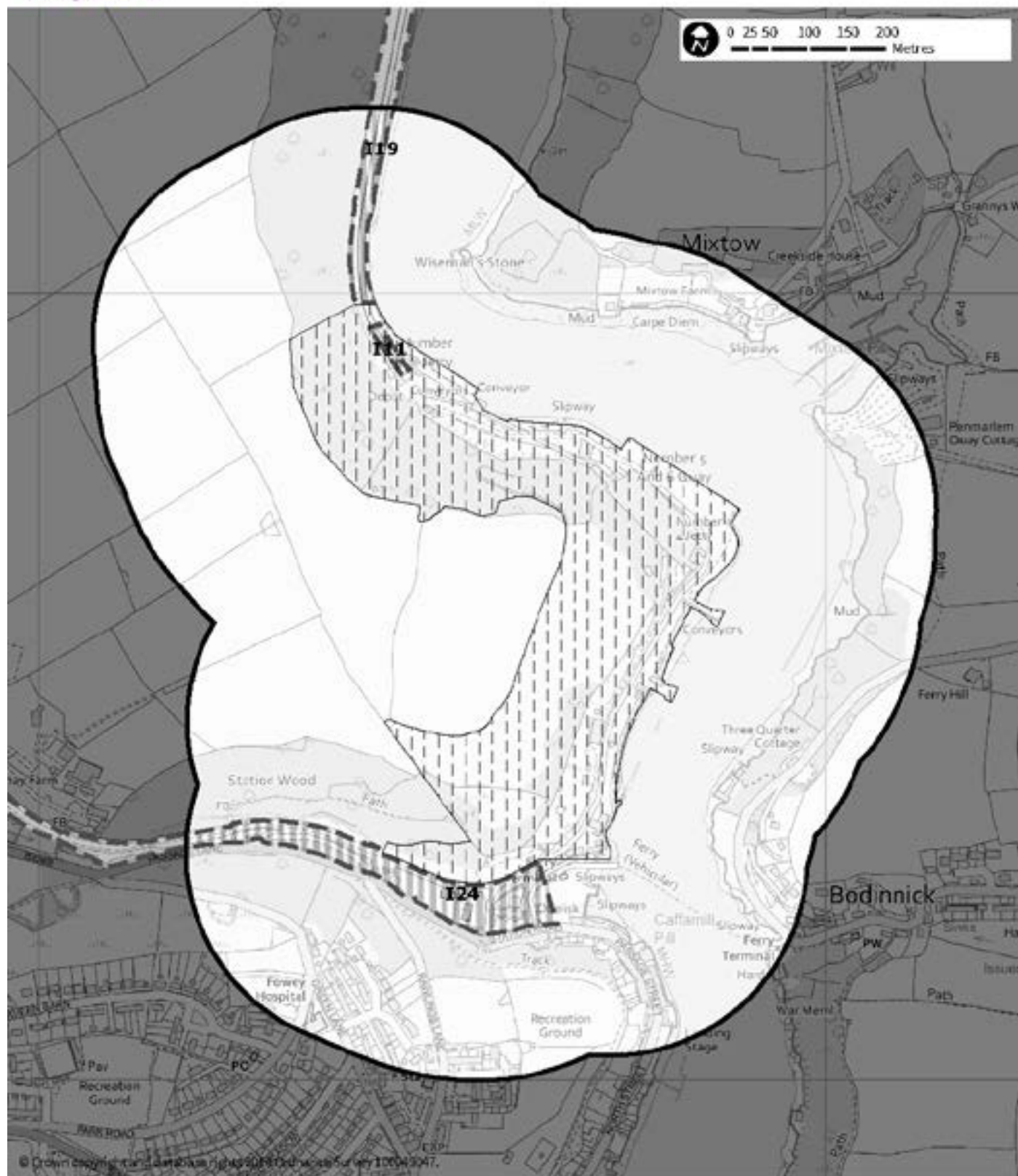
19

Falmouth Wharves



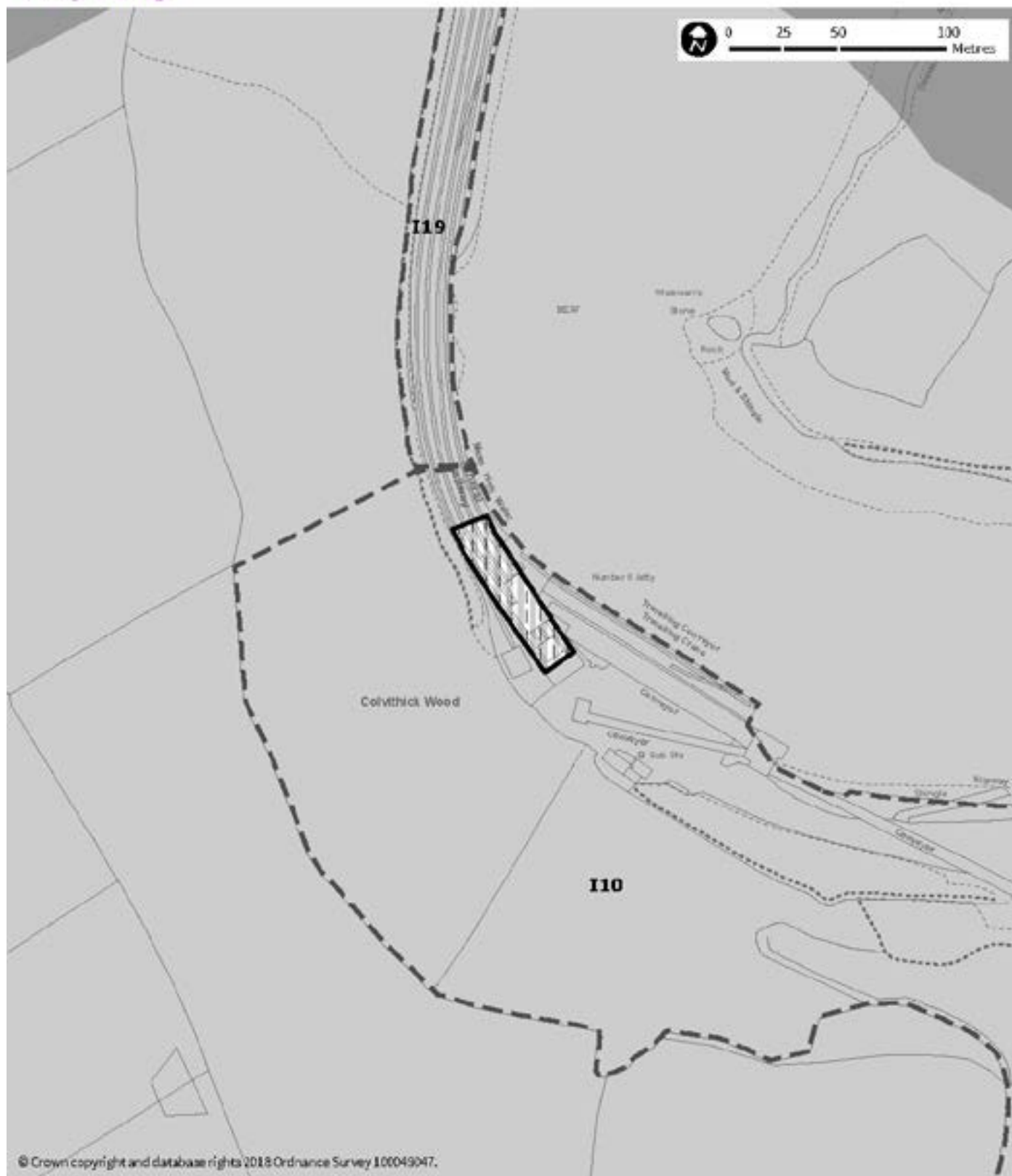
I10

Fowey Docks



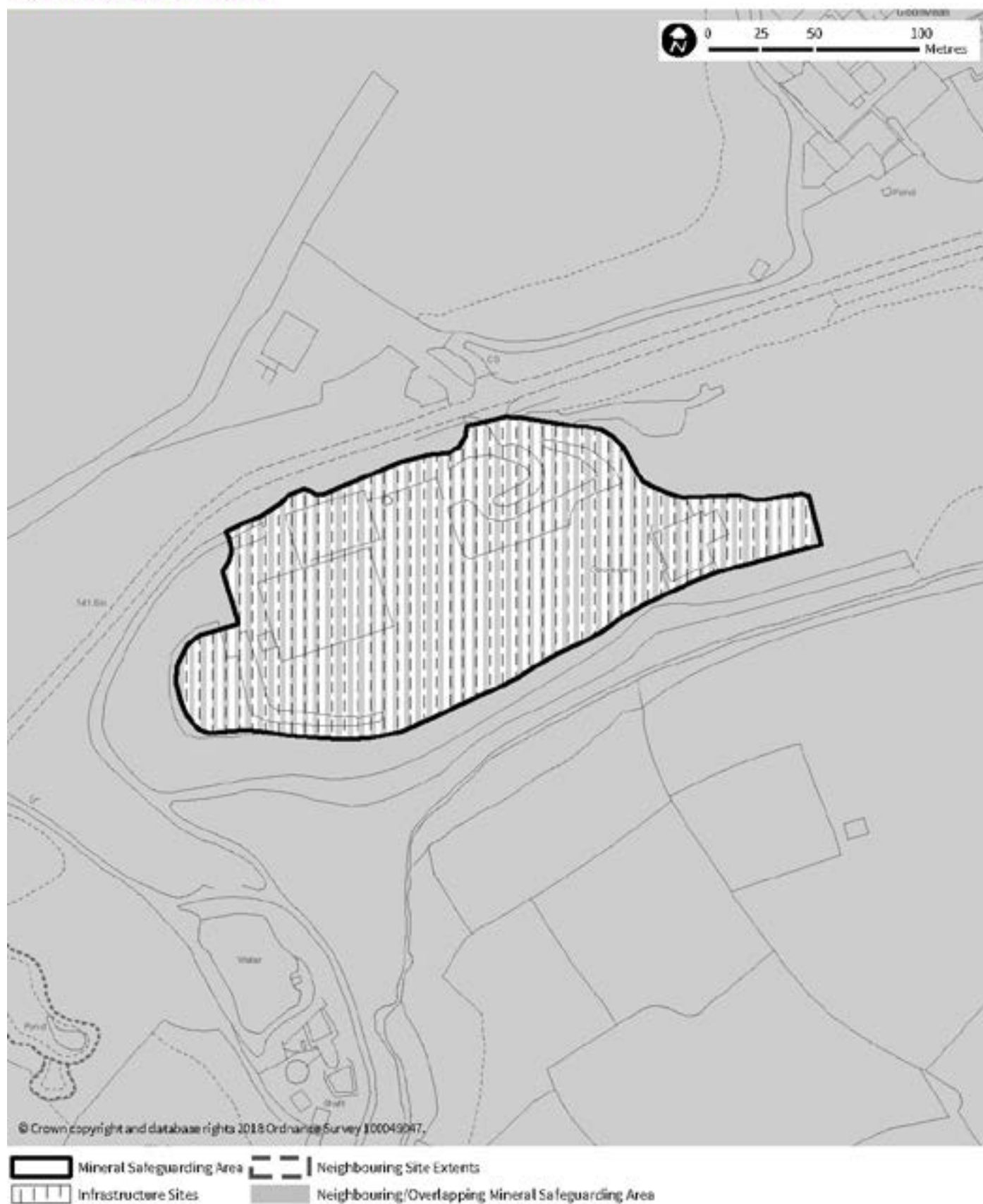
I11

Fowey Siding



I12

Goonvean Blockworks



