

## **Item: 13**

**Development and Infrastructure Committee: 6 September 2022.**

**Proposed Salt Storage Facility.**

**Report by Corporate Director for Neighbourhood Services and Infrastructure.**

### **1. Purpose of Report**

To consider options for the provision of a proposed new Salt Storage Facility.

### **2. Recommendations**

The Committee is invited to note:

#### **2.1.**

That the Winter Maintenance Policy, approved by Council in October 2021, states that the ability to adequately manage storage conditions for salt and keep it dry is required if national road safety standards are to be met.

#### **2.2.**

Options for the proposed development of a Salt Storage Facility, as detailed in the Stage 1 Capital Appraisal, attached as Appendix 1 to this report, with the preferred option being a new build facility at Cursiter Quarry.

#### **2.3.**

That, should the project be approved for progression through the Capital Project Appraisal process, a further sum of up to £20,000 is required to develop the Stage 2 Capital Project Appraisal, which could be met from existing service budgets.

**It is recommended:**

#### **2.4.**

That, as an exception to the Capital Project Appraisal process, in order to manage storage conditions for salt to meet national road safety standards, the Corporate Director for Neighbourhood Services and Infrastructure should submit, to the Policy and Resources Committee, a Stage 2 Capital Project Appraisal in respect of a proposed new Salt Storage Facility at Cursiter Quarry.

## **3. Background**

### **3.1.**

Currently, salt used in the winter road safety programme is stored in a pile at Cursiter Quarry, covered by tarpaulins. However, the area used to store the salt within the existing quarry is to be restored under the planning conditions for the quarry expansion and so a new storage area will need to be found.

### **3.2.**

The current storage method is not particularly robust as there is a clear risk of the salt getting damp as the covers are moved back once the salt pile starts to be used. Wet salt is difficult to control in terms of distributing it across the road network and is also less effective with regards to managing road conditions. In addition, there are significant health and safety risks associated with the operation of the covers.

## **4. Current Arrangements**

### **4.1.**

With the quarry expansion now underway, the current salt pile will require a new storage location and arrangements after this winter. As the expectation is that the current pile will be used up during the coming winter, in effect, this means that new storage arrangements require to be in place by September 2023.

### **4.2.**

It is expected that savings will be realised as a result of a better storage solution and hence more efficient use of the salt. In addition, road treatment will be more effective and meet the required national standards.

### **4.3.**

The current operation of sheeting the salt costs £7,700 just to put the sheet on. Current arrangements are labour intensive as the sheet requires to be manually moved every time salt is issued. Therefore, a different approach is estimated to save around two hours for each call out. Restocking can also be done in the summer months which is on average £4 per tonne cheaper to buy. Efficiencies in loading the gritters could release further savings which can be passed on to the Operational crews. It is therefore expected that the Quarry might achieve savings of something of the order of £10 per tonne on the gate fee. This could be used to offset the construction costs and would give a payback of an estimated £1m over 20 years.

### **4.4.**

Experience elsewhere has indicated that the provision of a Salt Storage Facility will reduce typical winter maintenance costs by some £5,000 per year per 1000 tonnes of salt used. The Salt Barn is to be designed for 5000 tonnes, so the savings could amount to £25,000 per year. This is achieved by reducing gritting spread rates by using dry (covered) salt rather than damp salt which clumps together leading to less even spread rates and can cause blockages of the gritting equipment. Operational

costs could be reduced even further by optimising the salting routes as spreading dry salt is far more efficient.

## **5. Options**

### **5.1.**

The following options are available:

- Option 1 – do nothing (continue with current arrangement). This option would be a continuation of the current arrangements for salt storage which is the external stockpile at Cursiter Quarry which is intermittently sheeted over with tarpaulin sheets.
- Option 2 – convert or use an existing Council owned facility. This option considers whether it would be possible to convert part of an existing Council owned facility eg sheds at Hatston into a covered salt store.
- Option 3 – acquire or lease existing premises with suitable facilities. This option is the same as Option 2 but includes looking for suitable property elsewhere, including those that are not currently in Council ownership.
- Option 4A – build new salt storage facility at Cursiter Quarry. This option is to construct a new purpose built 5000 tonne capacity dry salt storage facility at Cursiter Quarry.
- Option 4B – build new salt storage facility at another existing Council facility. This option is to construct a new purpose built 5000 tonne capacity dry salt storage at a location other than Cursiter Quarry.

