



Draft Isles of Scilly Local Plan

Including Minerals and Waste

2015 to 2030

MINERALS RESOURCE ASSESSMENT 2019

#LOCALPLAN #ISLESOFSCILLY #MINERALS



Council of the
ISLES OF SCILLY



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Council of the Isles of Scilly
Isles of Scilly Local Plan 2015–2030
The Planning Department
Town Hall
St Mary's
Isles of Scilly
TR21 0LW

planning@scilly.gov.uk



Contents

Introduction	4
National Planning Policy	4
National Planning Practice Guidance	5
Disclaimer	5
Local Context	5
Isles of Scilly Local Plan 2005	5
Draft Isles of Scilly Local Plan 2015-2030	5
Geological Data	6
Local Building Stone Quality	7
Local Designations	8
Historic Quarries	8
Local Context – Current Minerals Provision	21
Primary Research	21
Local Context – Future Development	24
Proposed Development	24
The Local Plan	24
Conclusion	26
Bibliography	29
Appendices	30
Appendix A – Construction Materials Survey	30
Appendix B – Construction Materials Survey - Responses	31
Appendix C – Designations	33
Appendix D – Memorandum of Understanding between Cornwall Council and the Council of the Isles of Scilly	35



List of Figures

Figure 1 Policy OE6 of the emerging Isles of Scilly Local Plan 2015-2030	6
Figure 2 Reproduced with permission from the British Geological Society (BGS) Contains British Geological Survey materials © UKRI2019	7
Figure 3 1890 OS Map of St Mary's, showing the multiple quarries at Buzza Hill. Porthcressa	9
Figure 4 Photograph of the historic quarry at Buzza Hill.....	10
Figure 5 1890 OS Map of St Mary's, showing a quarry at Bay View Terrace, Porthmellon ...	11
Figure 6 1890 OS Map of St Mary's, showing a quarry, junction of Porthloo Lane and Telegraph Road	13
Figure 7 1890 OS Map of St Mary's, showing a quarry, Peninnis Head.....	14
Figure 8 1890 OS Map of St Mary's, showing a quarry at the Garrison Tennis Courts	15
Figure 9 Current Tennis Court Site on the Garrison	16
Figure 15 1890 OS Map Series showing Pendrathan.....	17
Figure 15 1906-1908 OS Map Series showing Pendrathan.....	18
Figure 16 Pendrathen Site 2019	20
Figure 17 Aerial Photograph circa 2005	21
Figure 18 Survey results of known supplies of Minerals 2019	22
Figure 19 The Stone Yard at the Porthmellon Waste Site, 2019	23
Figure 20 Recycled Glass bagged at the Porthmellon Waste Site, 2019.....	23



Introduction

1. This Minerals Assessment Topic Paper supports the minerals policy approach in the Isles of Scilly Local Plan, including Minerals and Waste 2015-2030 Development Plan Document (DPD), referred to hereafter as the Local Plan. It sets out the background requirements on the Council, as a Minerals Planning Authority, and the existing context. This will establish the best approach to planning for minerals activity on the Isles of Scilly.
2. A first step in preparing the minerals approach in the Local Plan is to understand key factors such as the amount and type of minerals within the islands and future demands for it - this is achieved through an assessment of the need for minerals arising within the Isles of Scilly set out within this report. A report of Infrastructure Capacity Assessment (2018)¹ has also been prepared by the Council's Infrastructure Department and this covers the issue of waste over the same plan period.

National Planning Policy

3. The National Planning Policy Framework (NPPF) 2019² requires the Local Plan to facilitate the sustainable use of minerals, and to ensure that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods required. Particularly pertinent for the islands is to identify as far as possible the contribution that recycled materials would make to the supply of minerals, before considering extraction of primary materials.
4. The NPPF also makes provision for mineral safeguarding areas be defined to protect local and nationally important mineral resources as well as existing, planned and potential transport and other mineral infrastructure. The NPPF defines mineral safeguarding areas (MSAs) as "an area designated by mineral planning authorities which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development". The NPPF does make it clear that any designated MSA does not create a presumption in favour of mineral working in those areas.
5. There is a requirement for minerals planning authorities to plan for a steady and adequate supply of aggregates, not least by making provision for the maintenance of landbanks of:
 - at least 7 years for sand and gravel; and
 - at least 10 years for crushed rock.
6. These minerals are found on the islands but are not being actively quarried; they are addressed within this report.
7. The Local Plan, once adopted, will apply across all of the islands up to 2030, or until it is reviewed and replaced. Once adopted, it will form the development plan and form the basis of decision making for development on the islands over the plan period.

¹ <http://www.scilly.gov.uk/sites/default/files/planning-apps/Infrastructure%20Capacity%20Assessment%20Topic%20Paper%202018.pdf>

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf



8. This assessment has been undertaken to gain an understanding of current mineral resource within Scilly and to consider both potential future demand and supply to prepare comprehensive, compelling and long-lasting policy.

National Planning Practice Guidance

9. The Planning Practice Guidance (PPG) on 'Minerals' was published in October 2014³ and provides further information and guidance on the NPPF. The guidance advocates a systematic approach to safeguarding of mineral resources; use the best available information on the location of mineral resources; consult the mineral industry, local communities and other relevant interests; set out Mineral Safeguarding Areas on the policies map; adopt clear development management policies which set out how proposals for non-minerals development in Mineral Safeguarding Areas will be managed.

Disclaimer

10. This Minerals Topic paper does not consider paragraphs 209-211 of section 17 of the NPPF as there is no known potential for the exploration and extraction of oil, gas or coal on the islands. The NPPF also requires consideration of a steady and adequate supply of industrial minerals, including: silica sand; cement primary (chalk and limestone) and secondary (clay and shale) materials; and brick clay. These minerals are not currently either readily available or actively worked within the islands and as such they are not considered further within this report.

Local Context

Isles of Scilly Local Plan 2005

11. The current Isles of Scilly Local Plan, adopted in 2005, does not support any mineral extraction anywhere on the islands. Paragraph 9 of the 2005 Local Plan⁴ states that 'any mineral extraction would conflict with the islands' environmental qualities'.

Draft Isles of Scilly Local Plan 2015-2030

12. The emerging Local Plan considers mineral extraction, under its general duty as a Minerals Planning Authority. The emerging plan includes Policy OE6, set out below, which specifically does provide support for a supply of indigenous minerals to meet construction needs but this is only through the use of recycled and secondary materials. This is to restrict the requirement for direct extraction. This Minerals Topic Paper has been produced to inform and support this current policy approach in the emerging Local Plan.

³ <https://www.gov.uk/guidance/minerals>

⁴ <http://www.scilly.gov.uk/sites/default/files/document/planning/Isles%20of%20Scilly%20Local%20Plan.pdf>



POLICY OE6 Minerals

Support will be given to the supply of indigenous minerals to meet construction needs on the islands, including traditional materials, through the use of recycled and secondary materials to restrict the requirement for any direct extraction. Site Waste Management Plans (SWMPs) will be required to support development proposals, and will include measures to recycle and recover inert construction, demolition and excavation materials for re-use in building works, thereby also reducing transportation costs and carbon emissions.

Figure 1 Policy OE6 of the emerging Isles of Scilly Local Plan 2015-2030

Geological Data

13. The Isles of Scilly is a granite outcrop of the Cornubian Batholith, in terms of the geological conditions. Essentially the islands comprise a large mass of granite rock that was formed some 280 million year ago. 'The main exposed granites, from east to west are Dartmoor, Bodmin Moor, St. Austell, Carnmenellis, Tregonning-Godolphin, Land's End and the Scilly Isles'.⁵ In 1906 George Barrow produced a memoir called 'The Geology of the Isles of Scilly'⁶ which was based on the colour printed map of the Isles of Scilly (Sheets 357 and 360 as seen in figure 2 below). This assessment states that "although the islands are composed of granite, the rock is not quarried to any great extent and is never worked for exploitation... the quarries that do occur are in comparatively soft material, and there are few accessible places where any rock sound enough to pay for working could be met without first removing a considerable amount of more or less decomposed granite". It goes on to say that "the comparatively soft rock often forms a fairly good building stone, it undoubtedly contains much soluble silica". This work sets out the rocks present in Scilly:

Recent	Brown Sand
	Alluvium
Pleistocene	Upper head
	Iron-esment and glacial deposit
	Lower or Main head
	Old Beach
Eocene?	Gravel of St Martins
Paleozoic	Altered Killas (sedimentary rock)
Igneous Rocks	Elvan or quartz-porphry
	Inner-granite (finer)
	Outer-granite (coarser)

Table 1 Rock Types present on the Isles of Scilly, Barrow 1906

14. Local rock or stone is therefore limited to granite, which is the underlying bedrock of all the islands and rocky outcrops. These are the coarse-grained granites that contain the feldspar, which is the dominant building stone of the islands. Finer grained granite is present on the north and west side of St Mary's, the south part of Tresco and Bryher, Samson and the north-west side of Annet.

⁵ <http://www.es.ucl.ac.uk/map/SWEngland/geo2.htm>

⁶ <http://pubs.bgs.ac.uk/publications.html?pubID=B01742>



15. There are only two areas when Elvan, which is the native rock type of quartz-porphry, is known to be present. These are on St Mary's at Porthloo. In terms of other sedimentary rock, there is only one noted to be present in the islands on the north end of White Island, which lies to the north west side of St Martins.
16. Neither quartz nor the sedimentary 'altered killas' rock are used traditionally or historically as a building material for structures on the islands. Coarse granite, being the most common and readily available rock on the islands, has been historically used in the construction of buildings and homes on the islands up to the 20th century.