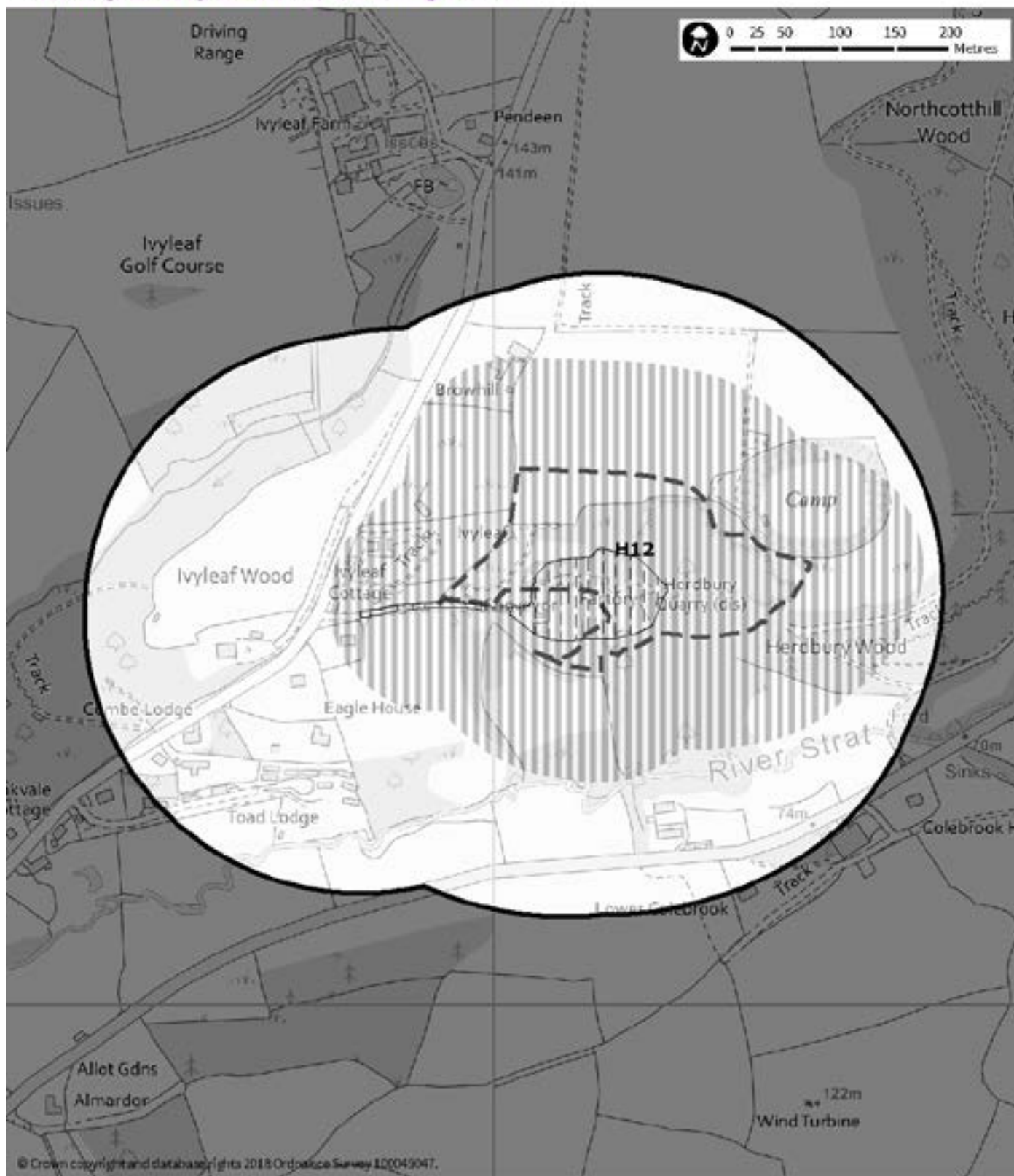
I13

Hallaze Blockworks



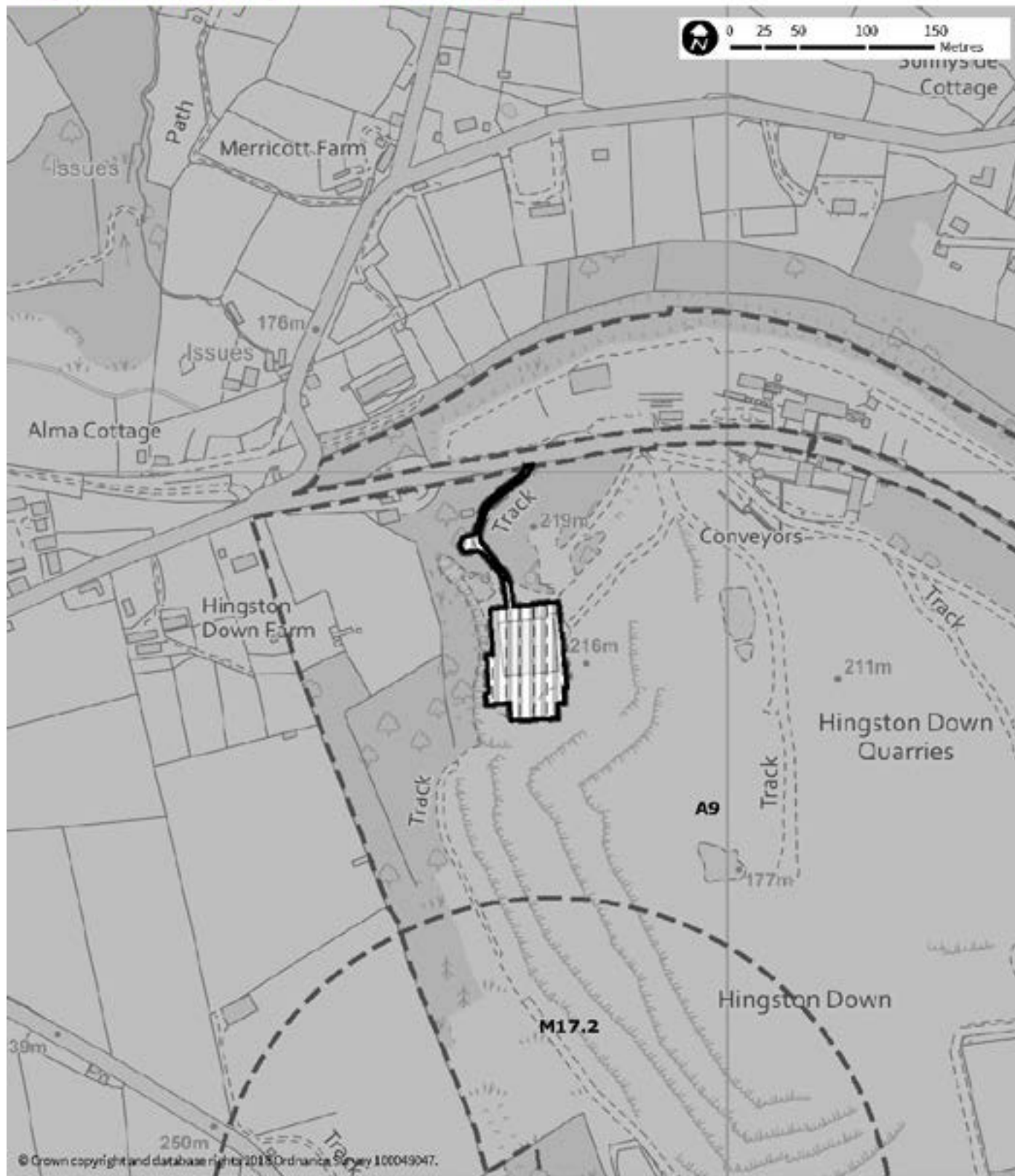
I14

Herdbury Quarry Concrete Batching Plant



I15

Hingston Down Quarry Concrete Batching Plant