### **5.2.**

Further details on each of the above options is provided in the Stage 1 Capital Project Appraisal, attached as Appendix 1 to this report.

### **5.3.**

Due to lack of suitable alternatives elsewhere, the new build approach is the one most likely to deliver a covered salt storage facility within the required timescales e.g. by Winter 2023. As an area suitable for the construction of a salt storage facility has been identified at Cursiter Quarry which also already has a weighbridge as well as access to plant and personnel for loading salt on a 24/7 basis, then Option 4A is the preferred option.

### **5.4.**

It is expected that savings will be realised as a result of a better storage solution and hence more efficient use of the salt. In addition, road treatment will be more effective and meet the required national standards. It is therefore proposed that Option 4A will secure best value to the Council.

## **6. Links to Council Plan**

### **6.1.**

The proposals in this report support and contribute to improved outcomes for communities as outlined in the Council Plan strategic priority themes of Connected Communities.

### **6.2.**

The proposals in this report relate directly to Priority 1.3 - Retain and where possible enhance public road infrastructure, of the Council Delivery Plan.

## **7. Links to Local Outcomes Improvement Plan**

The proposals in this report support and contribute to improved outcomes for communities as outlined in the Local Outcomes Improvement Plan priority of Connectivity.

## **8. Financial Implications**

### **8.1.**

A Stage 1 Capital Project Appraisal is attached at Appendix 1 to this report with an overview of estimated costs to complete the Stage 2 Capital Project Appraisal phase.

### **8.2.**

With £10,000 initially allocated from the Capital Project Appraisal Fund to develop this project beyond concept stage, £5,000 has been spent in Engineering fees to develop an outline Stage 1 CPA leaving a balance of £5,000 available within the project budget.

### **8.3.**

Based on an estimate of £20,000 to develop a detailed Stage 2 CPA, it is therefore anticipated that an additional £15,000 would be required to complete a robust Stage 2 CPA within financial year 2022/23. This additional cost will be funded through existing Service revenue budgets.

### **8.4.**

Financial year 2020/21 was unique, with a national lockdown and many Council services required to rearrange their method of service delivery. Additional government funding was provided to support Council costs, and on an agency basis to support the local community. Significant additional funding was paid to the Council in mid to late March 2021 as “redeterminations” of General Revenue Grant and £8.25M of this was carried forward, through the Renewable, Redevelopment and Regeneration Fund.

## **8.5.**

On 21 December 2021, the Policy and Resources Committee recommended the allocation of one-off funding towards a series of projects considered to provide recovery prospects from the COVID-19 pandemic, including an allocation of £500,000 towards a salt storage facility, potentially located at Cursiter Quarry.

## **8.6.**

The preferred option is to build a new salt storage facility at Cursiter Quarry at an estimated cost of £500,000.

## **8.7.**

The preferred option, as shown at section 5.3 above, is estimated to achieve savings in staff time, wastage of salt, provide options to buy salt at different times of the year and enable operational efficiencies. Any savings generated would be available to fund capital costs in excess of the £500,000 already allocated to the cost of the project.

## **9. Legal Aspects**

The Council has a statutory duty to secure best value and the development of a Stage 2 Capital Project Appraisal for the proposed new salt storage facility will support the Council in discharging this duty.

## **10. Contact Officers**

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## **11. Appendix**

Appendix 1: Stage 1 Capital Project Appraisal.

# ORKNEY ISLANDS COUNCIL - CAPITAL PROJECT APPRAISAL PROCESS

## Stage 1 CPA

Capital Programme: General Fund

Client Service: Neighbourhood Services

Project Name: Salt Storage Facility

## 1. Background

Currently, salt used in the winter road safety programme is stored in a pile at Cursiter Quarry, covered by tarpaulins. The current storage method is not particularly robust as there is a clear risk of the salt getting damp as the covers are moved back once the salt pile starts to be used. Wet salt is difficult to control in terms of distributing it across the road network and is also less effective with regards to managing road conditions. Manually removing tarpaulins to access salt is a challenging and potentially hazardous operation made more difficult in winter weather e.g. high winds.

An ability to adequately manage storage conditions for the salt and keep it dry is required if national road safety standards are to be met, as agreed in the revised Winter Maintenance Policy, agreed by the Development and Infrastructure Committee in September 2021. It is expected that savings will be realised as a result of a better storage solution and hence more efficient use of the salt. In addition, road treatment will be more effective and meet the required national standards.