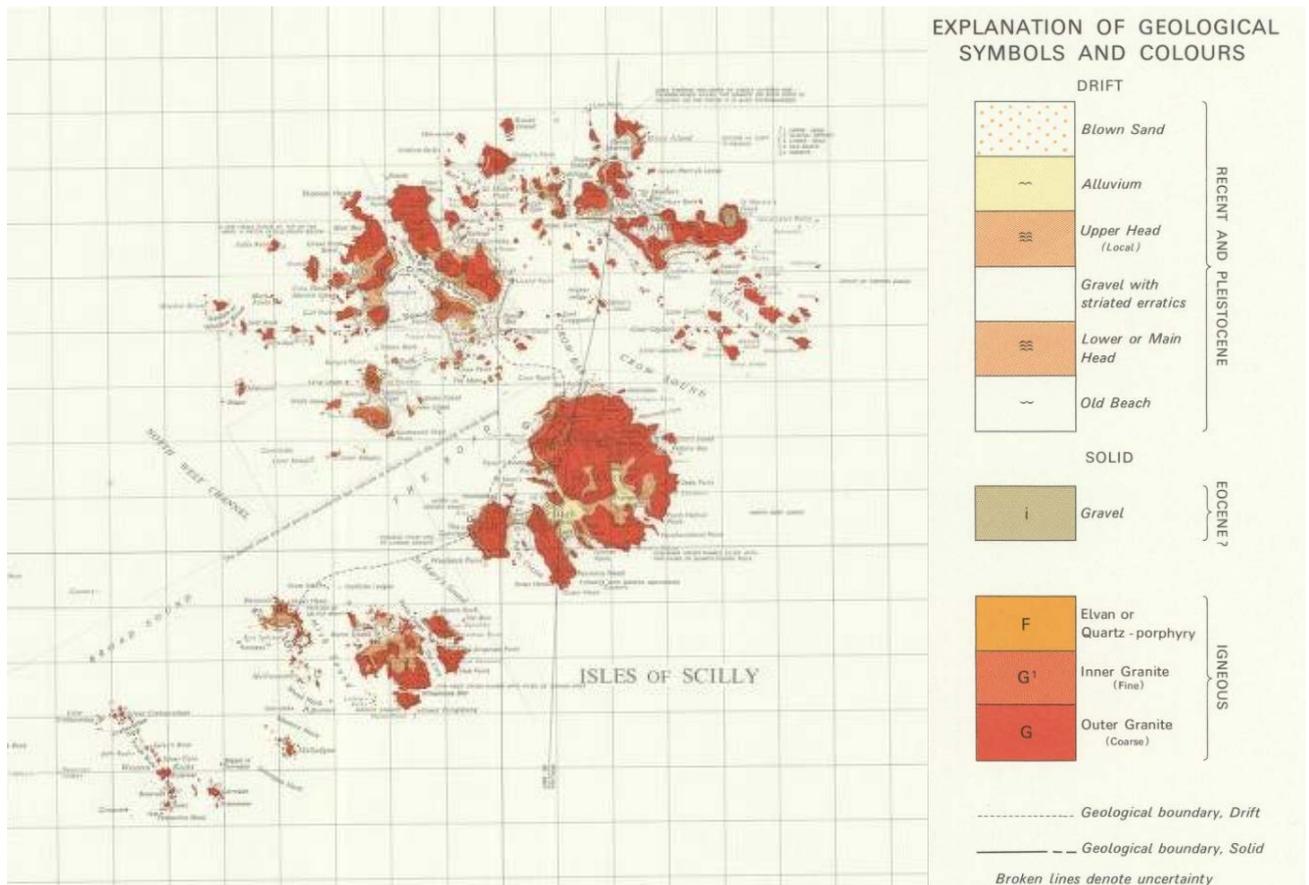


Figure 2 Reproduced with permission from the British Geological Society (BGS) Contains British Geological Survey materials © UKRI2019

Local Building Stone Quality

17. Finding sufficient suitable building material on Scilly has always presented a problem for islanders and, as historic references reveal, has often included materials scavenged from ship-wrecks, including ballast materials such as sandstone, through to beach or tidal rocks. Further evidence of the types of building stone used locally was documented by the Cornish antiquary, geologist and naturalist William Borlase in his work of 1756: Observations on the ancient and present state of the Isles of Scilly and their importance to the trade of Great Britain. This notes that stone was taken from the Peninnis peninsular, having been "much cloven and carried off for building". More recent work by Ratcliffe and Berry (1994) refers to making practical use of carn features, which have been used in buildings to form almost entire walls. These references highlight the lack of a ready supply of materials suitable for buildings.



Local Designations

18. One of the main constraints to development generally including sourcing local materials in recent years has been the designation of the islands in 1975 as a Conservation Area and an Area of Outstanding Natural Beauty.
19. The islands are also defined as a Heritage Coast which protect 64km² of coastline around the islands and 23km² of foreshore, cliff and dune environment. Some of the designations can be seen below in the map of Historic Environment and Natural Environment Designations, as attached at Appendix C. Other statistics for the islands are captured in the table below:

Designation	Number	Notes
Listed Buildings	128	20 per square mile, compared to 2.5 per square mile nationally
Scheduled Monuments	238	38 per square mile, compared to 7.5 per square mile nationally
Conservation Area	1	Blanket coverage across the islands
Heritage Coast	1	64km ² coastline and 23km ² foreshore
Area of Outstanding Natural Beauty	1	Blanket coverage across the islands.
Sits of Special Scientific Interest	26	Covering over 550 hectares of land across the islands with 334.43 hectares in favourable condition and 223.59 hectares in an unfavourable but recovering condition.
Special Area of Conservation	1	Isles of Scilly Complex coverings the marine environment around the islands measuring 26848.62 hectares.
Marine Conservation Zone	1	Comprising 11 sites covering 30km ² of a range of physical conditions supporting habitats and species.
Special Protection Area (SPA)	1	Covers 394 hectares over 26 rocks and islands of Scilly the habitat and feeding grounds of an important seabird assemblage.

Table 2 Natural and Historic Designations on the Isles of Scilly

20. The level of designation of the islands highlight that there are no areas that are unaffected in some way by one or more of the above designations.

Historic Quarries

21. There are various historic quarry sites on St Mary's. These have been identified through a review of Ordnance Survey maps dating from the 1890s. Legacy and historic quarry sites on St Mary's have been disused for many years with the only operational site, at Pendrathen (approximately 4800m²), now used for the processing of legacy quarried stone and inert construction and demolition waste for island construction projects, as opposed to direct mineral extraction. These sites are generally located in areas now close to residential properties or designated sites. Known historic quarry sites on St Mary's include:

- Buzza Hill
- Bay View
- Carreg Dhu and Tremelethen
- Bishop View



- Peninnis Head Peninsular
- The Garrison
- Pendrathen at McFarlands Down

Buzza Quarry sites

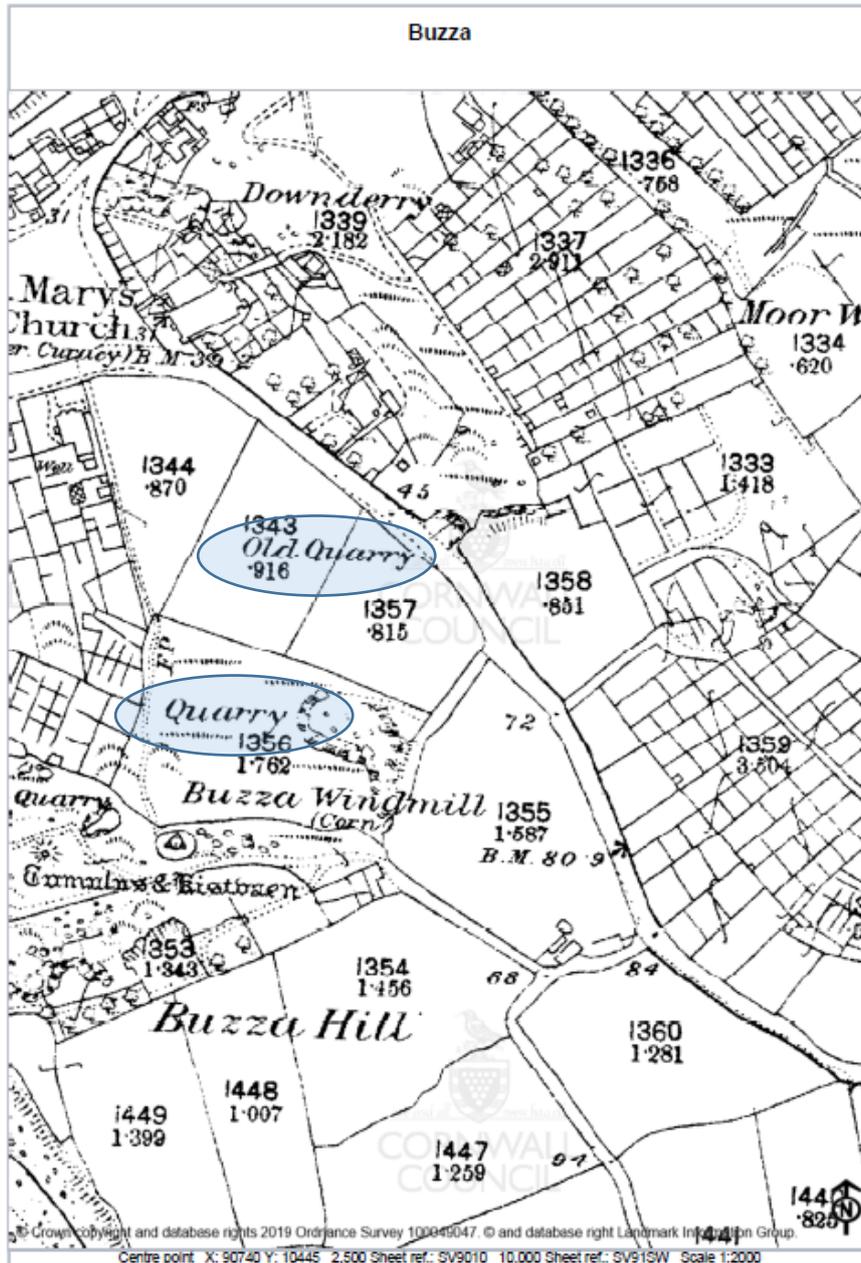


Figure 3 1890 OS Map of St Mary's, showing the multiple quarries at Buzza Hill. Porthcressa