I16

Jabez Concrete Plant



- Mineral Safeguarding Area
- Infrastructure Sites

I17

Kessel Downs Concrete Batching Plant



I18

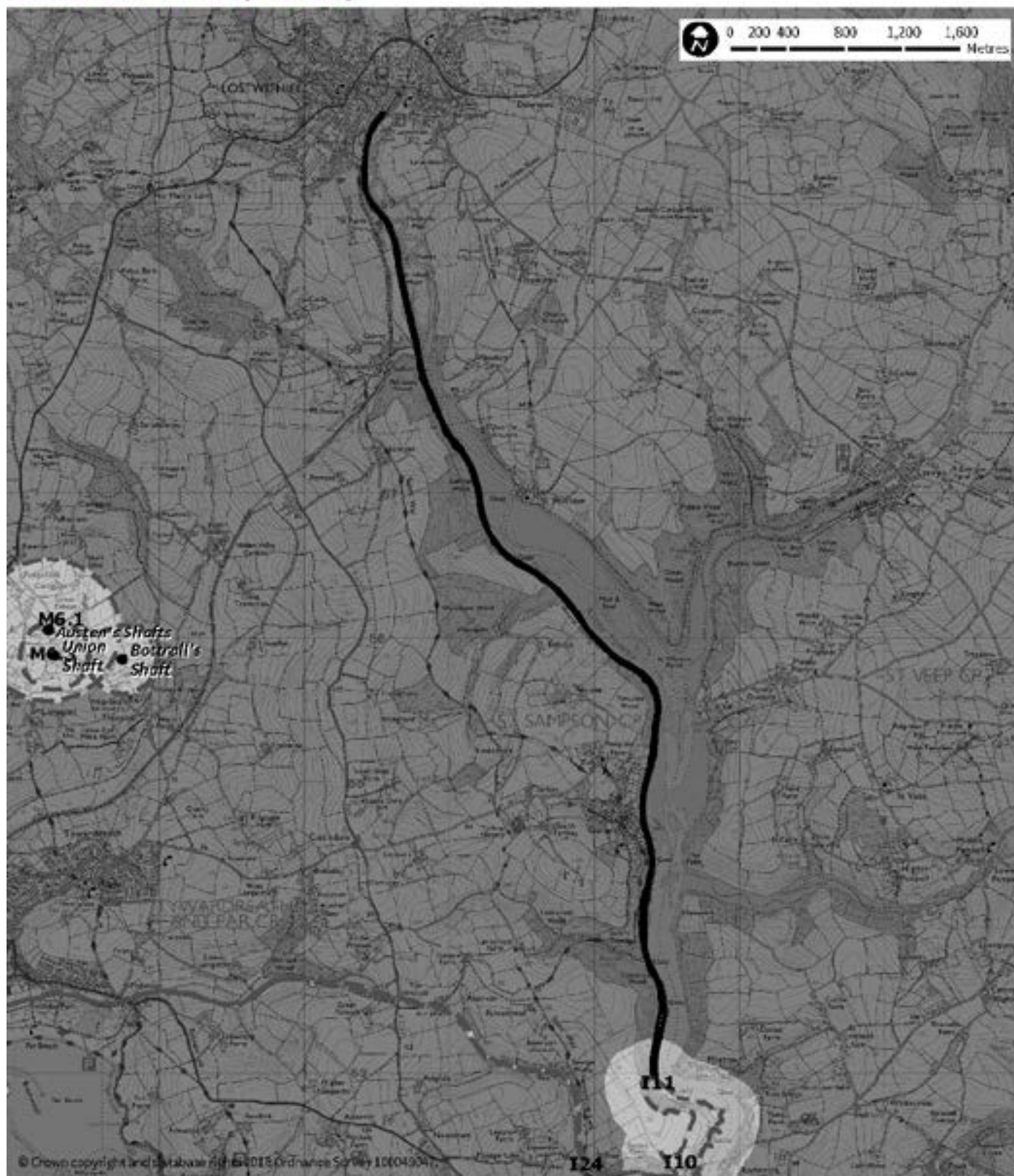
Leswidden Blockworks