Some work has already been done to identify potential storage solutions, taking into account methods used by other local authorities and road maintenance organisations. It is likely that the most effective solution will be a covered storage area, or Barn, which will keep the salt dry and sheltered from the weather. A suitable location has been identified at Cursiter Quarry where the salt can be issued, weighed, and released as required by the Roads and Environmental Services team who manage this aspect of the Winter Maintenance work, using gritters to transport and distribute the salt to affected areas of the road and footway network.

## 2. Options Appraisal

The following options are available:

### 2.1.

Option 1 – do nothing (continue with current arrangement).

This option would be a continuation of the current arrangements for salt storage which is the external stockpile at Cursiter Quarry which is intermittently sheeted over with tarpaulin sheets. Due to the requirement to carry out phased

restoration of existing quarry slopes as a planning condition of the quarry expansion project then the current stockpile would need to be relocated to another area of the quarry from summer 2023 onwards. By continuing with this current arrangement, Winter Maintenance operations would continue to encounter the existing difficulties with wet salt due to the inadequacies and difficulties of keeping salt fully dry via temporary sheeting. The operational difficulties around removal and replacement of sheeting would also continue. This option is not recommended for further consideration as it addresses none of the current issues with salt storage.

## **2.2.**

Option 2 – convert or use an existing Council owned facility

This option is to locate or convert part or all of an existing Council owned facility into a salt storage facility. A suitable building would need to be found that was of sufficient size to store approximately 5,000 tonnes of salt. Consequently, the building would need to be approximately 36m long x 22.5m wide and 8.0m high at eaves with reinforced concrete retaining walls on all sides. The building would require a weighbridge and have plant and personnel available to load salt into gritters including access for night-time working. It would therefore need to be located in an industrial area, eg Hatston, and be part of an existing depot. This option is not recommended for further consideration as there are currently no existing Council owned facilities that could be converted to meet the above requirements.

## **2.3.**

Option 3 – acquire or lease existing premises with suitable facilities.

This option is the same as Option 2 but would include looking at property that is not currently owned by the Council. Therefore, the same fundamental requirements would need to be met in terms of size and type of building as well as proximity to a weighbridge and workforce with 24 hour access. This option is not recommended for further consideration as there are currently no existing premises available for rent or sale that could be converted to meet the user requirements.

## **2.4.**

Option 4A – build new salt storage facility at Cursiter Quarry.

This option is to construct a new purpose built 5000 tonne capacity dry salt storage facility at Cursiter Quarry. This option would ensure that the user requirements are met in that the building is fit for purpose and provides a long term storage solution (with minimum design life of 30 years). The benefits of this option are that it would result in a continuation in terms of current arrangements for loading and distributing salt with access to specialist plant and trained personnel. There is also an existing weighbridge facility located at Cursiter Quarry which was upgraded earlier in 2022 to ensure salt usage and

stock levels can be accurately monitored and recorded. The estimated cost of this option is £500,000. This option is recommended as the preferred option.

## 2.5.

Option 4B – build new salt storage facility at another existing Council facility.

This option is to construct a new purpose built 5000 tonne capacity dry salt storage at a location other than Cursiter Quarry. Similar to Option 4A this option would also ensure that all the primary user requirements are fully met in terms of the building but assumes the site is not at Cursiter Quarry. This option would require a new site to be found and purchased if not already Council owned land. It would also then have additional costs associated with security and 24-hour access as well as the requirement to add a weighbridge into the design. If not located at an existing Council facility, then there would also be a need to provide plant and trained personnel to handle and load salt into gritters. This option is not recommended for further consideration as it would have additional cost implications as outlined above.

## 2.6.

It is expected that savings will be realised as a result of a better storage solution and hence more efficient use of the salt. In addition, road treatment will be more effective and meet the required national standards. It is therefore proposed that Option 4A will secure best value to the Council.

### 3. Financial Implications

	<b>Total</b>	<b>2022/23</b>	<b>2023/24</b>	<b>2024/25</b>	<b>2025/26</b>	<b>2026/27</b>
	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>	<b>£000</b>
Capital Expenditure						
Engineering fees	20	20				
Construction costs (D&C)	500	30	455	15		
<b>Less:</b> Anticipated Grants or Other Contributions						
<b>Net Capital Expenditure</b>						
Revenue Implications						
Financing/Loan Charges						
Estimated cost of detailed Stage 2 CPA	20					



## **4. Policy Aspects**

The provision of a salt storage facility will assist with the following Council Priorities:-

- Priority 1.3. Retain and where possible enhance public road infrastructure and coastal flood protection of public road infrastructure
- Priority 3.11. We will review and develop the Empowering Communities Project to create a sustainable model which will enable and empower communities in the delivery of services and projects in their community. The service on the isles will be supported by providing and funding local delivery.