Figure 4 Photograph of the historic quarry at Buzza Hill

Bay View Terrace

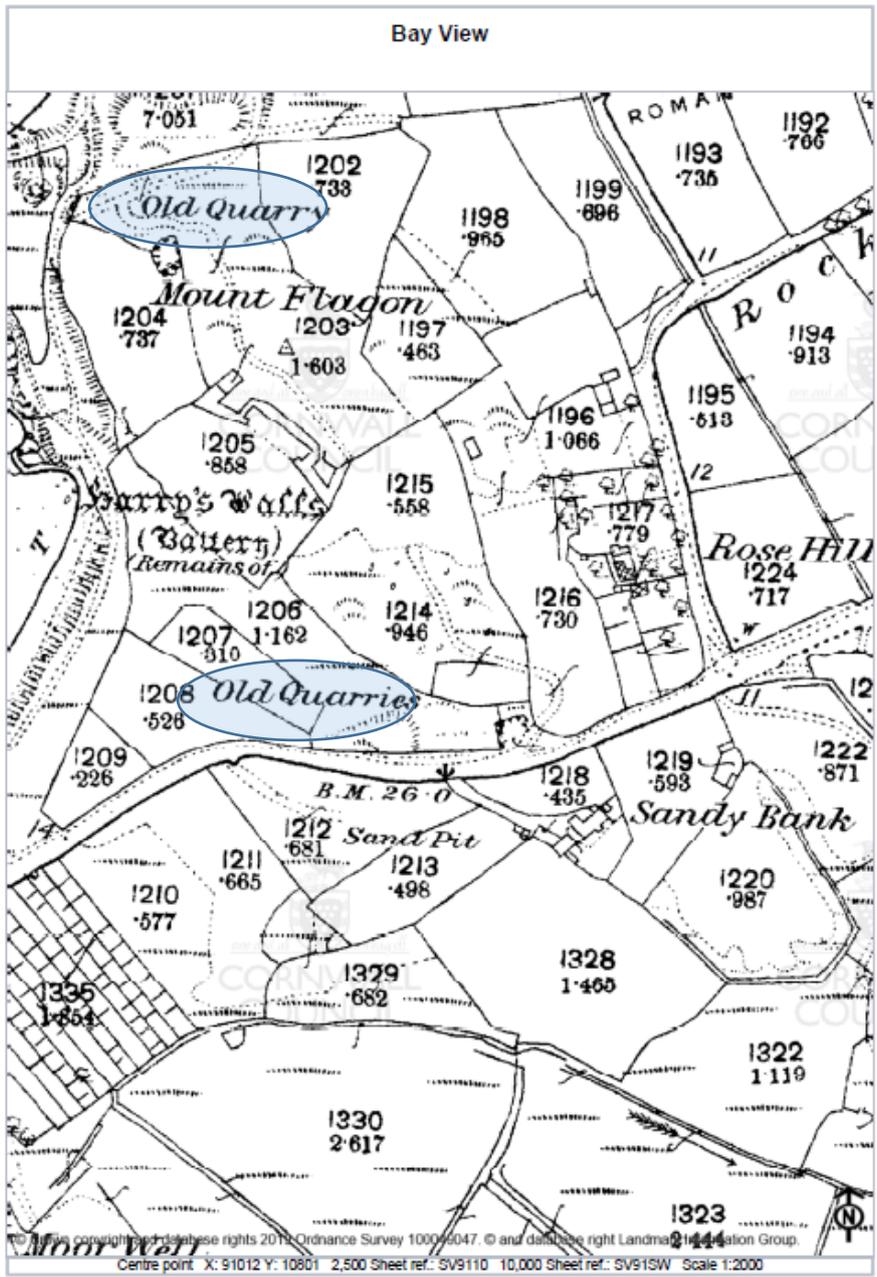


Figure 5 1890 OS Map of St Mary's, showing a quarry at Bay View Terrace, Porthmellon

Carreg Dhu Gardens and Tremelethen

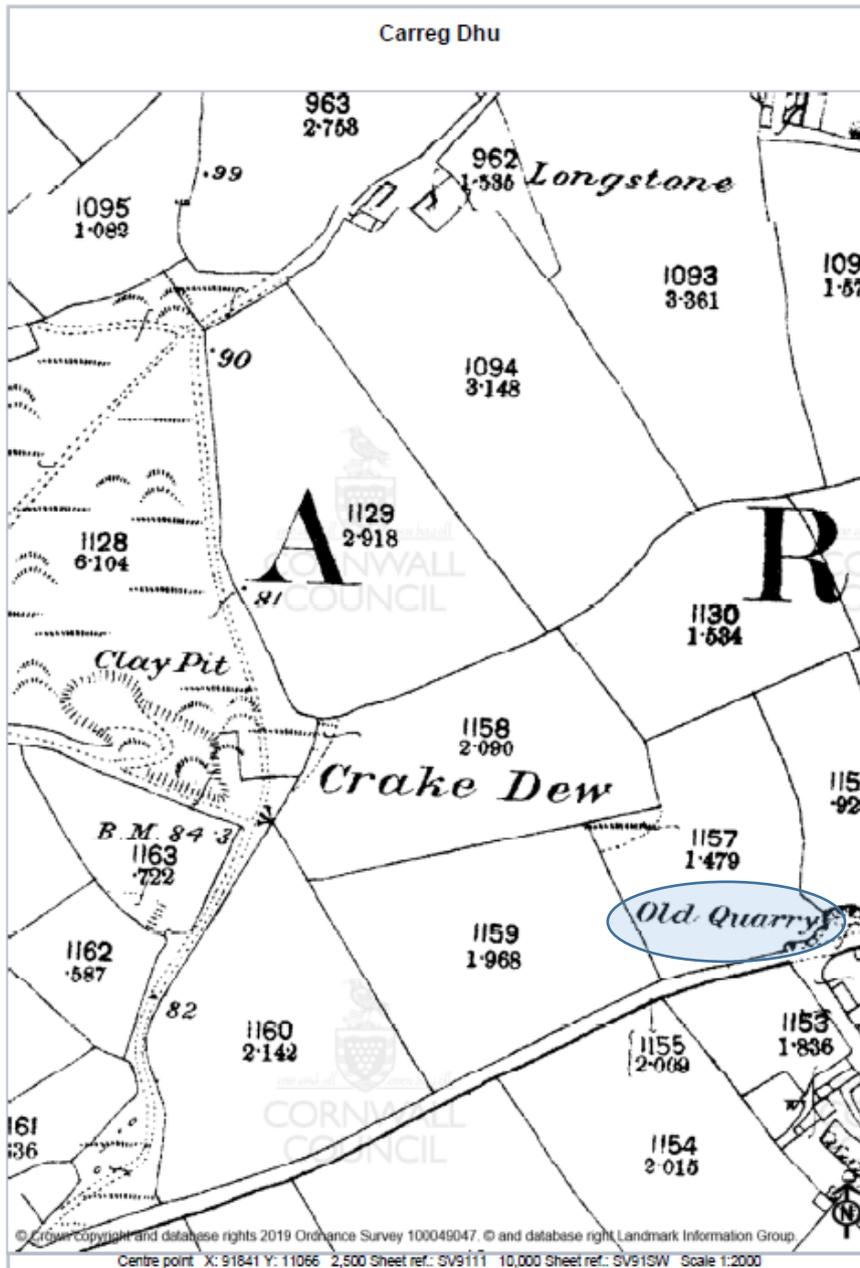


Table 3 1890 OS Map of St Mary's, showing quarry sites at Tremelethen and Carreg Dhu

Bishop View

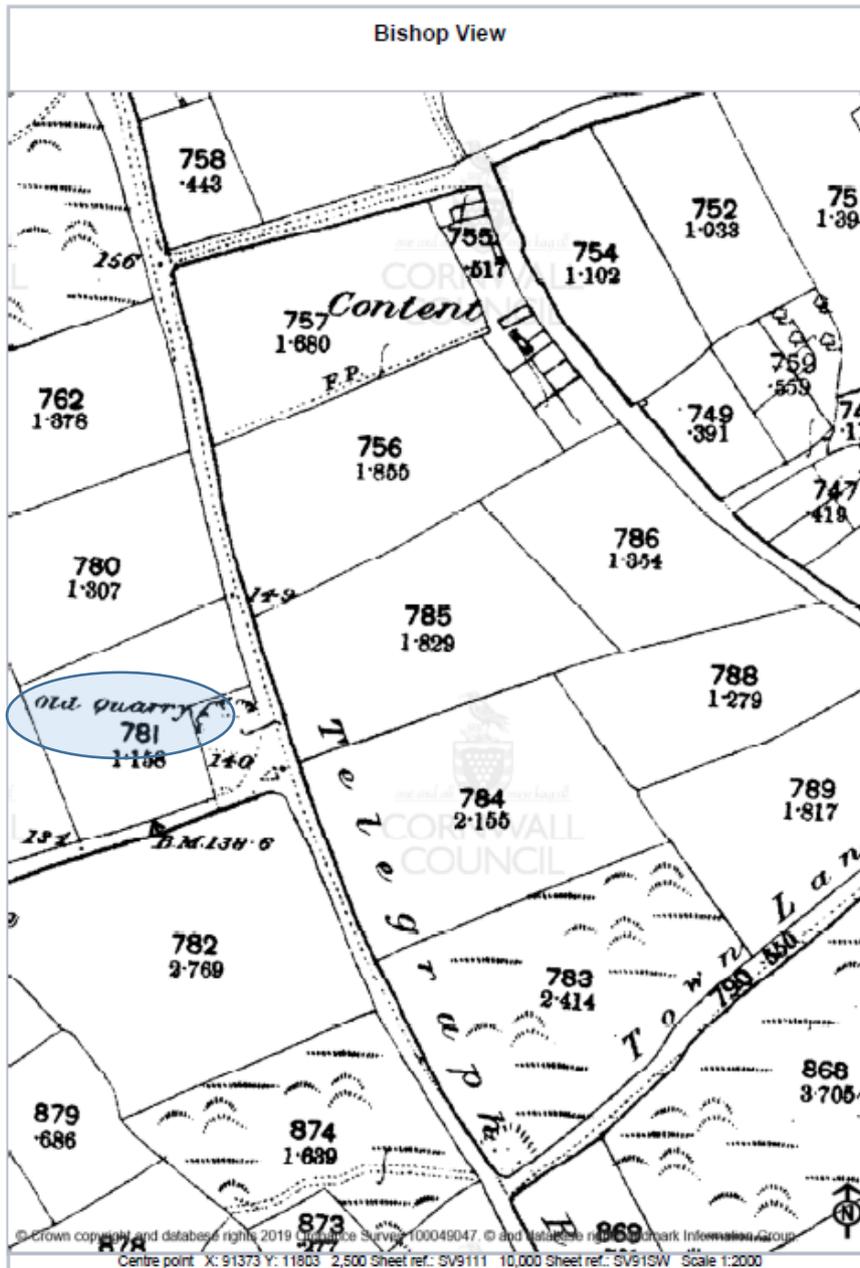


Figure 6 1890 OS Map of St Mary's, showing a quarry, junction of Porthloo Lane and Telegraph Road