- Mineral Safeguarding Area
- Infrastructure Sites

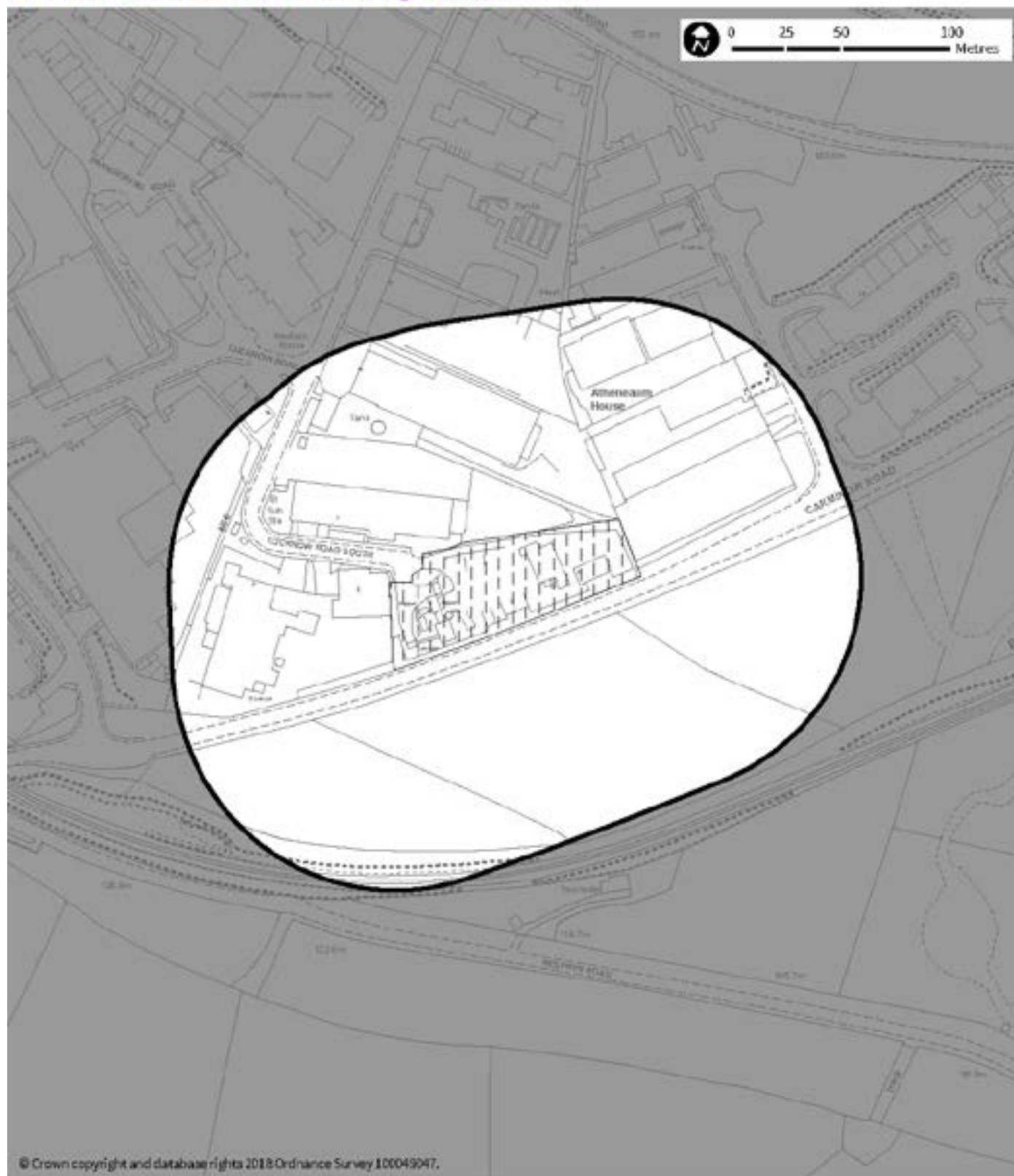
I19



Lostwithiel to Fowey Railway



I20

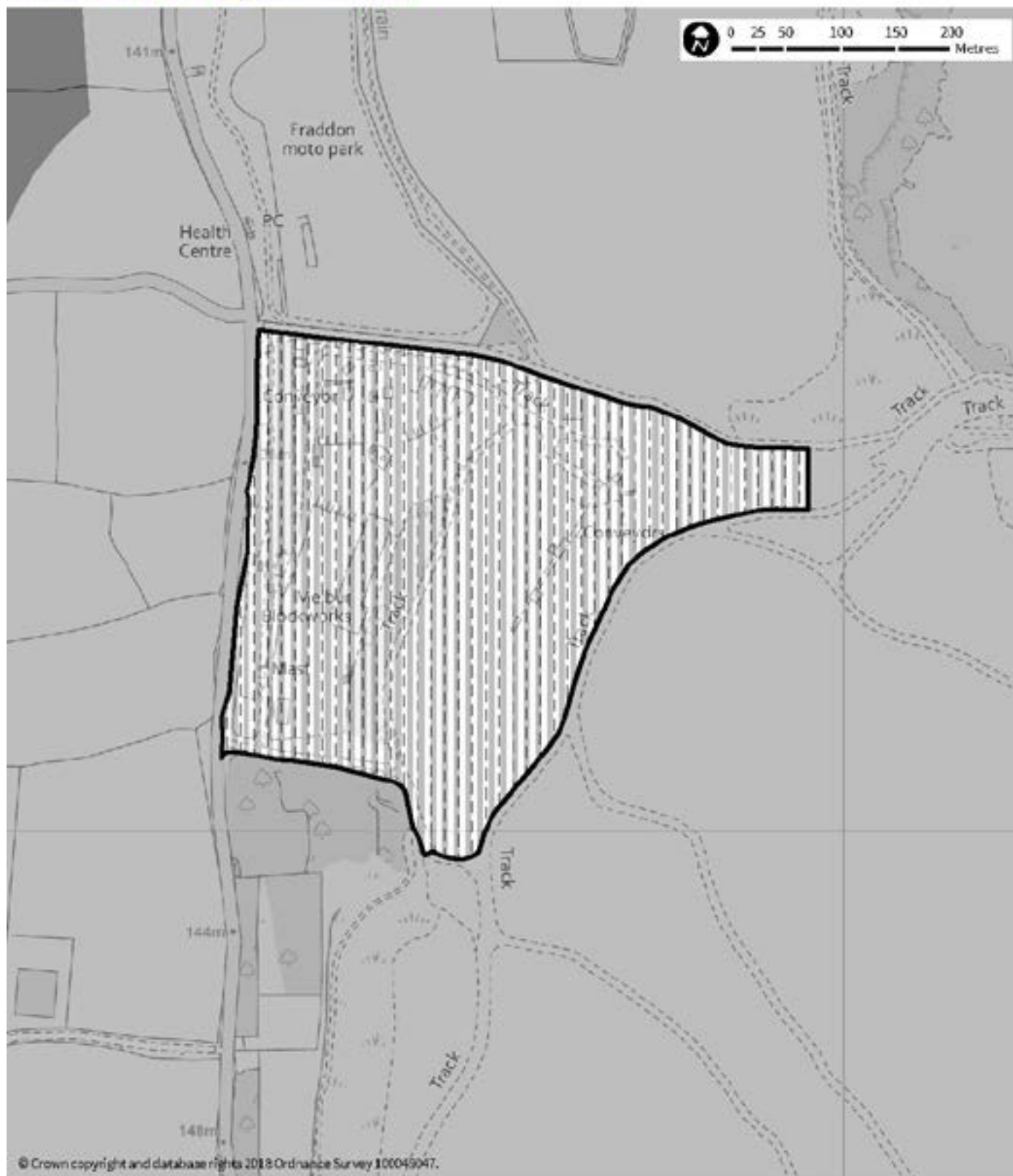
Lucknow Road Concrete Batching Plant, Bodmin



