

OUTLINE BUSINESS CASE

HORNCASTLE SALT BARN

JUNE 2015

Business Case Summary

Lincolnshire County Council operates winter maintenance activities from 8 strategically placed depots. 43 gritters run from these depots which all have on-site salt stocks available to load from. Following the construction of Willingham salt barn in the summer, Horncastle will be the only remaining depot without a permanent salt storage solution.

Preliminary discussions with LCC planning department have taken place and although objections from local residents are possible, mitigation measures and the environmental and strategic justification presents a strong case.

Although the option to continue using temporary sheeting is available the conclusion of this report is that the construction of a permanent salt dome should be approved for the following reasons:

- **OPERATIONAL** - Salt which is stored uncovered is open to the elements which can see its moisture content rise well out of desirable specification (between 2 and 3.5%). This leads to operational issues in terms of spreading equipment and also reduces its de-icing effectiveness thus requiring increases in spread rates or multiple applications to compensate for the increased moisture content.
- **HEALTH & SAFETY** - Temporary sheeting, which is currently employed as a storage solution at Horncastle depot sees a year-on-year cost for re-sheeting and is an unnecessary health and safety risk. This has the disadvantages of requiring specialist staff on hand that are trained in safely removing the sheeting. The un-sheeted sections are exposed to the elements just as an uncovered stockpile would be. The cost of sheeting a stockpile of 5500 tonnes each year is approximately £20,000.
- **ENVIRONMENTAL** - As sheeted or uncovered stockpiles of salt have no solid bund or containment and are more exposed than a dome or barn storage solution, there is an environmental risk with the potential for contamination of the surrounding areas and potentially watercourses. Horncastle Highways Depot is situated in the catchment area for the River Bain and even with salt sheeting in place, because it is not guaranteed to be water tight and has no solid bund there is a continued risk of leaching of sodium chloride into the local watercourses. There is scrutiny and increased pressure from the Environment Agency for Lincolnshire County Council to demonstrate it is taking measures to eliminate any possible environmental damage from the sodium chloride.
- **EFFECTIVENESS** - Spread rates are already low when performing precautionary salting of the road network, but part of the reason for this is the assumption of optimum moisture content and lack of contamination of salt stocks. The currently sheeted stockpile has been tested throughout the season and there is risk in future years of the

quality of the de-icing salt being reduced through exposure to the point of increased spread rates having to be employed in order to compensate for this. This sees extra tonnage of salt being used per run and therefore has significant cost implications. The application of salt from Horncastle has had to be repeated on several occasions where effectiveness has been reduced by using high moisture salt.

- **COST** – Estimates have been received for the proposed development which breaks down to £385,000 for the Salt Barn and £110,000 for site clearance, groundworks, vehicle access areas and ancillary works.

Recent winters have seen approximately 4300 Tonnes of salt used from Horncastle at a present day cost of £215,000. If spread rates are being increased to compensate for the reduced effectiveness this would be in the order of a 15% increase in salt usage at an increased cost of £43,250 per season.

- **RATE OF RETURN** - A budget estimate of £495,000 for the provision of a salt barn able to accommodate 5000 Tonnes, and annual savings of £63,250 (subject to 2% NPV discount factor), would therefore have a potential to recover the costs in less than 8.5 years.

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