Peninnis Head



Figure 7 1890 OS Map of St Mary's, showing a quarry, Peninnis Head

The Garrison

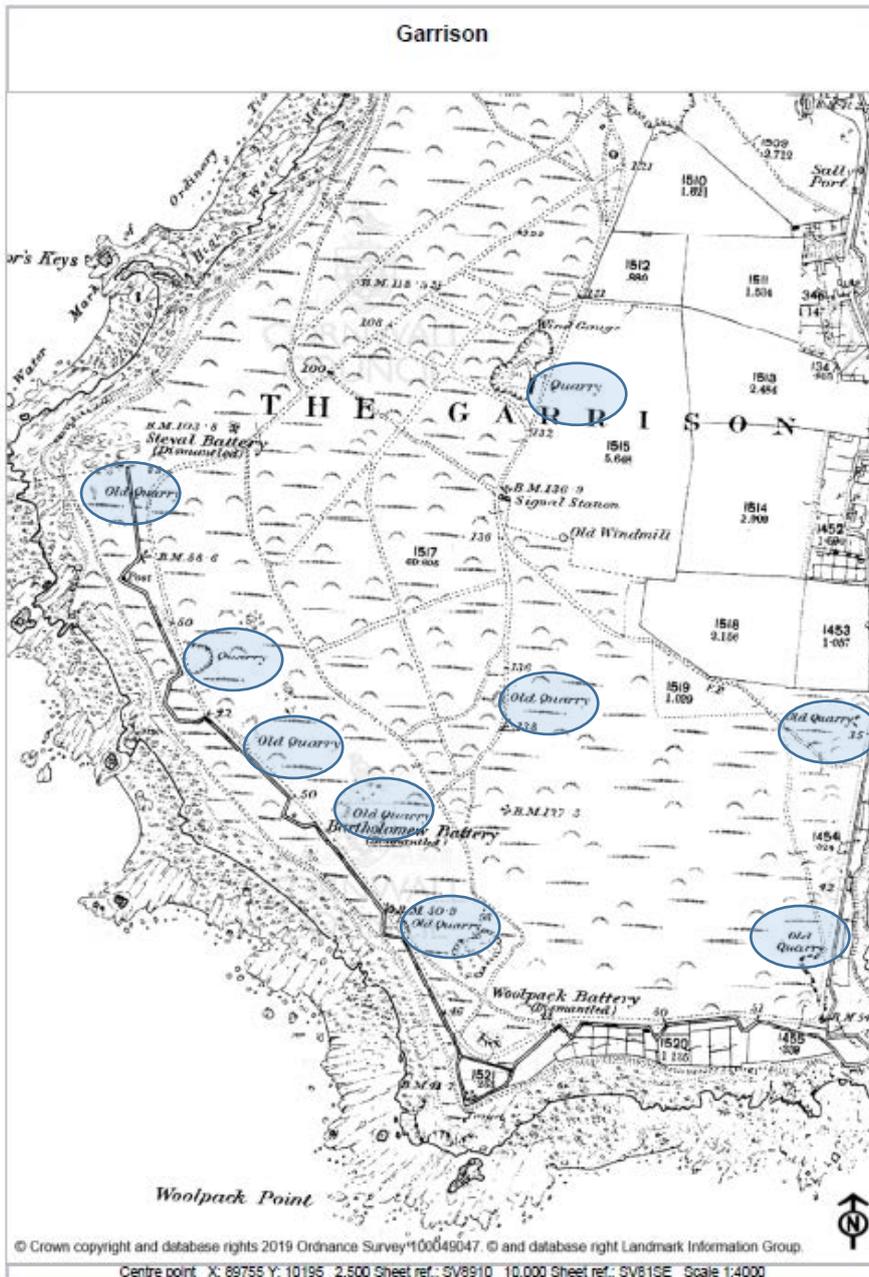


Figure 8 1890 OS Map of St Mary's, showing a quarry at the Garrison Tennis Courts



Figure 9 Current Tennis Court Site on the Garrison

22. Whilst historic map references show quarries on the islands, these were largely historic by the 20th Century. It can only be assumed that these ceased to operate because they were either exhausted following extraction or stone was no longer required as a source of building material or it became more readily available from mainland supplies to the islands. Certainly during the 20th century as more modern construction techniques became common there would have been less demand for materials like local granite. For example none of the Council housing constructed during the 1960s and 1970s or the social rented homes during the 2000 are constructed in granite.

Pendrathen

23. The last known active quarry site on the islands was at Pendrathen at McFarlands Down, which lies on the far north side of St Mary's. This remained operational as a quarry into the 1980s.
24. Pendrathen Quarry does not appear on the OS historical maps until the 1980s. On the 1963 Map series there is no reference to a quarry at this site, although a quarry feature can be discerned.