-  Mineral Safeguarding Area
-  Infrastructure Sites

121

Melbur Blockworks, Summercourt



122

Moorswater Aggregate Depot



123

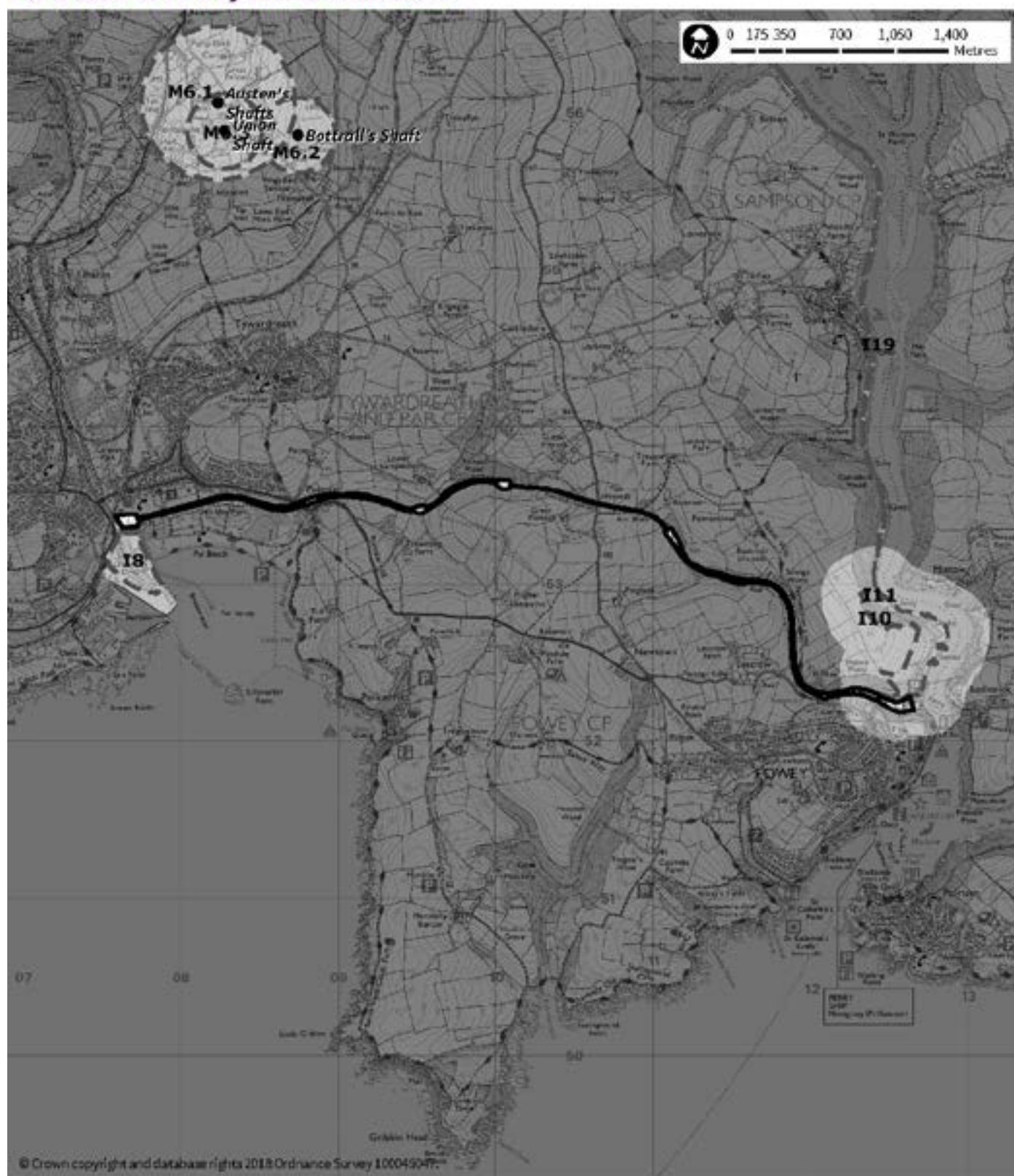
Old Quarry Concrete Batching Plant, Creegbrowse