By improving the Council's resilience to winter weather by significantly improving the storage capacity for rock salt, complying with current industry best practice concerning the storage and handling of rock salt which will help to keep roads open and safe for vehicles and pedestrians.

## **5. Statutory Responsibility**

Winter maintenance activities are covered by a national Code of Practice (CoP) - Well-managed Highway Infrastructure. This was produced by the UK Roads Liaison Group and is intended to apply throughout the UK. The Code is designed to promote an integrated asset management approach to highway infrastructure.

The CoP adopts a risk-based approach to delivering roads maintenance including Winter Service provision. National Winter Service Research Group (NWSRG) guidance documents provide the technical specification for winter service delivery, giving the Council certain legal obligations that it must comply with and which may be the subject of claims for loss or personal injury or of legal action by those seeking to establish non-compliance by the Council.

The Council has used the CoP since 2016 as a guide to the delivery of the winter service however pressures on budgets has not allowed all aspects to be fully adopted. This has been a risk-based judgement that sets a level of service that is affordable and deliverable in the winter period. Keeping the salt dry will allow the Code to be met with a reduced amount of dry, more effective amount of salt being spread as dictated by the weather.

## **6. Land Purchase Requirement**

The preferred option, if approved, identifies a suitable location for a salt storage facility with a storage capacity of 5000 tonnes at Cursiter Quarry, in the location where currently recycled glass is located – see Indicative Site Layout Plan included as Annex 1. As such there would be no requirements to purchase additional land, although the glass storage area will need to be re-located.

## **7. Impact on Local Business, Employment and the Economy**

As salt is currently already stored at Cursiter Quarry, existing supply chain requirements will prevail in terms of unloading salt supplies delivered in by coaster to Hatston Pier which are then hauled using road tippers to Cursiter Quarry.

Salt contained in a dry storage facility will be easier to manage, load and distribute across the road network so should lead to improved or more efficient winter maintenance. This should in turn result in less disruption to the road network in general and ensure disruption to businesses and the economy from adverse winter weather is able to be better managed.

## **8. Risk Assessment**

### Risks of Proceeding

The main risks in relation to the project progressing mostly relate to timescales with Planning as the most significant. As there is quite a range of bespoke salt barn solutions available from the market a procurement exercise will be required to identify the most economically advantageous solution that meets the Technical Specification for the project. This means that the overall size, geometry and height of the building will not be known until a preferred supplier has been identified. As a result planning permission can only be sought based on the preferred supplier's outline proposals. To manage this risk it is proposed that early discussions take place with Development Management to ascertain the key parameters and governing criteria so that they are stated within the Technical Specification issued to tenderers.

### Risk of Not Proceeding

In terms of the project not progressing then the risks are those that currently exist in terms of the current arrangements with storing salt externally and using tarpaulins to try to keep this as dry as possible and accepting the limitations of this approach and the negative effects it has on winter maintenance.

It would also mean Council employees continuing to manually sheet and then remove tarpaulins throughout the winter. This involves manual handling of heavy tarpaulins and tyres used to weigh these down as well as difficulties with access and working at height. Despite these operations being subject to risk assessment and the operatives involved being trained, the additional risks posed by having to undertake this work in adverse weather conditions mean this is simply not a long term option.

## **9. Accountable Officers**

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## **10. Annex**

Annex 1 – Indicative Site Layout Plan.

**Notes**

- 1. All levels are metres above Ordnance Datum (m AOD).

Indicative shed - dimensions/  
form of structure shown only for  
context not OIC requirements.



Entrance to quarry

Weighbridge

Approx.  
road edge.  
Main road in  
and out of  
quarry.

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# FOR INFO

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File Ref. 1003122		Drawing No. 3			
Revision	1				
Drawn CM	Checked MD	Approved DC			
Date 10/05/22	Scale 1:500	Original drawing size 420mm x 297mm (A3)			

Cursiter Quarry Salt Barn

Indicative Layout

ENGINEERING

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