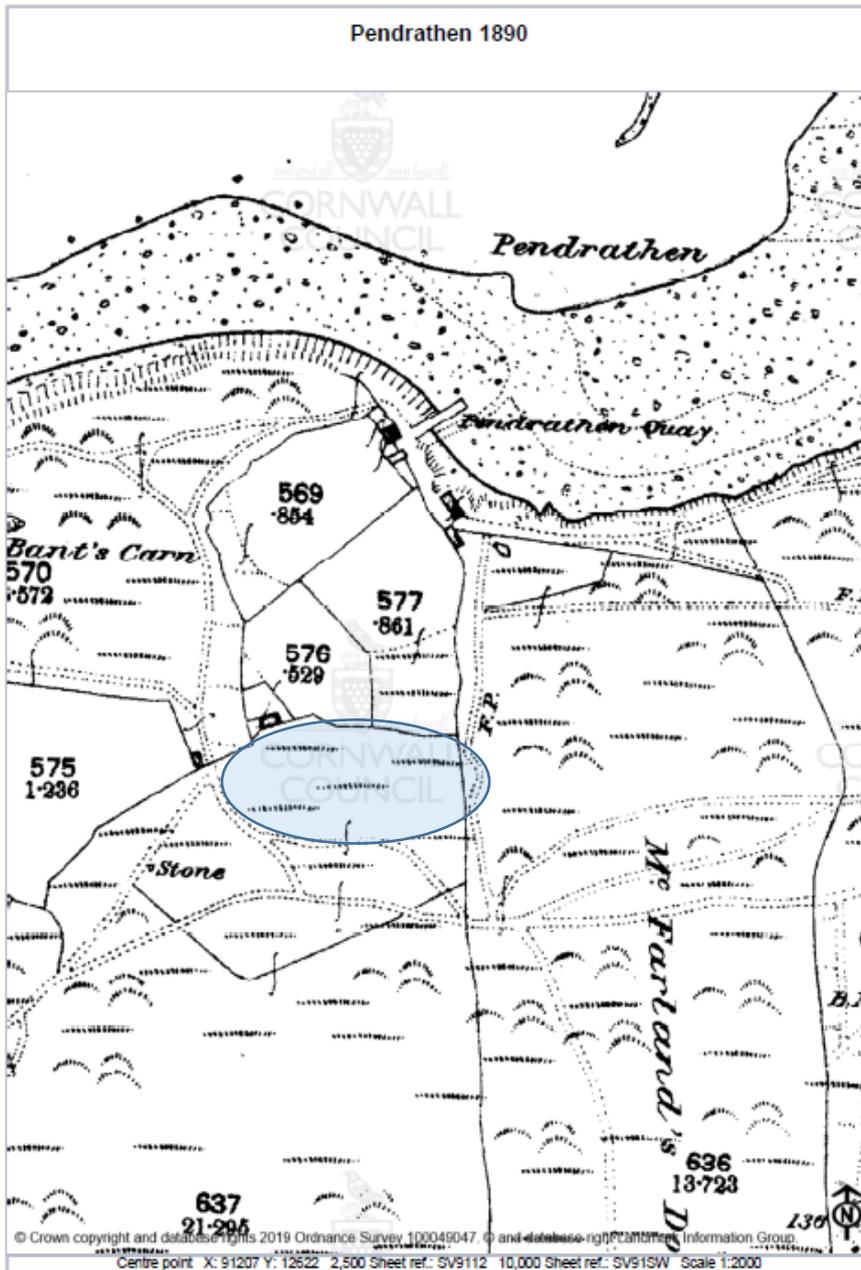


Figure 10 1890 OS Map Series showing Pendratheren

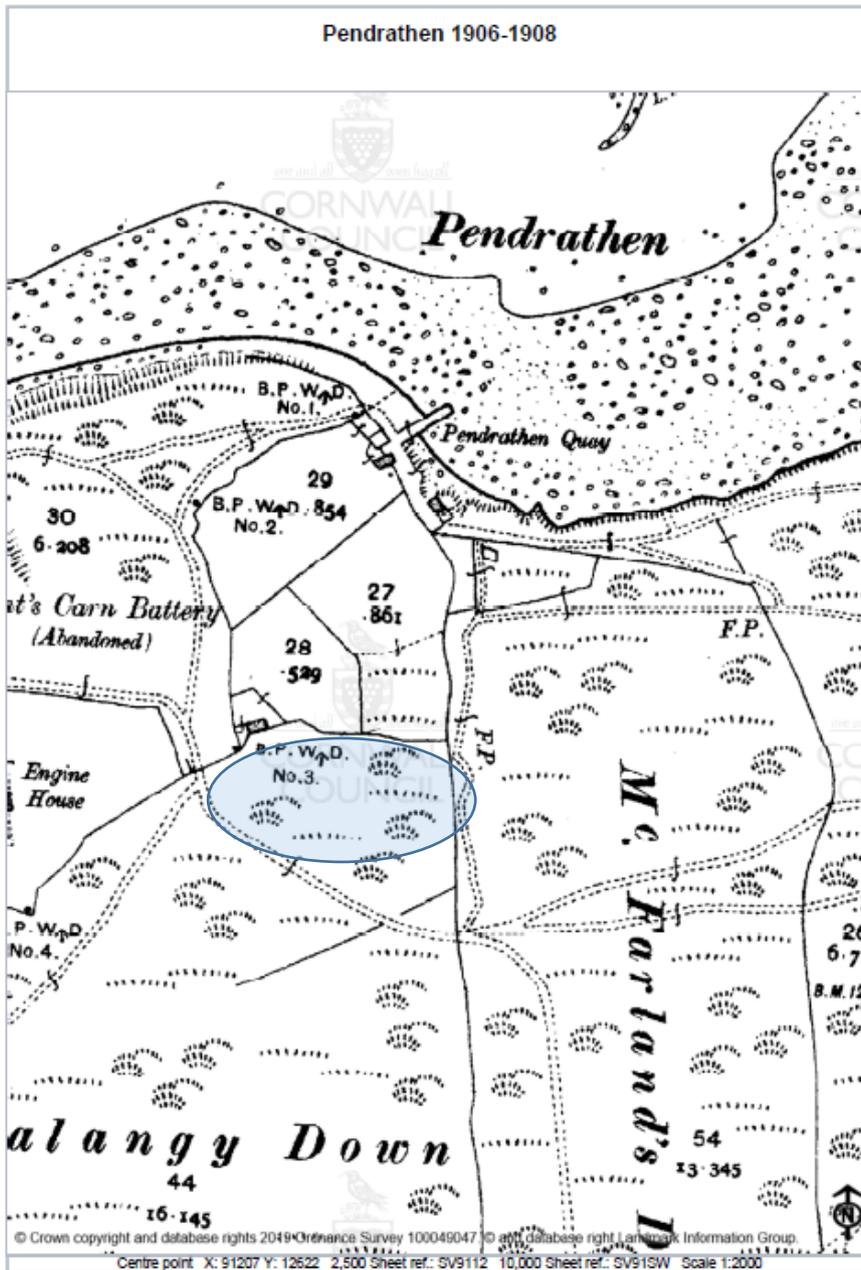


Figure 11 1906-1908 OS Map Series showing Pendrathen

25. The Pendrathen site is currently on lease from the Duchy of Cornwall to Mulciber Ltd. Prior to the lease from 2004 Mulciber Ltd. undertook a programme of works at the quarry to clear past accumulations of materials at the premises. A management plan, was agreed at that time between the Duchy, Mulciber Ltd and the Council of the Isles of Scilly.
26. The modern OS map, as shown adjacent to table 4 below, highlights the extent of operations at Pendrathen. The current operator continues to carry out transfer and crushing of construction and demolition waste, as permitted by the Environment Agency (Permit No:



BB3508LE/V002⁷). This permit is for a physical treatment facility and the lawful use, is described as an inert and excavation-waste recycling facility, and confirmed as lawful by the Council in 2015. A sworn declaration, submitted as part of a lawful use in 2015 (P/15/088/CLE) by a former site operator, states that during the lease of the site (1987 to 2003) direct extraction of material took place.

27. The road through McFarlands Down that accesses the quarry site remains in the ownership of the Duchy of Cornwall, with rights of access agreements given to property owners along McFarlands Down. There are 24 properties who require access from this road, with the closest property, known as Standing Stone, being within 65m of the site boundary.
28. The site at Pendrathen is located within a locally defined Archaeological Constraint Area known as ‘*Bants Carn, Halangy Down and Halangy Porth*’, and is identified as such due to the high potential for further archaeological remains at this site. The access road to the site separates the former quarry site from an extensive Scheduled Monument designation to the south west, which is identified as ‘*Entrances graves, standing stones, field systems, settlements and post-medieval breastwork, kelp pit and stone pits on Halangy and Carn Morval Downs*’. This is a Scheduled Monument that was first entered on the statutory list in 1970. Scattered around the quarry site are a number of Historic Environment Records (HERs) which include evidence of iron-age occupation of the islands.

Site ID	Name	Summary	
7479	PENDRATHEN QUAY - Iron Age occupation site, Romano British occupation site	Excavation of an occupation site near the old quay at Pendrathen revealed a hearth and a considerable number of flints.	
7490	BANTS CARN - Neolithic standing stone, Bronze Age standing stone	An ivy-covered possible standing stone, 2.0m high, close to a stony bank.	
7451.01	BANTS CARN - Undated findspot	A bead of pumice or bone found near Bant's Carn.	
7451.02	GREAT STITCH - Neolithic entrance grave	A worked flint was found associated with confused stonework and megalithic pottery.	
7488.03	BANTS CARN BATTERY - Post Medieval boundary post	Six war department boundary posts associated with Bant's Carn Battery.	

⁷ https://environment.data.gov.uk/public-register/waste-operations/registration/BB3508LE-V002?_pageState=result-waste-operations



Table 4 Historic Environment Records (HER) around Pendrathen Quarry site and Modern Map of Pendrathen Quarry (red boundary) including the Scheduled Monument (purple boundary).

29. The images below highlight the change in the site from 2005 up to 2019 and the assimilation of the former quarry into the landscape.



Figure 12 Pendrathen Site 2019



Figure 13 Aerial Photograph circa 2005

Local Context – Current Minerals Provision

Primary Research

30. In 2019 the Council contacted individuals, businesses and organisations who are known to be involved in construction and development on the islands. A total of 17 surveys were sent out to understand the current picture of where building materials are sourced from, for island-based construction projects and whether there is a reliable source of recycled/reclaimed materials. A copy of the survey sent out is appended at appendix A. In total the response rate was 11% and the results have been included in appendix B.

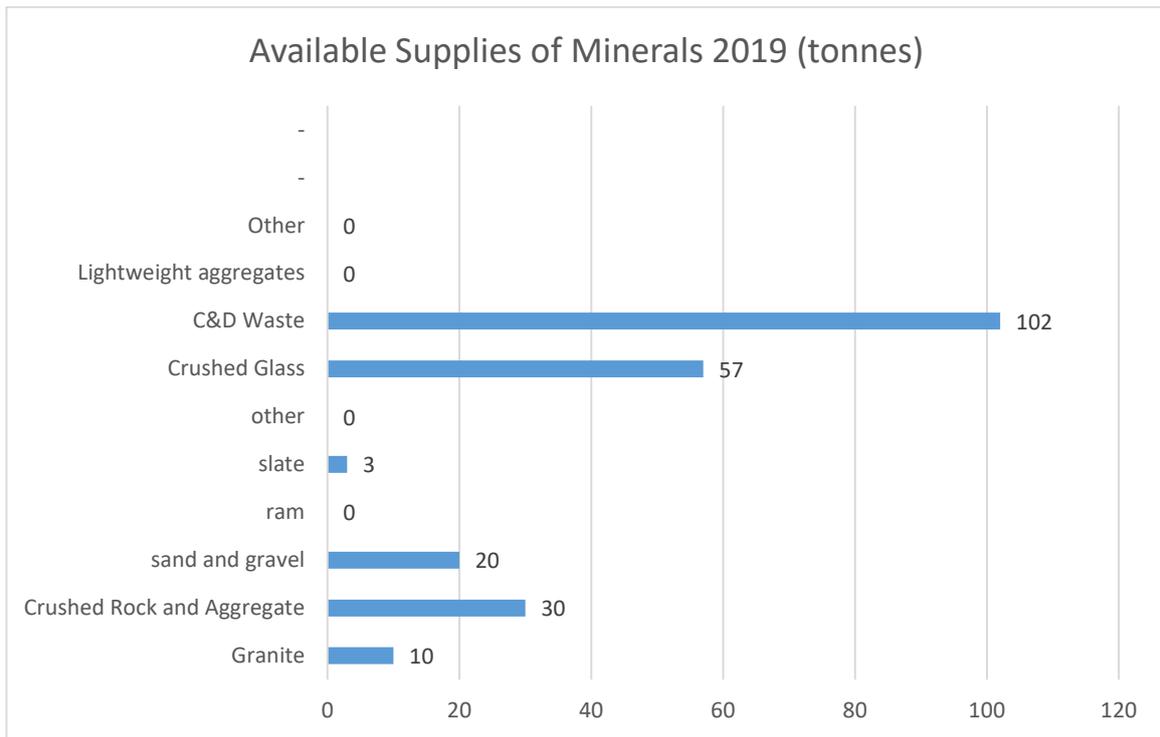


Figure 14 Survey results of known supplies of Minerals 2019

31. Whilst responses to this survey were limited it does demonstrate that in addition to recycled materials produced at the Pendrathen site, there are some sources of material already obtained locally including the 10 tonnes of granite and 30 tonnes of crushed rock and aggregate at Pendrathen. Sand and gravel aggregates are not available from local sources and rely on import supplies only. There is small supply of reclaimed slates, with an estimate of 3 tonnes, but these are also imported. Through the Council’s recycling there is currently an estimated 57 tonnes of crushed glass, which is used as a non-structural aggregate in building projects. Finally, an estimate of 102 tonnes of crushed construction and demolition waste is available on the islands through existing retained supplies, including materials stored on the Carn Thomas Secondary School site, which was demolished in 2017.



Figure 15 The Stone Yard at the Porthmellon Waste Site, 2019



Figure 16 Recycled Glass bagged at the Porthmellon Waste Site, 2019



Local Context – Future Development

Proposed Development

32. The Local Plan 2015-2030 sets out a positive policy framework for delivering sustainable development proposals that come forward during the plan period. With the exception of new affordable homes, as discussed below, there are no other planned developments of a significant scale that would necessitate the use of local materials to any significant degree. The plan recognises that infrastructure improvements will take place during the plan period, in particular the investments in sewage treatments and water supplies required to make the islands compliant with the Water Framework Directive, which comes into force in 2025. It is noted however, that infrastructure improvements of this nature will not require the use of large amounts of primary aggregates and minerals, but will require bespoke solutions and the importation of equipment for a sustainable solution.