Mineral Safeguarding Area
Infrastructure Sites

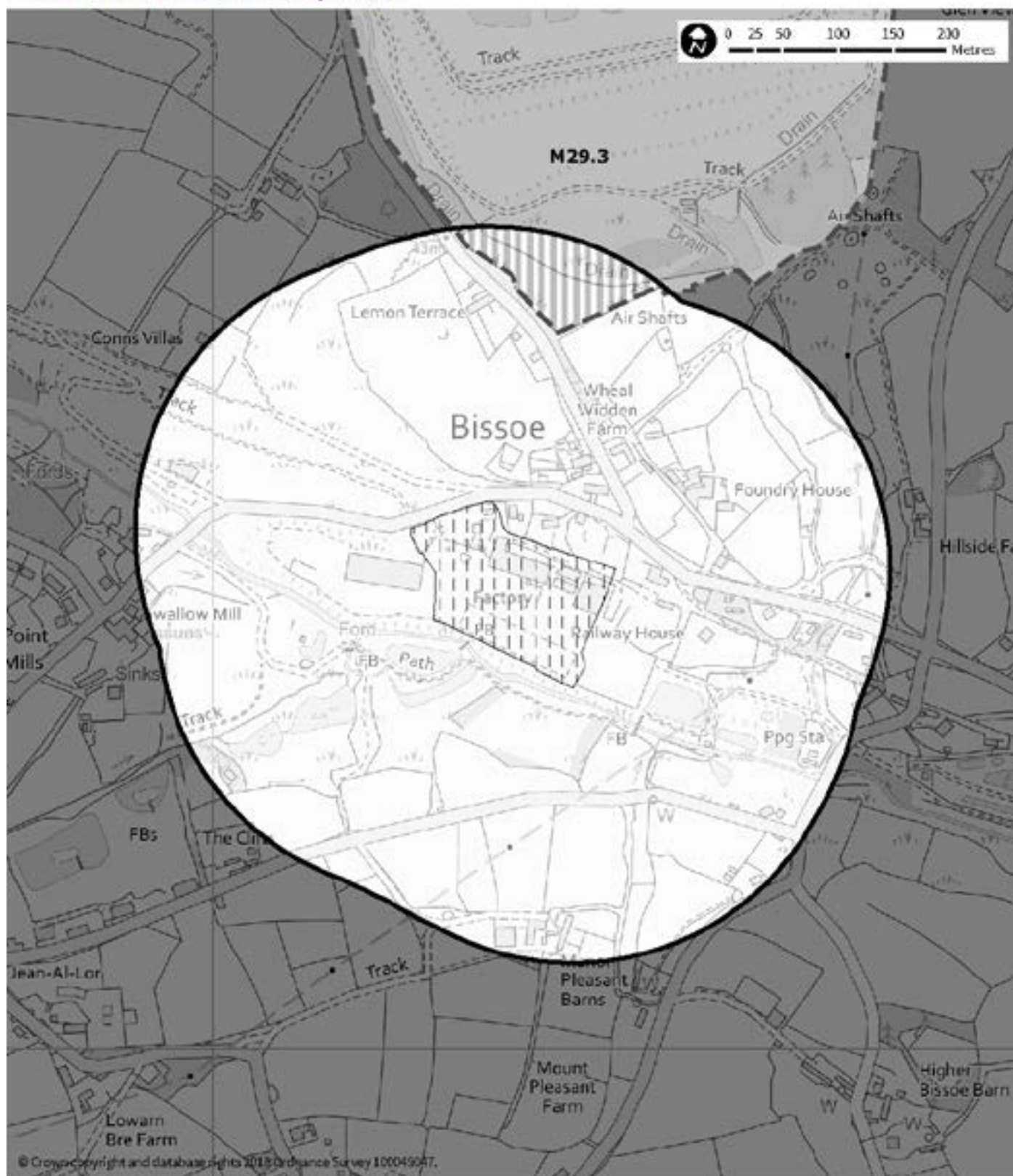
124

Par Docks to Fowey Docks Haul Road



I25

Point Mills Concrete Plant, Bissoe



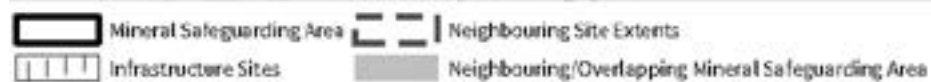
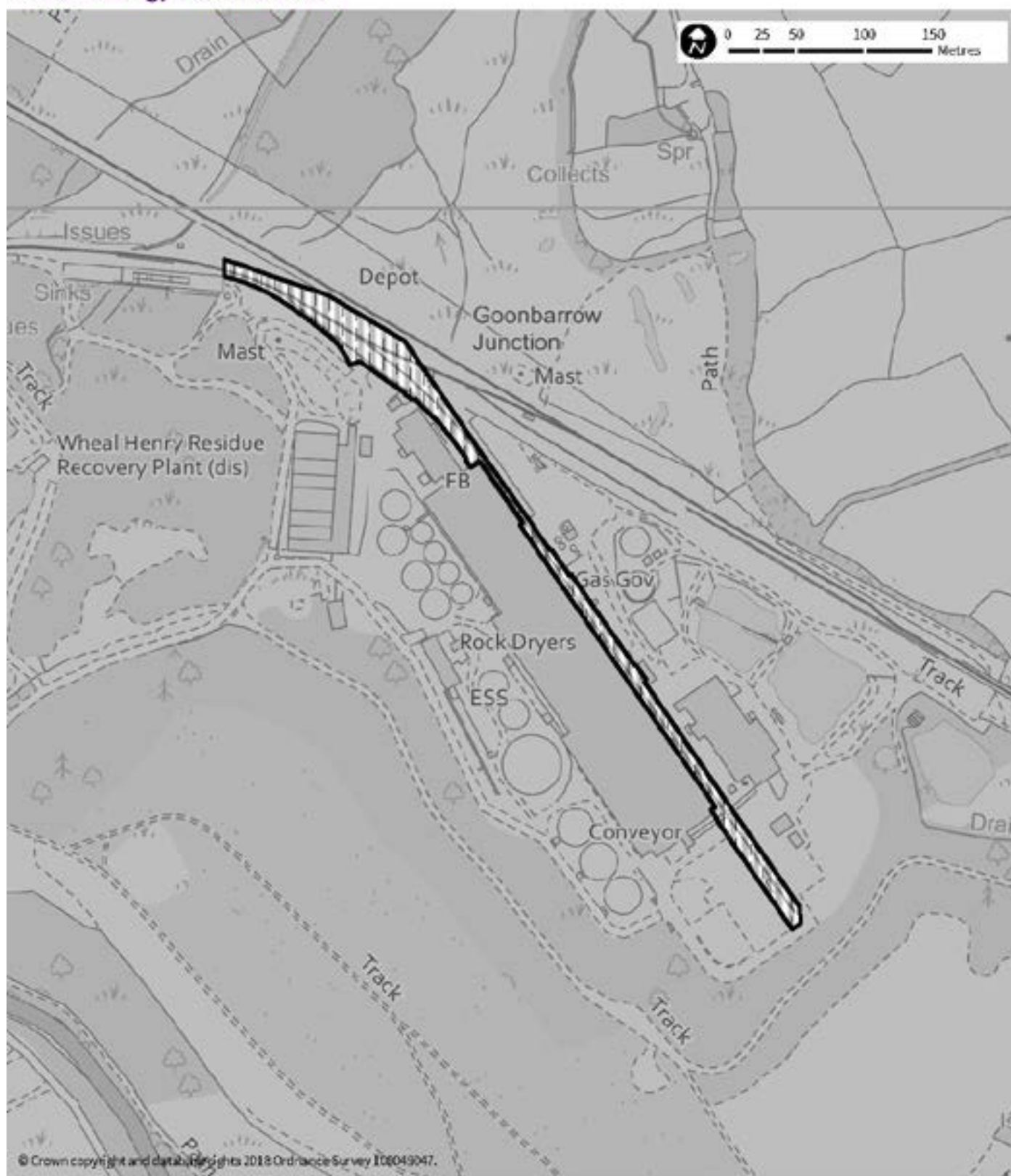
I26