The Local Plan

33. The Local Plan does seek to meet a local housing need through a spatial strategy of permitting a sufficient supply of affordable homes on sites specifically allocated for housing. These sites are primarily at Hugh Town and at Old Town. The plan recognises a ‘need’ for 105 affordable homes over the plan period. This is the figure initially identified in the Strategic Housing Market Assessment (SHMA) in 2016⁸ when considering the Objectively Assessed Need for housing. The figure has remained constant in the SHMA update which uses the new standardised method of calculating Local Housing Need⁹, contained in the Housing Topic Paper Update 2019. The Local Plan therefore recognises the need to deliver 105 affordable homes, a figure that has been accepted by the Council as the number of homes required over the plan period, to meet the existing needs of the community. The delivery of homes over the past 5-7 years has only been achieved through windfall developments coming forward and it is considered that this route will continue to be a reliable source of homes over the plan period, particularly on off-islands where no sites are allocated for housing.
34. The Local Plan seeks to allocate sites to deliver a sustainable spatial strategy, on which new homes should be achieved. In order to balance the delicate environment and limited land supply, the Local Plan does not, however, set a target to deliver open market or affordable homes over this period. Rather it seeks to maximise affordable homes on the allocated sites and through windfall development. In recognising the viability and economies of scale on the islands, for delivering affordable homes the Local Plan policies make provision to enable a case to be made, on the basis of viability, for some limited open market homes as a means to cross-subsidise the delivery of affordable homes.

⁸ <http://www.scilly.gov.uk/sites/default/files/planning-apps/Isles%20of%20Scilly%20Final%20SHMA%20Report%202016.pdf>

⁹ <http://www.scilly.gov.uk/sites/default/files/planning-apps/SHMA%20UPDATE%20Housing%20Need%20July%202019.pdf>



35. Viability carried out in 2018 by Three Dragons,¹⁰ recognised that in the absence of grant funding, the use of open market (principal residence occupancy restricted) could reasonably achieve up to 50-60% affordable homes (setting limitations of open market at 40-50%), depending on the circumstances on the site constraints, the ratio and mix of house size, types and tenures. The draft Local Plan initially set a target to deliver 105 affordable homes (as shown in the consultations in 2018 and again in 2019), which could result in the delivery (should all sites require up to 50% open market) of around 158 new homes on the islands.
36. In order to build-in some flexibility to the delivery of affordable homes the Local Plan, whilst protecting the islands from an excessive amount of new development, identifies 8 possible housing sites in Hugh Town and Old Town which, at modest densities, could deliver 116 homes. This would be sufficient to address the recognised need for affordable homes on the islands. The proposed amendments to the Draft Local Plan, ahead of submission, seeks to move away from the 105 affordable homes as a target and instead maximise the delivery of affordable homes on allocated sites. This would ensure that amount of new homes delivered would be restricted to the maximum these housing allocations could deliver.
37. In order to understand the minerals demand implication of seeking to deliver homes on the islands, reference is made to guidance produced by the Mineral Products Association.¹¹ This suggests that a single typical traditional construction new-build home would require 200 tonnes of aggregate for its construction and 12 tonnes of mortar; which is clearly more than currently identified as available on the islands. The delivery of a target of 105 affordable homes plus up to 50% additional open market homes would result in the delivery of 158 new homes on the islands. Based on a standard size of home and using traditional construction methods would require over 31,000 tonnes of aggregates and over 1,800 tonnes of mortar. The scenario, as proposed in the amendments in July 2019, of having no ‘target’ and seeking to maximise the sites allocated for housing only could result in the delivery of 116 homes in total (open market or affordable). Based on a standard size of home and using traditional construction methods would require over 23,000 tonnes of aggregate and over 1,300 tonnes of mortar.

No of Homes	Aggregate Requirement	Mortar Requirement
158 (potential number with a target of 105)	31,600 tonnes	1,896 tonnes
116 (potential number with no target but maximising allocations only)	23,200 tonnes	1,392 tonnes

38. Due to the constraints on local primary sources of materials, the Local Plan should not advocate the construction wholly in local materials or traditional construction methods, but rather seek to ensure local materials are re-used as much as possible in new building projects. This can include reclaimed local granite for re-use as a finishing detail around

¹⁰ <http://www.scilly.gov.uk/sites/default/files/planning-apps/Housing%20Viability%20Assessment%20Council%20of%20Isles%20of%20Scilly%20-%20Final%20Report%20March%202018.pdf>

¹¹ <https://mineralproducts.org/documents/Facts-at-a-Glance-2018.pdf>



windows and doors for example. Other reclaimed materials from demolished or disused buildings which could include quality slates for re-roofing and crushed construction materials for use as aggregates and for the purposes of site levelling, for example. Fundamentally, modern construction methods such as modular building should be encouraged in the plan, in order to reduce construction costs, which is a significant barrier for new development, as well as to minimise the need for direct extraction.

39. Policies SS1 and SS2 require the use of sustainable materials that complement those found in the local area to achieve good design. Whilst balancing development proposals that achieve high quality sustainable places, it also seeks to ensure sustainability is considered as part of construction through the choice and source location of materials, as well as through ongoing sustainable design solutions of buildings. The former consideration seeks to ensure supplies of materials are sourced as sustainably as possible. Whilst this may suggest a local supply of building materials would be the optimal solution in this respect, the limitations of local materials, as identified above, would suggest it would be inappropriate for the plan to specify the use of locally quarried building stone and other minerals.
40. Potential operations that seek to deliver a supply of local minerals, such as the large scale storage or crushing for example, should be controlled from adverse harm through policies set out in the 'Our Outstanding Environment' section of the Local Plan. Proposed Policy OE1 clearly requires development proposals to conserve and enhance the islands' landscape, seascape and scenic beauty unless the benefits of the proposal are demonstrated to clearly outweigh any harm.
41. Policy OE7 requires development proposals to conserve the islands designated and undesignated heritage assets. Policy OE3 seeks to ensure that any development proposal that has the potential to generate pollution including ground, water, noise, light or air pollution is only permitted where there would not be any impact on human health, the natural environment or general amenity.
42. Policy OE2 relates to biodiversity and geodiversity and requires the conservation, protection and restoration of biodiversity including measurable biodiversity net-gains.
43. The Memorandum of Understanding with Cornwall Council, as attached at Appendix C, provides for access to a supply of aggregate minerals and crushed rock supplies of Cornwall, sufficient to demonstrate access to a supply at least 10 years for crushed rock. The use of mainland supplies avoids the need to re-establish primary aggregate extraction on the islands. As identified above direct extraction would have significant adverse impacts for the tranquillity of the islands. This access to Cornwall's supplies together with non-traditional construction or off-site construction solutions, as advocated in the emerging Draft Local Plan, should seek to minimise the amount of aggregate required to deliver the proposed housing on the Isles of Scilly and provide for sustainable use for construction and demolition waste over the plan period.

Conclusion

44. As set out above, there are currently no active quarry sites on the Isles of Scilly. The NPPF is clear that there is a duty to protect locally and nationally important mineral resources. The islands do not currently contain any locally or nationally important active mineral extraction



sites and on this basis the Local Planning Authority consider that there is no requirement to provide for the re-establishment of a local supply of minerals. It should however support the re-use of reclaimed and recycled materials locally and one solution to safeguard supplies could be the designation of a recycled minerals safeguarding site.

Paragraph 204 of the NPPF: Planning Policies should:	Isles of Scilly Context
a) provide for the extraction of mineral resources of local and national importance, but not identify new sites or extensions to existing sites for peat extraction;	There are no active quarry sites on the islands that currently carry out direct extraction of primary aggregates.
b) so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously;	Secondary and recycled materials make up a significant proportion of materials for island construction projects, as evidenced by the use of Pendrathen, former quarry site, it is permitted use for recycling inert construction and demolition waste.
c) safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);	As a former quarry site on the islands, Pendrathen quarry has been a source of primary building stone only in the latter half of the 20 th century ceasing quarrying activities of any significant degree in the 1980s or 1990s. There are no reports of whether this quarry site has been exhausted of extractable materials or whether there remains a supply of primary materials available for quarrying. The site does not currently have a lawful use or extant permission for mineral extraction. There are no planning permissions for alternative uses of this site outside of its lawful use for processing intern construction waste. There are no proposals within the Local Plan for alternative uses for this site.
d) set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place;	Prior extraction of minerals would only be advocated where a development proposal was in place that required large scale excavation of ground materials.
e) safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;	There are no existing, planned or potential sites for bulk transport, handling or process of minerals or the large scale manufacturing of concrete products. Pendrathen quarry could be considered as a site to be safeguarded for the handling and distribution of recycled and secondary aggregate material.
f) set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts	Proposed Policy OE1 clearly requires development proposals to conserve and enhance the islands' landscape, seascape and scenic beauty unless the benefits of the proposal are demonstrated to clearly outweigh any harm. Policy OE7 requires development proposals to conserve the islands designated and



	from individual sites and/or a number of sites in a locality;	undesigned heritage assets. Policy OE3 seeks to ensure that any development proposal that has the potential to generate pollution including ground, water, noise, light or air pollution is only permitted where there would not be any impact on human health, the natural environment or general amenity. Policy OE2 relates to biodiversity and geodiversity and requires the conservation, protection and restoration of biodiversity including measurable biodiversity net-gains.
g)	when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction; and	The local plan does not seek to re-establish quarrying or mineral extraction activities so does not seek to develop noise limits.
h)	ensure that worked land is reclaimed at the earliest opportunity, taking account of aviation safety, and that high quality restoration and aftercare of mineral sites takes place	The local plan does not seek to re-establish quarrying or mineral extraction activities so does not seek to require mineral extraction restoration policies

45. Due to the exceptional environment, small size of the islands and no active quarries, coupled with the scale of development proposed in the emerging Local Plan, it is not considered proportionate to adopt a policy approach to establish support for local mineral extraction on the islands.
46. Whilst the known quantities of legacy supplies of materials or supplies of reclaimed/recycled materials is limited, there are known supplies of such materials on the islands, which are regularly used in construction projects. The use of Pendrathen for the crushing and re-processing of materials is testament to the demand for such a facility and the importance of recycled materials to the viability of construction projects and represents the most appropriate and sustainable solution for the islands.
47. Primary local aggregate extraction would have a significantly harmful impact upon the tranquillity of the islands as an Area of Outstanding Natural Beauty and potentially impact upon its economy and an important tourism destination. In addition such extraction could harm recognised sites of national and international importance and priority habitats and species.
48. The 'Duty to Co-operate' as placed on Local Planning Authorities by the National Planning Policy Framework (2019), presents opportunities to establish a solution that could fulfil the supply demands for minerals in connection with building projects. Cornwall Council have established through their assessment of minerals, a supply large enough to meet development needs for a period of 150 years. In order to utilise this as a supply of minerals to support the approach of not seeking to re-establishing quarrying activities on the Isles of Scilly, both authorities have agreed a Memorandum of Understanding (MoU). This establishes that development on the islands could utilise the established minerals supplies of Cornwall. This MoU is attached at Appendix D.



Bibliography

Barrow, G. (1906) *The Geology of the Isles of Scilly*, MHSO, London

Borlase, W. (1756) *Observations on the ancient and present state of the Islands of Scilly and their importance to the trade of Great Britain*.

Ratcliffe, J. and Berry, E. (1994) *The Samson Buildings*: Truro, Cornwall County Council, Cornwall Archaeological Unit.



Appendices

Appendix A – Construction Materials Survey

Dear «First_Name»,

«Company»

The Local Planning Authority are preparing an assessment of local building supplies for island-based construction projects. As a person or company involved in the construction industry on the Isles of Scilly you may be able to assist us in understanding current supplies of materials used in development projects.

If you are able to assist the Council then we would like to understand where materials are sourced from and how much recycled materials are currently available to you, on the islands, for local building projects and it would assist us if you could answer all or as many of the following questions. We would like to get as many responses back by the 5th July 2019.

Date: [Click or tap to enter a date.](#)

1. Do you/your company carry out building projects on the Isles of Scilly?

[Choose an item.](#)

- If you answered NO then you do not need to answer any further questions.

2. When carrying out a building project on the Isles of Scilly do you/your company supply all or any building materials? [Choose an item.](#)

- If you answered 'No Materials' you do not need to answer any further questions but it would be helpful if you could you list your supplier: [Click or tap here to enter text.](#)

3. As an individual or company/organisation/contractor who has access to a supply of building materials and aggregates we would like to understand current amounts and source locations of any supplies and would appreciate you completing the table below.

- We do not require any personal details and the information you provide would be used to understand the supply of materials from or to the islands and to inform an assessment of minerals, for the purpose of the Local Plan.

Material	Used for:	Estimate current Supply Amount (tonnes)	Actual current Supply Amount (tonnes)	Sourced from	For materials sourced from the mainland, what is the primary route to getting them to the islands
	e.g. concrete batching, mortar/render, facing materials, finishing details, walls, floors, levelling, drainage etc.	Estimate of how much you have access to annually. If you do not know state 'not known'	If you have access to a known quantity annually please specify. If you do not know state 'not known'	Name of quarry or name of supplier. If you have more than one supplier please provide as many details as possible	Through the Isles of Scilly Steamship Company or by other private transportation methods.
1. Primary Construction Materials:					
Granite					
Crushed rock aggregate					



Sand and gravel					
Ram					
Slate					
Other stone types (specify below):					
Other (Specify below):					
2. Secondary Aggregate (specify below):					
3. Manufactured Aggregate (specify below):					
4. Recycled Materials or Aggregates e.g. crushed glass, construction and demolition waste (specify below)					

Comments/Feedback:
Please use this box to clarify any of the above points or to provide feedback or any issues that you feel relevant not captured by responding to the above questions:

Responding

If you can return completed surveys to me at lisa.walton@scilly.gov.uk by replying to this message (or by Post to the Town Hall, St Mary's). The date for responding by is:

5th July 2019.

If you have any questions arising from this questionnaire please do not hesitate to get in touch with me at the above email address or by calling 01720 424456.

Thank you for your time.

Appendix B – Construction Materials Survey - Responses

Responder	Estimate (Tonnes)	Actual	Source	Use	Route	Total
Granite						
M1	Not Known	Not Known	Sourced from various contractors/farmers locally	Walls, Open Space maintenance	n/a	10+

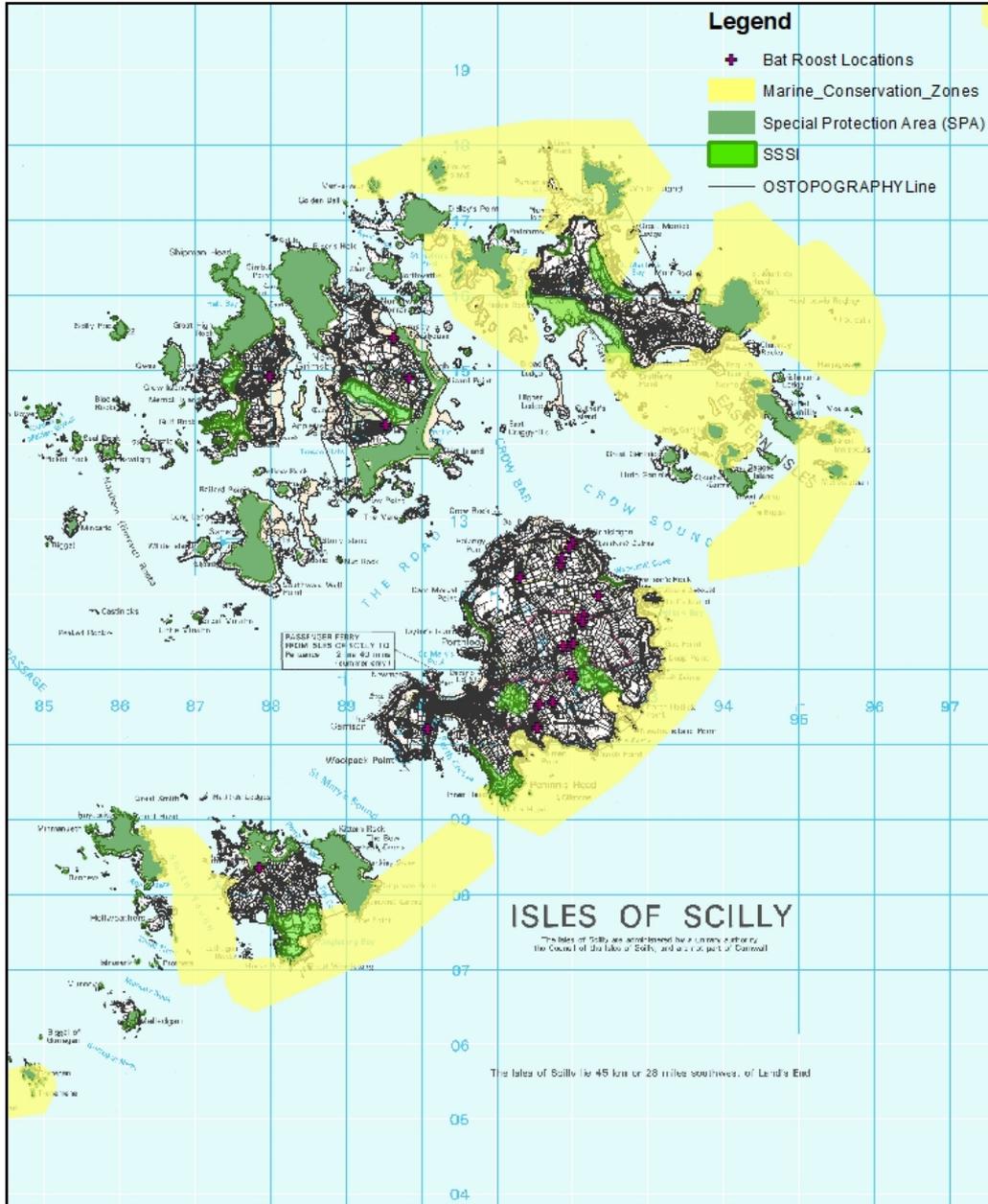


M2	10	n/a	salvaged from other structures and field clearances	Field walls	n/a	
Crushed Rock Aggregate						
M2	30	n/a	Pendratheren Quarry	track surfacing	n/a	30
Sand and Gravel						
M1	not known	not known	Local Building Suppliers	Mortar/render, screed, blockwork, flooding (sandbags)	ISSC	20+
M2	20	n/a	mainland	general building	ISSC	
Ram						
M1	Not known	Not Known	Sourced from various contractors/farmers locally	Footpath surfacing	n/a	Unknown
Recycled: Crushed Glass						
M1	57	not known	Porthmellon Waste Site	Backfill, drainage, footpaths, infill, hard-core	n/a	57
Recycled: Crushed C&D Waste						
M1	100	-	Carn Thomas Secondary School Site	Backfill, drainage, footpaths, infill, hard-core	n/a	102
M2	2	n/a	in hand	general fill	n/a	
Manufactured: lightweight aggregate						
M1	not known	not known	Local Building Suppliers	Concreting, highway repairs	ISSC	Unknown
Slate						
M2	3	0	mainland	roofing	ISSC	3