Pigsdon Asphalt Plant



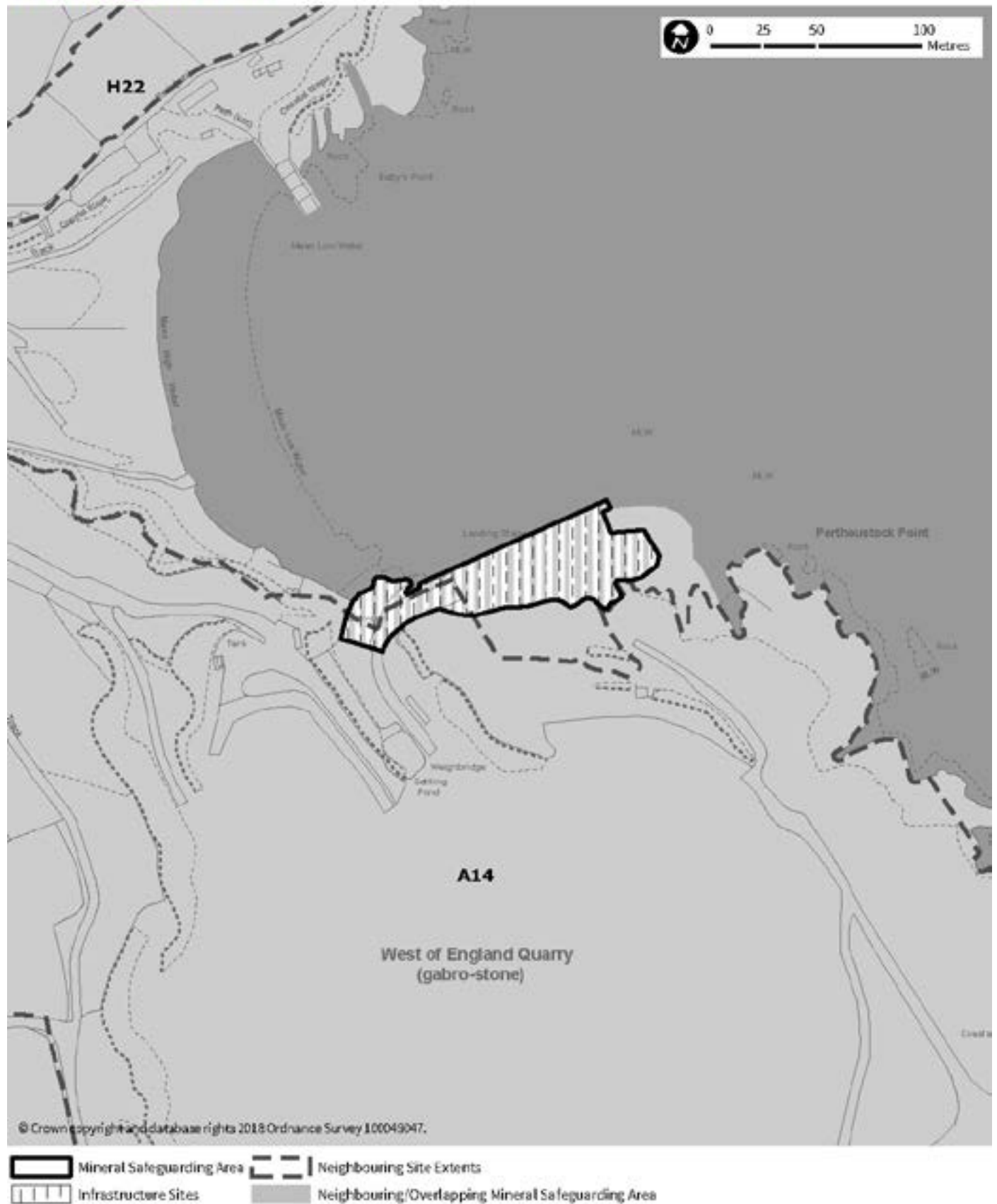
127

Rocks Siding, Goonbarrow



I28

West of England Wharf



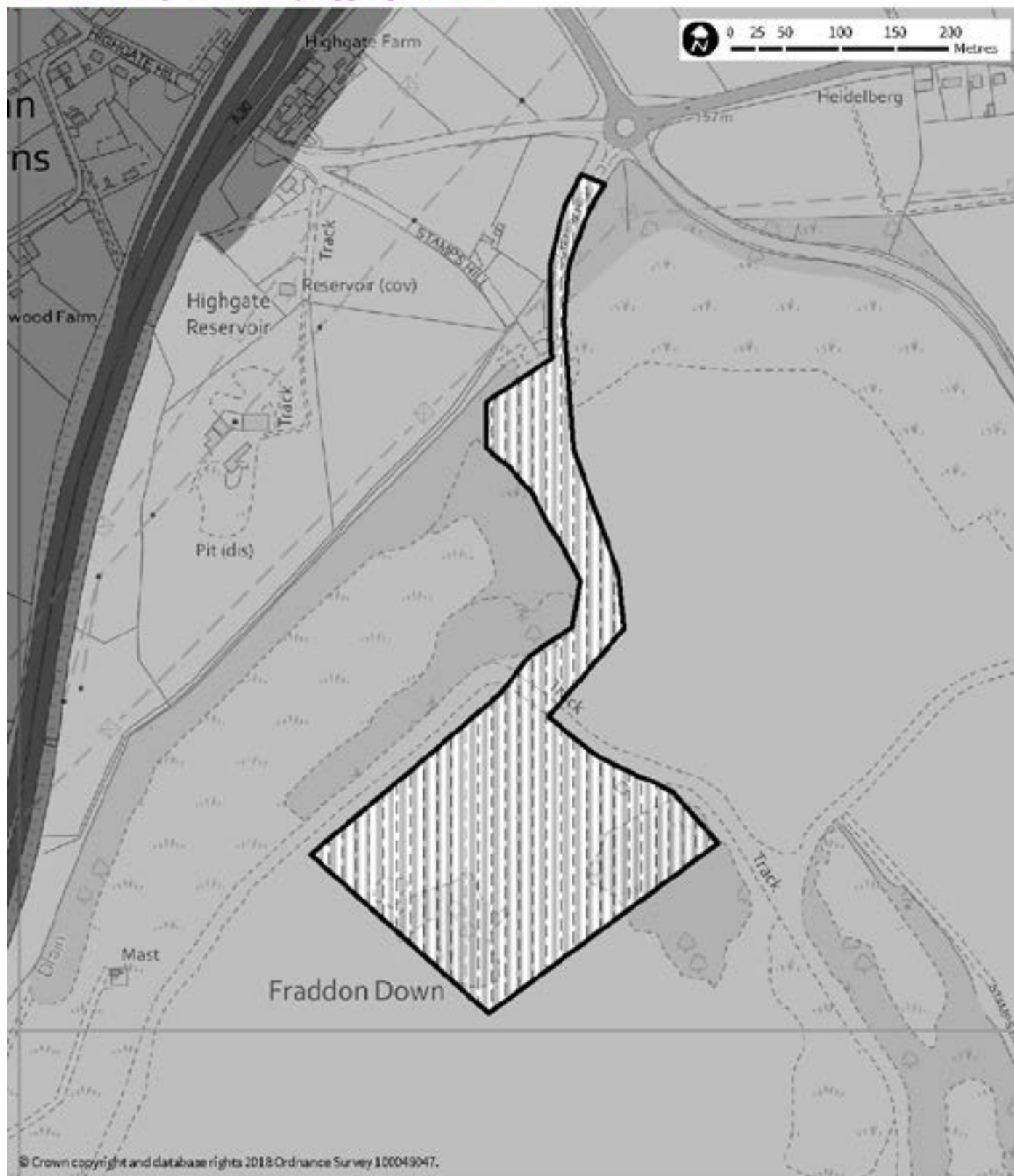
129

Western Blocks, Hayle



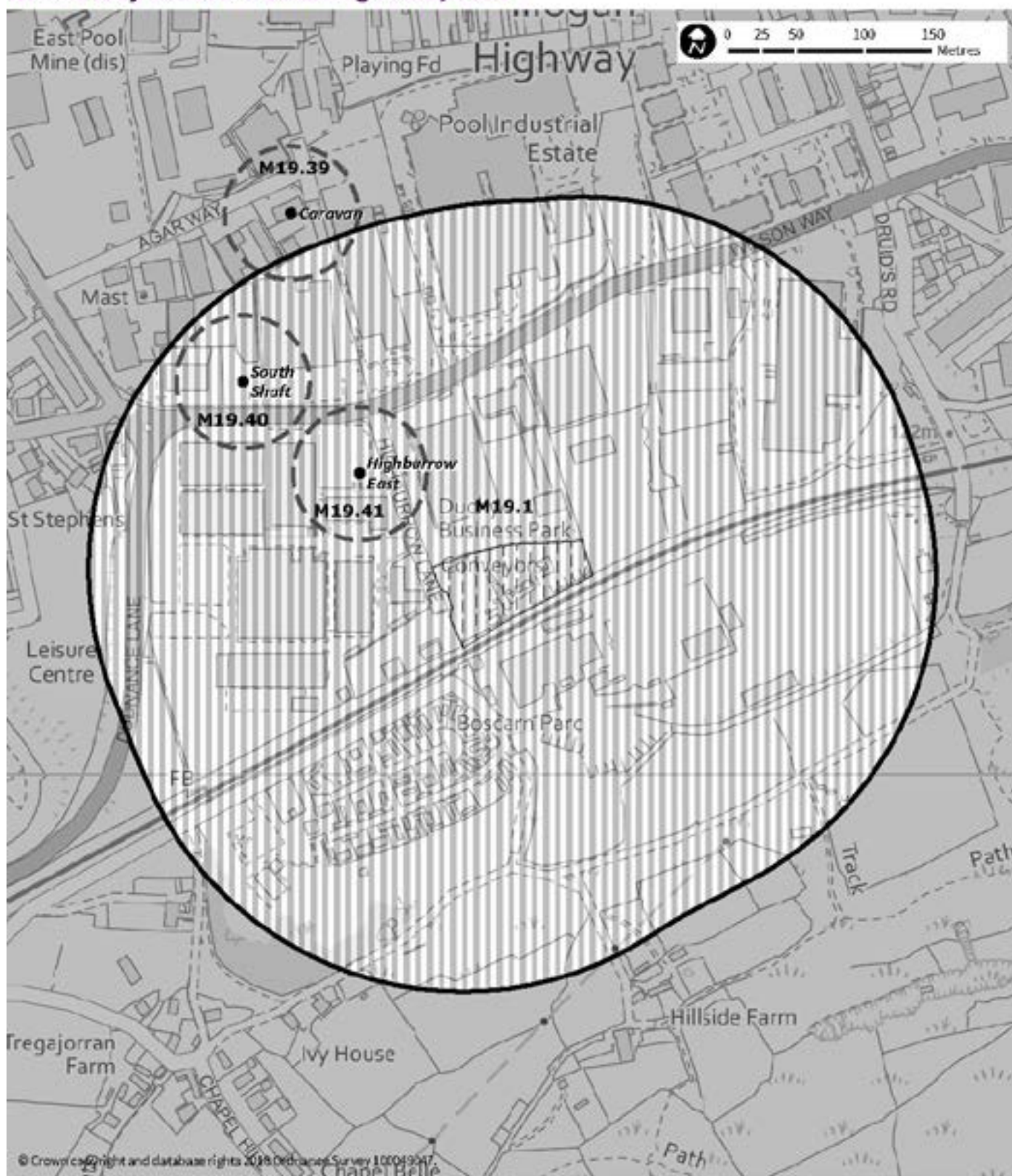
I30

Wheal Remfry Secondary Aggregate Plant



I31

Wilson Way Concrete Batching Plant, Pool



Appendix 2

Monitoring Framework

The key mechanism by which the policy in the Minerals Safeguarding DPD will be implemented is through the submission and determination of planning applications. To enable the Council to assess whether the Minerals Safeguarding DPD is being implemented effectively and that the Plan's objective is being met, monitoring will be undertaken through an annual Monitoring Report. Table 3 Monitoring Framework provides the monitoring framework for the Minerals Safeguarding DPD.