Appendix C – Designations

Natural Environment Designations on the Isles of Scilly



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Date: 27/06/2019

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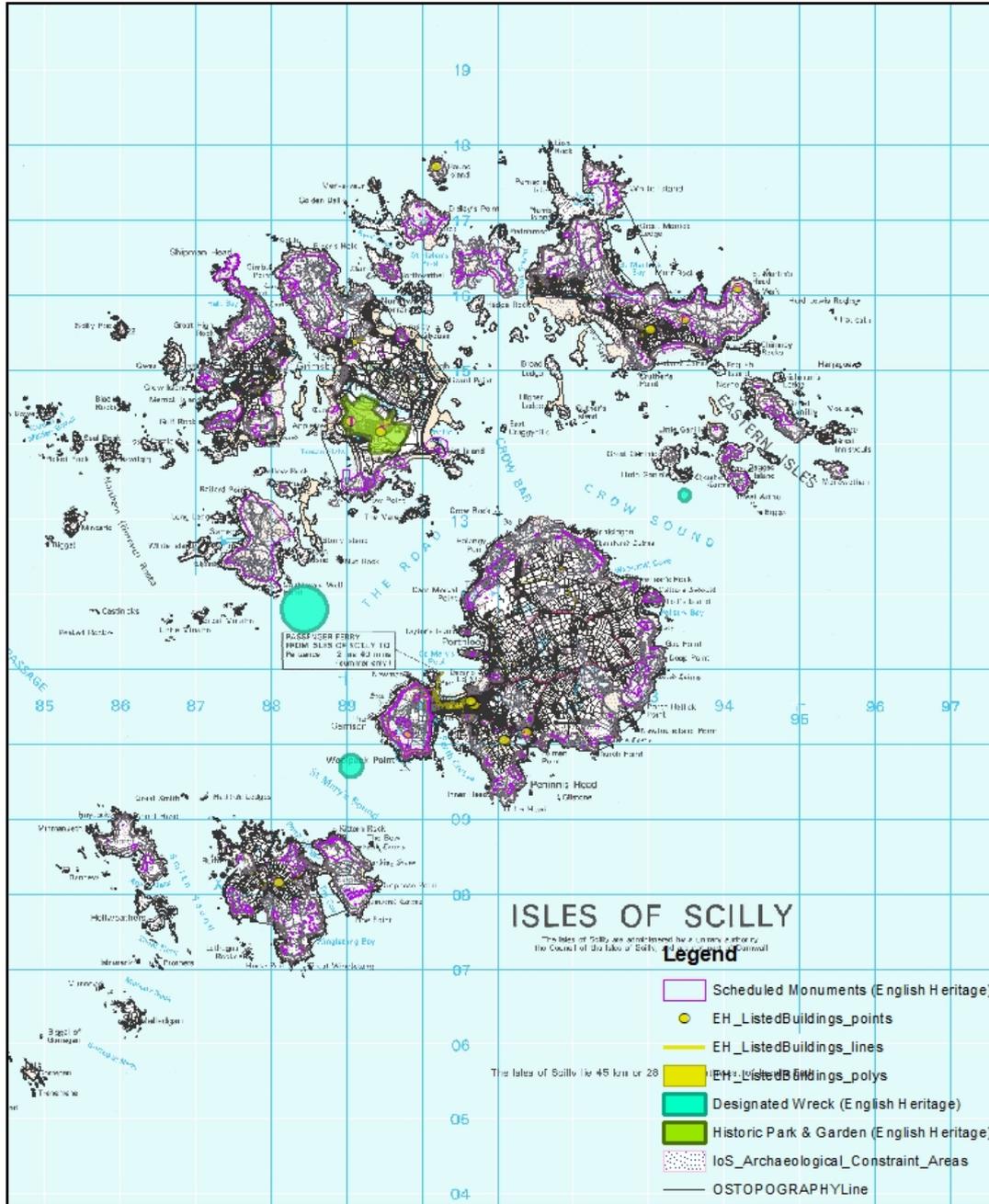
Town Hall, The Parade,
St Mary's, Isles of Scilly, TR21 0LW



Council of the
ISLES OF SCILLY



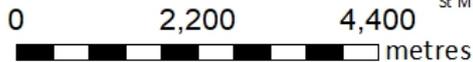
Historic Environment Designations on the Isles of Scilly



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Date: 27/06/2019

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Town Hall, The Parade,
St Mary's, Isles of Scilly, TR21 0LW



Council of the
ISLES OF SCILLY



Appendix D – Memorandum of Understanding between Cornwall Council and the Council of the Isles of Scilly

Memorandum of Understanding (MoU) initiated by the Council of the Isles of Scilly 2019

Version 1

Steady and Adequate Supply of Minerals

Purpose and Scope of this MoU

1. The purpose and scope of this MoU is to establish a framework (outlining the roles and responsibilities) of the Council of the Isles of Scilly (CIOS) and other signatories to this MoU with regard to fulfilling the Duty to Cooperate for the steady and adequate supply of aggregates over the period to 2030.
2. The MoU is intended to enhance and formalise partnership working in:
 - Plan preparation;
 - Evidence gathering;
 - Recording and monitoring minerals issues; and
 - Plan implementation
3. Further information on CIOS's approach to the Duty to Cooperate can be found in the CIOS's Statement of Common Ground with Cornwall Council, entered into under the Duty to Cooperate.

Background on mineral resources and supply: summary of evidence

4. Currently the Isles of Scilly has no land-won mineral extractions and known stock-piles or land banks of reclaimed materials are limited to private holdings with only limited supplies directly owned and controlled by the Council.
5. There has previously been small-scale mineral extraction across St Mary's. None of these historic quarries are currently extracting. Materials for building projects make use of reclaimed and recycled materials or required amounts are imported in specifically as and when demand arises.
6. The islands are heavily designated by natural and historic environment designations of local and national importance. The existence of these designations, the limited supply of land and the fact that there are no active quarries currently underpins the policy position of not supporting the re-establishment of a quarrying on the islands.
7. Modern construction practices have become the common method for development projects on the islands, with only the re-use of traditional and historic building or the repair/construction of traditional stone walls requiring larger amounts of granite. It is not anticipated that the delivery of affordable homes, would require traditional construction methods on the basis of the current lack of supply and the cost of importing sufficient supplies. It is therefore anticipated that new homes would be utilising off-site construction methods or other modern means of construction rather than using a more traditional, mineral-heavy, construction methods.



8. The 2019 Minerals Resource Assessment,¹² sets out a scenario for the amount of minerals required to deliver the level of housing anticipated by the Draft Local Plan, using traditional construction methods.
9. These figures suggest that up to 31,600 tonnes of aggregate and 1,896 tonnes of mortar could be required to deliver a target of 105 affordable homes, should this require up to 50% open market to enable delivery.
10. In moving away from a target approach and using only those sites allocated for housing on a needs-led approach this reduces the potential delivery of new housing down to around 116 homes. This would still require a supply of minerals for construction including 23,200 tonnes of aggregate and 1,392 tonnes of mortar.
11. Notwithstanding the likelihood that the construction of new homes would not be of a traditional construction method, it is prudent to understand the above demands on minerals to ensure the Council can maintain an adequate supply to meet development demand, where this is identified in the Local Plan.

Joint Approach

12. It is agreed that:
 - Due to its limited mineral resources, the Isles of Scilly does not currently maintain its own landbanks or reserves of granite, sand and gravel and has not extracted such materials for a period of around 30 years (or at most very minor quantities).
 - As a result the Isles of Scilly does not have a 10 year average that can inform any potential future provision. The Council of the Isles of Scilly, however, intends to maintain provision for a supply of building materials of granite, from the mineral resources in Cornwall.
 - The Council of the Isles of Scilly and Cornwall Council will continue to co-operate on cross-boundary mineral interests, including on-going monitoring, whereby the demands of the islands on supplies from Cornwall can be clearly understand. The Cornwall Local Aggregate Assessment takes account of mineral exportation and importation, which sets the strategic context for the emerging Isles of Scilly Local Plan including minerals planning for the islands.
 - Exports of relatively small quantities of non-recyclable mineral waste will continue to be processed with the islands' waste supplies over the plan period.
13. The MoU shall be reviewed by the signatories as and when required to ensure that it remains fit for purpose. It is expected that the MoU will remain in place until at least the adoption of all relevant Local Plan documents covering the Isles of Scilly.

The Council of the Isles of Scilly's specific responsibilities under this MoU

14. As Minerals Planning Authority for the Isles of Scilly, the Council of the Isles of Scilly has undertaken and will continue to undertake to cooperate with all other signatories of this MoU

¹²

<http://www.scilly.gov.uk/sites/default/files/Minerals%20Resource%20Topic%20Paper%202019%20Published%2001.08.2019.pdf>



in the preparation and delivery of the Isles of Scilly Local Plan, including Minerals and Waste, 2015 – 2030 by:

- Notifying signatories at each consultation stage in the preparation of its local development documents and plans relevant to its statutory functions; and if appropriate meet and discuss any issues raised by Cornwall Council and take into account any views expressed on those issues;
- Meeting with signatories as required to monitor the preparation and implementation of minerals policy and strategy across the islands; review work undertaken jointly by parties signed up to the MoU;
- Co-operating with signatories in preparation of any relevant Local Aggregate Assessment (in particular Cornwall’s Local Aggregate Assessment) including related dialogue with members of the South West Aggregates Working Party (SW AWP); and
- Co-operating with relevant professional organisations, in particular the British Geological Survey and the Ministry for Housing, Communities and Local government (MHCLG) and, as required, the Cornwall and Isles of Scilly Local Enterprise Partnership (CIOSLEP).

General responsibilities of other signatories under this MoU

15. As signatory to this MoU, all partners will undertake to cooperate with other signatories of this MoU in the preparation and delivery of the Isles of Scilly Local Plan, Including Minerals and Waste 2015 – 2030. In particular this will entail:

- Responding to each consultation stage in the preparation of the Isles of Scilly local development documents and plans relevant to the Council of the Isles of Scilly’s statutory functions; and if appropriate, meet and discuss any issues raised by the Council of the Isles of Scilly;
- Meeting with the Council of the Isles of Scilly as required to monitor the preparation and implementation of minerals policy and strategy of the Isles of Scilly; and review work undertaken jointly by both parties; and
- Informing the Council of the Isles of Scilly should there be any substantive change in respective positions summaries in the background evidence on granite, sand and gravel.

Effective date and signature:

Signed on behalf of the Council of the Isles of Scilly:



Craig Dryden, Senior Manager Infrastructure and Planning, Council of the Isles of Scilly

Signed on behalf of Cornwall Council:

Louise Wood, Head of Planning, Cornwall Council

Signed on behalf of the Aggregate Working Party (AWP):

Name, Job Title