Table 3. Monitoring Framework

Policy	Indicator	Target	Trigger for review of Plan/Policy
Policy MS1	Number of planning applications approved contrary to policy	Zero	Development sterilises a mineral resource
	Number of planning applications approved within Mineral Safeguarding Areas	N/A	N/A
	Number of mineral planning applications approved outside Mineral Safeguarding Areas	N/A	Approval of mineral development outside a Mineral Safeguarding Area.

Glossary

Adit – A horizontal opening, entrance or tunnel excavated or driven from the surface to intersect an underground mineral working for the purpose of draining water from the workings.

Active Site – A mineral site defined by Schedule 13 1(1) of the Environment Act 1995 as having mineral development carried out to a substantial extent at any time beginning on 22nd February 1982 and ending on 6th June 1995 by virtue of a planning permission to win and work minerals or to tip mineral waste. A site that operated between these dates but which subsequently closed is still defined as ‘Active’ for the purposes of the Act.

Aggregate – Sand, gravel, crushed rock and other bulk fill materials that are suitable for use in the construction industry as concrete or mortar, or for use as a constructional fill or railway ballast. Primary aggregate is derived from in situ deposits such as quarries. Secondary aggregates are derived from the extraction of primary minerals such as china clay waste.

Aggregates Working Party (AWP) – A group comprising representatives of mineral planning authorities, the minerals industry and other relevant organisations within each region. An AWP oversees aggregates data collection and produces an annual report for its area, and advises on the Local Aggregate Assessments produced by its member MPAs.

Ancillary Operation – Those activities associated with the winning and working of minerals e.g. processing plant.

Batholith – An intrusive mass of igneous rock.

Borehole Log – The record of a drilling activity which indicates the type of material found at various depths and geological horizons.

British Geological Survey (BGS) – A public sector organisation responsible for advising the UK Government on geological matters and providing geological advice to industry, local government, academia and the public.

Building Stone – Stone that is sufficiently consolidated to allow it to be cut or shaped for use as a material for walling, paving or roofing.

Buffer Zone – A buffer around a mineral resource to reduce the risk of incompatible development occurring in close proximity to the mineral resource. Table 1 Mineral Safeguarding Area Buffer Zones sets out the mineral resources to be safeguarded including their associated buffer zones.

China Clay – Powdery white mineral produced by the decomposition of feldspar in granite; this process is known as kaolinisation. Kaolin is another term for china clay.

Crushed Rock – Granite, sandstone and igneous rocks which can be mechanically broken for use as aggregates by the construction industry.

County Geology Sites – Formerly referred to as Regionally Important Geological and Geomorphological Sites (RIGS). Sites recognised for their geological or geomorphological importance.

Deposit – A concentration of mineral or sediment in a layer, vein or pocket.

Development Plan Documents (DPDs) – Documents within the Local Plan which form the statutory plan.

Dimension Stone – Stone cut to special dimensions, for use in construction.

Dormant Site – Defined by the Environment Act 1995 as ‘a mineral site where no mineral development has been carried out to any substantial extent in, on or under the site at any time in the period beginning on 22nd February 1982 and ending on 6th June 1995. A Dormant Site has an extant planning permission, but working cannot recommence until a new scheme of working conditions has been approved by the Mineral Planning Authority.

Heritage Stone Quarry – Quarries which have previously supplied building stone and slate for important historic buildings and structures and which are protected as major long term assets to building conservation. Designated quarries will have supplied stone to prestigious development and contain rock of unique petrology/appearance/physical properties. Heritage Stone Quarries currently have dormant planning permission or no planning permission.

Igneous Rock – Rock produced by the cooling of molten magma, characteristically crystalline (e.g. granite).

KaBCA – The Kaolin and Ball Clay Association.

Kaolin – See china clay.

Landbank – A ‘stock’ of permitted reserves of aggregates, required by government minerals policy to enable a steady and continue supply of aggregates, normally for a period of ten years or more.

Local Aggregate Assessment (LAA) - An assessment prepared annually, of the demand for and supply of aggregates in a Mineral Planning Authority’s area. A LAA should include a forecast of aggregates demand, analysis of all supply options, and an assessment of the balance between demand and supply.

Metalliferous Mineral - Naturally occurring minerals that contain a high concentration of metallic elements, including precious, base and rare earth metals.

Mine Shaft – A vertical opening excavated as a means of access to an underground ore body.

Mineral – Defined in planning terms as a rock or other material which has a commercial value for which it may be extracted.

Minerals Development - development consisting of the winning and working of minerals or involving the depositing of mineral waste.

Mineral Planning Authority (MPA) – The Planning Authority with responsibility for mineral development i.e. Cornwall Council.

Mineral Resource Assessment - An assessment of the presence of mineral resources of current or potential economic value beneath a site being proposed for non-mineral development within a Mineral Safeguarding Area. The assessment should be undertaken by or on behalf of the applicant for the non-mineral development, and should include appraisal of the site’s geology and available mineral exploration data, together with analysis of the potential economic value of the underlying resource and the scope for its extraction. Where warranted by this analysis, it may be necessary for physical site investigation to be undertaken. Applicants are advised to discuss their proposals and evidence requirements in advance with the Mineral Planning Authority and relevant mineral operators.

Minerals Safeguarding Area – an area designated by a Mineral Planning Authority which

covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development

Non-Minerals Development - Development that is not associated with the winning and working of minerals.

Overriding Strategic Need - Reason why the site has to be development for this proposal over any alternatives, if such alternatives are available. Establishing an overriding need for non-minerals development is to a degree a matter of judgment but arguably it should not just be a comparison of relative commercial values.

Petrology – The study of minerals.

Primary Aggregates – Naturally occurring sand, gravel and hard rock extracted with the express purpose of being used in the construction industry, as opposed to those which are by-products or waste materials (see secondary aggregates).

Polished Stone Value (PSV) – An indication of the suitability of an aggregate mineral for road surfacing. The higher the value the more resistant the stone is to polishing by the passage of vehicle tyres.

Prior Extraction - the extraction of minerals prior to development taking place.

Reserve – The extractable part of a measured and/or indicated mineral resource that is considered economically viable to extract at a profit.

Resource – Potentially economic mineral that lies in the ground.

Secondary Aggregates – Aggregates derived from by-products of the extractive industry, e.g. china clay waste, colliery spoil, blast furnace slag and pulverised fuel ash. They can also be derived from the recycling of construction and demolition waste, e.g. crushed concrete.

Shaft – See Mine Shaft

Sterilisation – When the development of land or a change of use prevents mineral exploitation in the foreseeable future.

Strategic Environmental Assessment (SEA) – Structured evaluation process for assessing the environmental impacts of plan and programmes. SEA is a statutory process.

Supplementary Planning Document – Non-statutory planning guidance related to a Development Plan Document policy, which will form part of the Local Plan.

Sustainability Appraisal (SA) – A process for assessing the impacts of a development in terms of the principles of sustainable development. The methodology for SA is directly comparable to that for SEA and the two are usually performed as a unified assessment process.

Stent – Rocky waste found within clay excavations; unkaolinised granite.

Strategically Important Metals –Comprise the rare earth elements, the platinum group elements and other main group elements of importance to the UK. Of particular importance are those specialist metals that are vital to advanced manufacturing, low carbon technologies and other growing industries.

Strategically important shafts - Shafts and other access points giving access, ventilation and maintenance to important metalliferous resources.

Tin Streaming – Tin working exploiting ore weathered from lodes using water to separate tin from host rock.

Tonne – 1,000 kilograms

Winning - Preparation of land to make a mineral available or accessible to be removed.

Working - Removal of a mineral from its position in or under the land.

World Heritage Site (WHS) - A natural or man-made feature or area of outstanding cultural or natural importance that is identified by UNESCO as meeting at least one of 10 cultural and natural criteria.

**The Mineral Safeguarding
Development Plan Document**

can be viewed on the Council's
website:

www.cornwall.gov.uk/mineralsdpd

If you would like this information in another format or
language please contact:

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Telephone: 0300 1234 100

Email: enquiries@cornwall.gov.uk

www.cornwall.gov.uk



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